Sessions and Events

Spotlight Sessions

TRB has spotlighted a number of sessions that are being presented by our sponsors or cover timely issues and topics.

Poster Sessions

Convention Center, Lower Level, Hall A

Poster Sessions provide an opportunity to interact with authors in a more personal setting than the conventional lecture. The papers presented in these sessions meet the same review criteria as lectern session presentations. For a complete list of poster sessions, see the "Sessions, Events, and Meetings" section in the printed program. The full description for each poster session—including the titles and locations of individual posters—is available via the mobile app. A floor plan of the posters also on the mobile app.

Continuing Education Credits

Professional Development Hours (PDHs) may be claimed for attending the TRB Annual Meeting. Each hour of participation earns one PDH. Attendees must maintain their own record of attendance and can do so using the form in the printed program. At the request of a licensing or certifying agency, TRB will confirm an individual's meeting registration; however, TRB is not able to confirm attendance at specific sessions. Please note that, at this time, neither TRB nor the Annual Meeting is certified with the state licensing boards of Florida and New York.

Certification Maintenance (CM) credits—approved by the American Planning Association (APA) for retaining American Institute of Certified Planners (AICP) certification—are offered for some sessions at the TRB Annual Meeting. Persons seeking AICP CM credits must record their credits directly with APA. In the Annual Meeting mobile app, tap the "Program" icon on the home screen and then tap "CM Sessions" for a list of sessions approved for CM credits. Also, on the Annual Meeting Interactive Program, you can click the "Features" drop-down menu in the left column, then check only the box for "AICP Certification" to filter just for sessions with approved CM credits.

Sunday, January 05 (Sessions 1001 - 1067)

1001 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 149

Decarbonizing Mobility Globally: International Perspectives and Experiences with Congestion Pricing and Beyond

Matthew Daus, Windels Marx Lane & Mittendorf, LLP, presiding

Sponsored By International Coordinating Council

Congestion pricing and tolls are being implemented by cities worldwide to manage traffic congestion, reduce pollution, and improve the efficiency of transportation systems. This workshop aims to provide a comprehensive understanding of congestion pricing and tolling systems by examining international perspectives and case studies. It will also explore the importance of research studies and benchmarking to ensure successful tolling, and other sustainable congestion mitigation policies.

Welcoming Remarks & Keynote Remarks (P25-21443)

Kristin White/Federal Highway Administration (FHWA)

Congestion Pricing "Around the World" – Lessons Learned & Research Priorities (P25-21444)

Lisa Daglian/Permanent Citizens Advisory Committee to the MTA (PCAC), Michael Caltabiano/ARRB Group, Maria Eugenia Martínez Donaire/Madrid City Council, Mikael Ivari, David Do/City of New York, Taxi & Limousine Commission

1002

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, Salon A

Mixed Methods in Bicycle and Active Transport Equity and Safety Research

Bahar Dadashova, Texas A&M Transportation Institute, presiding

Alejandro Manga, Drexel University, presiding

Sponsored By Standing Committee on Bicycle Transportation, Standing Committee on Pedestrians, Standing Committee on Geographic Information Science, Standing Committee on Statistical and Econometric Methods, Standing Committee on Transportation Planning Analysis and Application, Standing Committee on Equity in Transportation, Standing Committee on Native American Transportation Issues, Standing Committee on Transportation and Public Health

Mixed-methods are becoming popular tools to address equity in public health, transportation safety, and active transportation studies. This workshop will invite academics and practitioners who are using mixed-methods approaches in their research and practice to inform equitable planning and policy making. Local and state agencies will share viewpoints, perspectives, and approaches to improve their research, community engagement, and decision making focusing on vulnerable communities.

Centering Equity & Community Data in Active Transportation Research (P25-20985)

Jamila Porter/de Beaumont Foundation

Exploring Risk Factors Contributing to Inequities in Pedestrian and Bicyclist Fatalities and Injuries (P25-20986)

Anthony Boutros/Federal Highway Administration (FHWA)

Evaluation of a Large Scale Universal Basic Mobility Wallet in South Los Angeles (P25-20987)

Tamika Butler/University of California, Los Angeles

Tribal Pedestrian Safety (P25-20988)

John Habermann/Texas A&M Transportation Institute

Increasing Equity and Achieving Zero Fatalities in Alexandria (P25-20989)

Christopher Ziemann/City of Alexandria (VA)

Rural Electric Carsharing Pilot: A Case Study in California's San Joaquin Valley (P25-20990)

Caroline Rodier/University of California, Davis

Effects of Mobi's Equity Initiatives on Public Bike Share Access and Use (P25-20991)

Kate Hosford/Simon Fraser University

Better Late Than Tomorrow: Relationships Between Cycling Enrollment Ages, Health-related Expectations, and Riding Outcomes: A Cross-cultural Study (P25-20992)

Sergio Useche/University of Valencia

1003

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 102B

Estimating Staffing Needs and Developing Staffing Plans for Traffic Management Systems

Jon Obenberger, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Intelligent Transportation Systems, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Freeway Operations, Joint Subcommittee on Active Traffic Management, Standing Committee on Traffic Signal Systems, Standing Committee on Managed Lanes, Standing Committee on Artificial Intelligence and Advanced Computing Applications

This workshop will identify practices to assist agencies with estimating their staffing needs and developing a staffing plan for their traffic management system (TMS). This workshop (1) identify methods to quantify the workload for positions in a TMS, (2) process key factors to estimate the staffing needs for a TMS, and (3) elements to include in a staffing plan to capture TMS staffing needs. The expected outcomes from the small group discussions will take place during the breakout session conducted during the workshop, will identify the key issues, practices, and resources agencies might use to estimate the workload for key positions in a TMS, estimate staffing needs of the TMS, and including in a TMS staffing plan.

Session 1 - Framing the Discussion (P25-20755)
Jianming Ma/Texas Department of Transportation
Estimating Workloads for TMS Positions (P25-20127)
Matthew Hall/Victoria Department of Transport and Planning
Estimating TMS Staffing Needs (P25-20128)
Peter Marshall/D2 Traffic Technologies
Developing TMS Staffing Plans (P25-20129)
Daniel Lukasik/Parsons
California DOT TMS Staffing Example (P25-20130)
David Man/California Department of Transportation
Florida DOT TMS Staffing Example (P25-20131)
Fred Heery/Florida Department of Transportation
Framing the Discussion - Session 1 (Recorder) (P25-20756)
Fanis Papadimitriou/Nea Attiki Odos Operation
Session 2 - Identify Issues to Consider, Practices, and Resource Needs to Estimate TMS Staffing Needs and Develop Staffing Plans (P25-20132)
Susanna Zammataro/International Road Federation (IRF)
Session 3 - Report Out of Breakout-Session Results (P25-20133)
Leslie Jacobson/LNJ Transportation. Consulting
Report Out of Breakout-Session Results - Recorder (P25-20753)
Vladimir Vorotovic/ERTICO-ITS Europe
Report Out of Breakout-Session Results - Recorder (P25-20754)
Philip Masters/Masters and Associates Ltd.
Workshop Results and Action Planning (P25-20134)
Raj Ponnaluri/CONSOR Engineers
Next Steps and Sponsors' Perspectives (P25-20135)
Jon Obenberger/Federal Highway Administration (FHWA)

1004

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, Salon C

Integrating Highly Automated Vehicles into Traffic in Cities and on Highways: A Safety-Centric Conversation

Laura Fraade-Blanar, Waymo, presiding
Jane Lappin, Blue Door Strategy and Research, presiding
Jiaqi Ma, University of California, Los Angeles, presiding

Sponsored By Standing Committee on Vehicle-Highway Automation, Standing Committee on Intelligent Transportation Systems, Standing Committee on Freeway Operations, Standing Committee on Traffic Flow Theory and Characteristics, Standing Committee on Traffic Simulation

This workshop will explore the safety-centric fulcra on which AV integration rests. We'll consider: What challenges and opportunities arise when AVs join traffic flow among human drivers? What are the trade-offs among regulations, traffic flow efficiency, safety, and human and automated driver capabilities? How can measurement of AV driving performance be accurate and valid? And how can the case for safe enough be made convincingly and concretely? Expert speakers will lead an in-depth examination of the range of safety issues germane to AV deployment at scale for both passenger vehicles and trucks, followed by small-group discussion and Q&A.

What should we optimize? Balancing among throughput/efficiency, legal compliance, local driving culture, safety, sustainability, etc (P25-20803)
Simeon Calvert/Delft University of Technology
Compliance with rules of the road (P25-20804)
Gil Amid/Foretellix Ltd
Vision Zero - How can AVs support Vision Zero? How does scale/perfusion into the fleet impact this? (P25-20809)
Jeffrey Michael/Johns Hopkins Center for Injury Research and Policy
Integration of AVs from a city experience (P25-20813)
Kristin Bray/City of Austin
Safety Measures from a City Perspective (P25-20816)
Stephanie Dock/District Department of Transportation
What Do We Learn from SGO Data (P25-20817)
Steven Shladover/University of California, Berkeley
Recommendations from the Retrospective Automated Vehicle Evaluation (RAVE) (P25-20818)
Eric Teoh/Insurance Institute for Highway Safety
Safety Cases in Standards and Best Practices: ISO, SAE, and AVSC (P25-20820)
Jeffrey Wishart/Science Foundation Arizona
Getting Clarity on Safety Cases: What, Why, and How to Use Them? (P25-20822)
Francesca Favaro/Waymo
Aurora's Safety Case Structure: Communication Safety (P25-20824)
Chan Lieu/Aurora Innovation
New Proposed Regulations, with the Benefit of Experience (P25-20826)
Bernard Soriano/California Department of Motor Vehicles
Keeping a Safety Case Up-To-Date (P25-20827)
Michael Wagner/Edge Case Research
Analysis of AV Data on Safety (P25-20819)
Ali Ghasemzadeh/GM Cruise

1005

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, Salon B

The Safe System Approach in Action: Building Relationships to Address Impaired Driving

Tara Casanova Powell, Association of Transportation Safety Information Professionals, presiding
Max Roberts, Washington Traffic Safety Commission (WTSC), presiding
Sponsored By Standing Committee on Impairment in Transportation, Standing Committee on Human Factors of Vehicles, Standing Committee on Human Factors of Infrastructure Design and Operations, Standing Committee on Transportation Safety Management Systems, Standing Committee on Traffic Law Enforcement, Standing Committee on Native American Transportation Issues

Impaired driving remains a significant challenge on our roadways requiring collaborative action. This workshop showcases the Safe System Approach through multidisciplinary professionals sharing successes and opportunities to address impaired driving. Discover how to break down silos, build partnerships, and collectively address impaired driving from diverse perspectives. Explore integrated strategies spanning engineering, enforcement, education, and technology for a comprehensive solution.

Designing for Pedestrian Impairment—Messy Corridors (P25-20197)
Patricia Tice/ProFound Insights, Inc
Impaired Driving and the Safe System Approach (P25-20198)
Jane Terry/National Highway Traffic Safety Administration (NHTSA)
Implementing Impaired Driving Solutions: A Roadmap Leveraging Interior Sensing (P25-20205)
Michael Lenne/Seeing Machines
Ocular Changes Associated with Cannabis Use and Implications for Prevention and Detection of Impaired Driving (P25-20199)
Ashley Brooks-Russell/University of Colorado, Anschutz
PartnershiCOPs: Community Outreach and Promising - Practices of Engagement, Developing Alliances, and Partnering for Success (P25-20201)
Tim Burrows/Kimley-Horn and Associates, Inc., Kyle Clark/IACP
Collaborative Solutions: Strengthening Community Outreach and Agency Partnerships to Combat Impaired Driving (P25-20207)
Enjoli Dixon/National Center for Mobility Management

1006 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 150A

Data Repositories and Technologies: Data Archival, Analysis Tools, and Practices for Transportation Planning

Chapman Munn, PMG Software Professionals, presiding
Cemal Akcicek, National Renewable Energy Laboratory (NREL), presiding
Peggi Knight, Iowa Department of Transportation, presiding
Sponsored By Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Urban Transportation Data and Information Systems, Standing Committee on Freight Transportation Data

The workshop will convene a group of experts to discuss the current state of data on passenger, freight, safety, and asset management topics. The first part of the workshop entails a panel discussion centered around finding thematic data, highlighting potential pitfalls, and a discussion of cross-group coordination that can be beneficial in such data pursuits. The second portion will include demonstrations of data archives surrounding the aforementioned themes. Through the workshop, we also plan to solicit (and eventually disseminate) information on the types of data they are interested in/looking for.

Leveraging Open Source Databases (P25-20692)
Chapman Munn/PMG Software Professionals
Public Domain Geospatial Datasets and How to Use Them (P25-20633)
Brian Brotsos/Federal Highway Administration (FHWA)
Harnessing Open-Source Geospatial Data: State DOT Hubs and Tools in Action (P25-20629)
Sage Donaldson/Arizona Department of Transportation

(continued)

Unlocking Transportation Data: Using Open and FAIR Data from the Bureau of Transportation Statistics and Beyond (P25-20637)
Ed Strocko/OST-R/Bureau of Transportation Statistics
Leveraging Cross-Agency Open-Source Transportation Data (P25-20693)
Daniel Morgan/U.S. Department of Transportation
Using Transitland to Browse and Analyze Thousands of GTFS Transit Data Feeds (P25-20694)
Drew Dara-Abrams/Interline Technologies LLC
Upcycled Data: The Promise and Perils of a Statewide Repository of Transit Data (P25-20695)
Hunter Owens/California Department of Transportation
Transportation Secure Data Center: Balancing Privacy and Data Sharing (P25-20696)
Cemal Akcicek/National Renewable Energy Laboratory (NREL)
NHTSA's Motor Vehicle Crash Data and Tools (P25-20716)
Rajesh Subramanian/National Highway Traffic Safety Administration (NHTSA)

1007

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 147A
Artificial Intelligence–Empowered and Quantum Technologies for Transforming Transportation
Yinhai Wang, University of Washington, presiding
Heng Wei, University of Cincinnati, presiding
Jesse Newberry, HNTB, presiding
Sponsored By Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Urban Transportation Data and Information Systems, Standing Committee on Information Systems and Technology, Standing Committee on Geographic Information Science, Standing Committee on Statistical and Econometric Methods, Standing Committee on Freight Transportation Data

This workshop explores the transformative potential of quantum and AI-powered technologies in the transportation sector, with a strong focus on practical applications, human-centered design, and workforce development. Attendees will learn about optimizing transportation systems to enhancing precision in sensing and detection. These cutting-edge innovations promise to reshape how we move people and goods. Learn about how quantum computing and AI can be applied to solve real-world transportation challenges while keeping human needs and usability at the forefront.Join us to learn how these technologies are being integrated into the transportation ecosystem, with a focus on practical implementation and preparing the workforce of the future.

Practical Applications of AI Technologies to Optimize Transportation Safety and Logistics (P25-20552)
Willis Zhang/Google
How AI Innovations Can Address Workforce Challenges, from Upskilling to Creating New Job Opportunities (P25-20553)
Ryan McCreedy/Slalom
Practical Use Cases for Leveraging Sensor, Computer Vision, and Connected Data with AI Tools (P25-20555)
Mark Eric Pittman
Introduction to Quantum Technologies (P25-20557)
Yaakov Weinstein/MITRE Corporation
Applications of Quantum Technologies (P25-20558)
Prachi Vakharia/U.S. Department of Transportation
Quantum and AI Intersections (P25-20559)
Daniel LeMaster/Office of the Assistant Secretary for Research and Technology (OST-R)
Research Spotlight – Quantum Gravimeters for Construction (P25-20561)
Nicole Metje/University of Birmingham

1008

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 151A

Public- and Private-Sector Collaboration for Regional Data-Collection Programs

Anurag Komanduri, LOCUS Inc., presiding
Pragun Vinayak, LOCUS Inc., presiding
Brent Selby, Cambridge Systematics, Inc., presiding
Jonathan Ehrlich, Metropolitan Council, presiding
Laura Wilson, WESTAT, Inc., presiding
Zachary Patterson, Concordia University, presiding

Sponsored By Standing Committee on Travel Survey Methods, Data, Planning, and Analysis Group, Standing Committee on Traveler Behavior and Values, Standing Committee on Transportation Demand Forecasting

Agencies spend significant time and resources to budget for, plan for, and administer data-collection programs. This is becoming more onerous for three reasons: (1) agencies have shrinking budgets (2) the data requirements are ever-increasing, and (3) response rates are on the decline. This impacts both the way data are collected and also the number of private sector firms conducting data collection. The workshop will comprise of three panel discussions and a break-out with audience participation to improve the public-private partnership in collecting travel behavior information while encouraging new ideas and new approaches. Panelists include State DOT, MPO, & private sector participants responsible for administering survey programs.

Panel 1 : State DOTs (P25-20666)
Karen Faussett/Michigan Department of Transportation, Christopher Melson/Oregon Department of Transportation, Rebekah Straub/Ohio Department of Transportation
Panel 2 : MPOs (P25-20667)
Suzanne Childress/Puget Sound Regional Council, Arup Dutta/Maricopa Association of Governments, Jilan Chen/Southeast Michigan Council of Governments (SEMCOG), Jonathan Ehrlich/Metropolitan Council
Panel 3 : Consultants (P25-20668)
Jesse Casas/WESTAT, Inc., Jeremy Wilhelm/RSG, Joann Lynch/Ipsos, Thomas Rossi/Cambridge Systematics, Inc.

1009 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 151B

Transportation Planning Is Incomplete Without Demand Management

Sabyasachee Mishra, University of Memphis, presiding
Todd Litman, Victoria Transport Policy Institute, presiding
Veronica Jarvis, Thurston Regional Planning Council (TRPC), presiding
Tien-Tien Chan, Nelson Nygaard, presiding
Lama Bou Mjahed, World Bank, presiding

Sponsored By Standing Committee on Transportation Demand Management, Standing Committee on Traveler Behavior and Values, Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices, Standing Committee on Transportation Demand Forecasting, Standing Committee on Economics and Finance

Transportation Demand Management (TDM) can play an essential role in increasing transportation system efficiency by encouraging travelers to use the most efficient option for each trip. Investments in non-auto modes and Smart Growth development policies can be more cost-effective, equitable, politically acceptable, and beneficial if implemented with TDM incentives to encourage their use. Currently, TDM components are often limited. This workshop will examine how TDM can help improve multimodal transportation plans and Smart Growth development policies, identify the full range of TDM strategies that should be considered, and describe methods and tools for optimizing TDM policies and programs.

Introduction of the workshop and agenda (P25-20891)
Sabyasachee Mishra/University of Memphis
TDM Overview (what it is, how it is implemented, business case) (P25-20892)
Todd Litman/Victoria Transport Policy Institute
Real world TDM Case Studies (P25-20893)
Veronica Jarvis/Thurston Regional Planning Council (TRPC)

(continued)

Using concept of Nudging in TDM (P25-20894)
Sabyasachee Mishra/University of Memphis, Avani Aravind/University of Memphis
Exercise 1: Project Level – Small working group (P25-20895)
Todd Litman/Victoria Transport Policy Institute
Exercise 2: Regional Level – Small working groups (P25-20896)
Todd Litman/Victoria Transport Policy Institute

1010

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 152B
From Concept to Implementation: Is Your Project Ready?
Steve Woelfel, Massachusetts Department of Transportation, presiding
Patt Talvanna, Boston Consulting Group, presiding
Sponsored By Standing Committee on Strategic Management, Standing Committee on Workforce Development and Organizational Excellence, Standing Committee on Performance Management, Standing Committee on Public Engagement and Communications, Standing Committee on Data for Decision Making

Project readiness is a critical issue for transportation agencies and has become even more important with the emphasis on discretionary federal funding. For a project to move from concept to implementation, a number of factors need to be in place including the availability of good project data, the right organizational processes, and strong stakeholder partnerships that allow for projects to advance. This workshop will feature speakers that will discuss both the need to improve the data and processes typically used to inform project implementation while also highlighting the importance of strong partnerships. An interactive exercise will allow attendees to explore how to best balance these critical elements of project readiness.

Project Delivery at the North Central Texas Council of Governments (P25-20112)
Michael Morris/North Central Texas Council of Governments
Project Delivery at the Massachusetts Department of Transportation (P25-20113)
John Moran/Massachusetts Department of Transportation
Project Delivery at the Washington State Department of Transportation (P25-20114)
Jay Drye/Washington State Department of Transportation
Project Delivery at the Texas Department of Transportation (P25-20224)
Ceason Clemens/Texas Department of Transportation

1011

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 152A
The Convergence of Data Governance, Knowledge Management, and Information Management
Frances Harrison, Spy Pond Partners, LLC, presiding
Sponsored By Standing Committee on Information and Knowledge Management, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Information Systems and Technology, Standing Committee on Strategic Management, Standing Committee on Research Innovation Implementation Management, Standing Committee on Workforce Development and Organizational Excellence, Standing Committee on Transit Data

The combination of workforce challenges, new opportunities for applying artificial intelligence, and the desire to better share and leverage data for decision making are contributing to growing interest in data governance, information management, and knowledge management. This workshop will feature presentations from agencies taking a unified approach to these activities and a facilitated discussion of organizational models and processes for tackling these efforts holistically for maximum impact.

Data Governance, Information Management and Knowledge Management: Definitions and Linkages (P25-20240)
Frances Harrison/Spy Pond Partners, LLC
The Glue of Governance: Connecting Data, Information and Knowledge at VDOT (P25-20236)
Michael Ulrey/Virginia Department of Transportation

(continued)

NCDOT's CLEAR Program: Managing Information and Knowledge to Fuel Innovation and Continuous Improvement (P25-20237)
Alyson Tamer/North Carolina Department of Transportation
Integrating Data, Information, Knowledge Management, and AI Search for Employee Success (P25-20238)
Lorri Economy/Utah Department of Transportation
Sound Transit's Journey Towards Information Governance: How Our Data, Knowledge, Records, and Library Team is Taking Shape (P25-20239)
Erin O'Meara/Sound Transit

1012

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 202A
Exploring Sustainability and Resilience from TRB's Transportation Infrastructure Group Perspective
Derrick Dasenbrock, Federal Highway Administration (FHWA), presiding
Tara Cavalline, University of North Carolina, Charlotte, presiding
Dr. Soheil Nazarian, University of Texas, El Paso, presiding
Sponsored By Transportation Infrastructure Group, Section - Construction, Section - Geology and Geotechnical Engineering, Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials, Standing Committee on Transportation Earthworks, Standing Committee on Geotechnical Instrumentation and Modeling, Standing Committee on Geosynthetics, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Binders for Flexible Pavement, Section - Pavements, Subcommittee on Sustainable and Resilient Pavements, Subcommittee on Young Members, Standing Committee on Maintenance and Operations Management, Standing Committee on Roadside Maintenance Operations, Standing Committee on Winter Maintenance, Standing Committee on Road Weather, Standing Committee on Pavement Management Systems, Standing Committee on Pavement Preservation, Joint Subcommittee on Integrating the Flexible Pavement Life Cycle (with ACK60, AKM10, AKM20, AKM30, AKM40, AKP30, and AKT30), S

This workshop explores sustainability and resilience, from perspectives of committees in the TRB Transportation Infrastructure Group. Current TRB Sustainability and Resilience activities are often focused on planning, overall system designs, high-level policies and the use of our transportation system. Complimentary sustainability and resilience efforts in TRB's Transportation Infrastructure Group, deal with lifecycle engineering phases: design, construction, preservation, and maintenance of our bridge and roadway infrastructure system. There is a need to improve collaboration and create a broader coalition incorporating sustainability and resilience into engineering lifecycle phases and related research. A primer on important jargon will kick-off the event (EPDs, LCAs, PEFs etc) followed by lightning sessions and several engaging interactive activities.

Welcome, Introduction, and Opening Presentation: "Resilience and Sustainability" (P25-20792)
Derrick Dasenbrock/Federal Highway Administration (FHWA)
Workshop Activity #1: : "EPDs, LCAs, PEFs, Oh My!" (Breaking the Language Barrier) (P25-20793)
Heather Dylla/Construction Partners Inc., Chud Lundgreen/Washington State Department of Transportation
AK000 Group Lightning Presentations (P25-20794)
Dr. Soheil Nazarian/University of Texas, El Paso, Derrick Dasenbrock/Federal Highway Administration (FHWA)
Workshop Activity #2 "Low-Carbon Decisions: Reducing Embodied Emissions of Bridges" (P25-20795)
Peter Wang/HNTB
Workshop Activity #3 "What Sustainability and Resilience Mean to My TRB Section" (P25-20800)
Dr. Soheil Nazarian/University of Texas, El Paso, Derrick Dasenbrock/Federal Highway Administration (FHWA)
Workgroup Activity #4: Communicating Messages from the TIG to the TRB Resilience and Sustainability Communities" (P25-20801)
Derrick Dasenbrock/Federal Highway Administration (FHWA), Dr. Soheil Nazarian/University of Texas, El Paso
Session Closing and Next Steps (P25-20802)
Tara Cavalline/University of North Carolina, Charlotte, Dr. Soheil Nazarian/University of Texas, El Paso, Derrick Dasenbrock/Federal Highway Administration (FHWA)
Life Cycle Assessments: Uncovering the Carbon Footprint of Our Bridges (P25-21087)
Peter Wang/HNTB
Today's and tomorrow's construction-related transportation issues in Resilience and Sustainability (P25-21086)
Georgene Geary/GGfGA Engineering, Lauren Alger/STV, Inc.
The Challenges of Resilience and Sustainability on Low-Volume Roads (P25-21088)
Gordon Keller/Genesee Geotechnical, David Orr/Cornell Local Roads Program

(continued)

Resiliency Framework for Sulfate Soil Stabilization (P25-21089)
Anand Puppala/Texas A&M University, College Station, Bhaskar Chittoori/Boise State University
Resilience and Sustainability from a Materials Perspective (P25-21090)
Amir Golalipour/Federal Highway Administration (FHWA)
Sustainability and Resilience Updates from AKP00 (P25-21091)
Heather Dylla/Construction Partners Inc., Austin Jarrell/Federal Highway Administration (FHWA)
Sustainable Transportation Solutions through Engagement and Capacity Building (P25-21092)
Mike Burton/Campbell Scientific, Inc.
Resilience in Maintenance Management Activities (P25-21093)
Amy Simpson/WSP, Charles Pilson/Mott MacDonald, LLC
Resilience and Sustainability from a Materials Perspective (P25-21395)
Bhaskar Chittoori/Boise State University
Today's and tomorrow's construction-related transportation issues in Resilience and Sustainability (P25-21086)
Georgene Geary/GGfGA Engineering, Lauren Alger/STV, Inc.

1013

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 156
Improving the Reliability and Quality of Buried Bridges Through the Proper Selection of Soil Design Parameters and Installation Inspection
Jesse Beaver, SGH, presiding
Sponsored By Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction, Standing Committee on Tunnels and Underground Structures, Standing Committee on Construction of Bridges and Structures, Standing Committee on Low-Volume Roads, Standing Committee on Transportation Earthworks

Buried bridges have rapidly become a viable short-span bridge solution for highway agencies. Their reliable design and installation requires an understanding of the design properties for embedment and foundation soils. This workshop will help attendees develop and verify soil information for the design of buried bridges. This will include the identification of available codified soil parameters for in situ and backfill soils to be used in design and analysis; expected site geotechnical explorations, test methods, and procedures to determine design parameters; and discussion of field observations and testing to verify that soil selection and placement techniques will produce the soil stiffness and strength assumed in the design calculations.

Buried Bridge Project Examples (P25-21357)
Joel Hahm/Contech Engineered Solutions LLC
Soil Parameters & Specifications (P25-21370)
Brent Bass/SGH
Soils Testing Frequency, Locations, & Methods (P25-21369)
Conrad Felice/C. W. Felice, LLC
Modeling & Structural Design (P25-21212)
Jeremy Bowers/SGH
Special Geotechnical Topics & Installation Inspection (P25-21371)
Aaron Zdinak/HDR
Effects of Soil Properties on Designs, (P25-21372)
Joel Hahm/Contech Engineered Solutions LLC

1014

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 202B

"Life in the Fast Lane" or "Slow Ride"?: Designing Roadways to Target Speed in an Evolving Multimodal Context

Marcus Brewer, Texas A&M Transportation Institute, presiding
Zachary Bugg, Kittelson & Associates, Inc., presiding
Sponsored By Standing Committee on Performance Effects of Geometric Design, Standing Committee on Pedestrians, Standing Committee on Bicycle Transportation, Standing Committee on Human Factors of Infrastructure Design and Operations, Standing Committee on Access Management, Standing Committee on Safety Performance and Analysis, Standing Committee on Transportation Planning Policy and Processes, Standing Committee on Transportation Planning Analysis and Application, Standing Committee on Tort Liability and Risk Management, Standing Committee on Roadside Safety Design, Standing Committee on Landscape and Environmental Design, Standing Committee on Roundabouts and other Intersection Design and Control Strategies

The concept of speed is integrated into the roadway design process. In many contexts, the desired operational speed may vary substantially from the design speed. A recent trend within the design process is the concept of “target speed,” which promotes a roadway environment that encourages drivers to operate at or below that selected speed (i.e., setting a maximum speed range to discourage excessive speeding and decrease the speed differential between vehicles on the same roadway). Achieving this target speed can also improve safety and comfort for non-motorized users. This workshop will present key concepts related to target speed and attendees will participate in an interactive case study to discuss and apply target speed principles.

Tort Liability Perspective (P25-20044)
Heidi Skinner/County of San Diego
Incorporating Target Speed into MassDOT's Project Development Design Guide (P25-20045)
Carrie Lavallee/Massachusetts Department of Transportation
Street Design for Function, Context, and Multimodal Needs in Austin, TX (P25-20547)
Eric Bollich/City of Austin
Slow streets, safe links: improving urban and suburban arterials for safety (P25-20548)
Stephen Ratke/Federal Highway Administration (FHWA)
Speed Management: Developing Marketable Materials & Implementation Strategies for Municipalities (P25-20765)
Francis Tainter/University of Massachusetts, Amherst

1015

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 103B

Debris Flows Hazards and Mitigation: A Multidisciplinary Approach to Debris Flow Risk Management for Transportation Agencies

Ben Arndt, RJ Engineering and Consulting, presiding
Sponsored By Standing Committee on Engineering Geology, Subcommittee on Rockfall Management

As wildfires and extreme weather become more common, debris flow hazards pose a greater risk to transportation agencies. Evaluating and mitigating these hazards requires a multidisciplinary approach for true risk management. This workshop will include presentations of debris flow hazard evaluation and mitigation from the viewpoints of owners, mitigation designers, hydrologists, and outside stakeholders. The format will include a panel discussion with attendee involvement to discuss the current state of practice and identify areas where design and investigation could be streamlined with multidisciplinary teams and stakeholder input. Outcomes could provide direction for risk management with respect to a TRB Synthesis Study or an E-Circular.

Introduction (P25-20275)
Nicole Oester Mapes/Colorado Department of Transportation
Post-fire Assessments and Modeling Initial Response (P25-20278)
Francis Rengers/U.S. Geological Survey
Debris Flow Modeling- a Multi Disciplinary Approach (P25-20279)
Aliena Debelak/WSP, Elizabeth Kidner/WSP

(continued)

Debris Flow Mitigation Design (P25-20280)
Ben Arndt/RJ Engineering and Consulting
Debris Flow Response and Management - an Owners Perspective (P25-20281)
Katelyn Card/Washington State Department of Transportation
Post-Fire Debris Flow Vulnerability Assessments and Resilient Transportation Systems (P25-20282)
Mikhail Chester/Arizona State University

1016

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 101
Resiliency and Sustainability for Bridge Elements and Beyond
Sharid Amiri, California Department of Transportation, presiding
Sponsored By Standing Committee on Foundations of Bridges and Other Structures, Standing Committee on Transportation Asset Management, Standing Committee on Innovative Highway Structures and Appurtenances, Standing Committee on Steel Bridges, Standing Committee on Concrete Bridges, Standing Committee on Seismic Design and Performance of Bridges, Subcommittee on Geoseismic Issues of Bridges (with AKG70), Standing Committee on Tunnels and Underground Structures, Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction, Standing Committee on Geotechnical Instrumentation and Modeling

This workshop provides an in-depth focus on advancing the knowledge and understanding of the resiliency and sustainability of bridge elements and beyond. It will bring together leading experts, researchers, and practitioners to discuss the latest innovations, emerging technologies, and best practices in bridge elements, bridge foundation design, and other transportation assets. Three outstanding and innovative presentations will be followed by a panel discussion featuring additional experts and authorities. Together, they will explore the critical roles of resiliency and sustainability in transportation structures and beyond.

Resiliency-Based Design Approach for Foundational Elements (P25-20001)
Ahmad Alhasan/HNTB
Advanced Materials in Construction of Resilient and Durable Bridges (P25-20002)
Mustafa Mashal/Idaho State University
Geotechnical, Foundation and Geo seismic aspects of Resilience, Sustainability and its Assessment for a Bridge Structure- A Case Study (P25-20003)
Jinchi Lu/Fugro
Panel Discussion (P25-20039)
Nina Choy/California Department of Transportation, Silas Nichols/Federal Highway Administration (FHWA), Gerald Verbeek/Verbeek Management Services, Thomas North/U.S. Army Corps of Engineers (USACE), Gerardo Flintsch/Virginia Polytechnic Institute and State University, Matthew Chynoweth/RS&H, Inc.

1017

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 206
Don't Let Asphalt Recycling Scare the RAP Out of You
Jenna Bowers, Ingevity, presiding
Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design, Standing Committee on Asphalt Pavement Construction and Rehabilitation, Standing Committee on Production and Use of Asphalt, Standing Committee on Binders for Flexible Pavement

Reclaimed asphalt pavement (RAP) has been used in asphalt pavement rehabilitation for decades. However, with goals for making asphalt pavements more cost-effective, the desire to increase the use of RAP has continued. Positive, sustainable benefits have been documented by the National Asphalt Pavement Association and some state departments of transportation (DOTs) that have embraced the use of high RAP in asphalt mixtures. Despite its benefits, there are still some challenges associated with the use of high RAP. This workshop will discuss effective mix design strategies, plant production and construction considerations, and case studies from state DOTs on their successful experience and strategies with high RAP asphalt mixtures.

Setting the Stage for Using High Reclaimed Asphalt Pavement (RAP) (P25-20055)
Tim Aschenbrener/Federal Highway Administration (FHWA)

(continued)

High RAP Mitigation Strategies for Balanced Performance (P25-20056)
Amy Epps Martin/Texas A&M University
RAP Management & Best Practices (P25-20057)
Tanya Nash/Asphalt Testing Solutions and Engineering
Michigan DOT's Success Story: Increasing RAP, Maintaining Quality (P25-20058)
Michelle Miller/Michigan Department of Transportation
Corrected Optimum Asphalt Content (COAC) - Georgia and South Carolina Experiences (P25-20059)
Fan Yin/National Center for Asphalt Technology (NCAT)

1018

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 201
Toward Low-Carbon Concrete, Part 1 (Part 2, Session 1050)
Jason Weiss, Oregon State University, presiding
Thomas Van Dam, Wiss, Janney, Elstner Associates, Inc., presiding
Sponsored By Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Tunnels and Underground Structures, Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction, Standing Committee on Construction of Bridges and Structures, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete, Standing Committee on Structures Maintenance

This workshop will cover what low-carbon concrete means. Practical methods to reduce the carbon footprint of concrete by reducing the powder content, reducing the clinker content, and increasing the life cycle will be presented. This includes the use of Type IL (Portland Limestone Cement), supplementary cementitious materials, novel materials, and technologies. Examples will be covered to demonstrate how barriers to change can be overcome. Discussions of codes for low-carbon concrete, environmental product declarations, and life-cycle assessments will be presented. A panel discussion will cover successes and challenges as a path for the future to improve the sustainability of concrete transportation infrastructure.

Introduction of Low-Carbon Concrete (P25-20004)
Jason Weiss/Oregon State University
Using Voluntary Guidelines to Advance on the Road to Carbon Neutrality (P25-20017)
Lindsey Geiger/Portland Cement Association
Developing Specifications to Support Reduced-Carbon Concrete Implementation (P25-20005)
Lawrence Sutter/Sutter Engineering LLC
Sustainability in Construction: Life Cycle Assessment of Cement, Concrete, and Supplementary Cementitious Materials (P25-20006)
Sabbie Miller/University of California, Davis, Somayeh Nassiri/University of California, Davis
The American Concrete Institute's – Low-Carbon Code (P25-20007)
Christopher Ferraro/University of Florida, Matthew Adams/New Jersey Institute of Technology, Andrea Schokker/University of Minnesota, Duluth
SCM reactivity, optimization, and mixture design (P25-20008)
O. Burkan Isgor/Oregon State University
Panel Discussion (P25-20015)
Jason Weiss/Oregon State University, Thomas Van Dam/Wiss, Janney, Elstner Associates, Inc.

1019

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 207A

Data That Extend the Life Cycle of Highway Infrastructure Assets

Deborah Walker, Federal Highway Administration (FHWA), presiding
Shri Bhide, Federal Highway Administration (FHWA), presiding
Gonzalo Rada, WSP, presiding

Sponsored By Section - Pavements, Standing Committee on Highway Traffic Monitoring, Transportation Infrastructure Group, Standing Committee on Testing and Evaluation of Transportation Structures, Standing Committee on Geotechnical Instrumentation and Modeling, Standing Committee on Pavement Condition Evaluation, Standing Committee on Design and Rehabilitation of Concrete Pavements, Standing Committee on Design and Rehabilitation of Asphalt Pavements, Standing Committee on Pavement Structural Testing and Evaluation, Standing Committee on Pavement Surface Properties and Vehicle Interaction, Section - Highway Maintenance, Section - Infrastructure Management and System Preservation, Standing Committee on Pavement Management Systems, Standing Committee on Pavement Preservation, Standing Committee on Pavement Maintenance, Standing Committee on Structures Maintenance, Standing Committee on Bridge and Structures Management, Standing Committee on Bridge Preservation

Developing tools and products to extend the life-cycle of highway infrastructure assets depends on readily accessible data. The Federal Highway Administration has been leading in collecting and making available infrastructure data through its InfoHighway™ web portal with an objective to improve the performance and create a sustainable highway infrastructure. The workshop will discuss preservation, the effects of climate and traffic loading, sustainability, and resilience on designing new and preserving existing infrastructure. The workshop will also discuss how to use available data and emerging technologies to develop practical tools to extend the life-cycle of highway infrastructure assets. Additional data needs will also be discussed.

Welcome and Opening Remarks (P25-20625)
Gonzalo Rada/WSP
FHWA InfoHighway™ Web Portal (P25-20627)
Jane Jiang/Federal Highway Administration (FHWA)
Presentations by TRB Infrastructure Committee Chairs (P25-20635)
Gabe Cimini/Stantec, Jenny Li/Texas Department of Transportation, Anne Rearick/Indiana Department of Transportation, Michael Brown/Wiss, Janney, Elstner Associates
Breakout Group 1 - Life cycle Extension Through Preservation (P25-20638)
Jason Dietz/Federal Highway Administration (FHWA), James Nelson/Iowa Department of Transportation
Breakout Group 2 - Effect of Climate and Traffic (P25-20639)
Larry Wiser/Federal Highway Administration (FHWA), Tommy Nantung/Indiana Department of Transportation
Breakout Group 3 - Resilient and Sustainable Highway Infrastructure (P25-20642)
Amir Golalipour/Federal Highway Administration (FHWA), Jane Lin/University of Illinois, Chicago
Breakout Group 4 - Emerging Data Sources and Data Science (P25-20645)
David Mensching/Federal Highway Administration (FHWA), Nima Kargah-Ostadi/Callentis Consulting Group
Breakout Groups' Reports (P25-20646)
Jason Dietz/Federal Highway Administration (FHWA), Larry Wiser/Federal Highway Administration (FHWA), Amir Golalipour/Federal Highway Administration (FHWA), David Mensching/Federal Highway Administration (FHWA)
Closing Remarks (P25-20647)
Jean Nehme/Federal Highway Administration (FHWA)

1020

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 207B

3-Minute Thesis Competition: Effective Strategies for Communicating Research to a Broad Audience

Jhony Habbouche, Asphalt Institute, presiding
Niloo Parvinashtiani, Iteris Inc., presiding
Sruthi Ashraf, WSP, presiding
Nagham Matout, American Traffic Safety Services Association, presiding
Shraddha Sagar, University of Florida, presiding
Sponsored By Section - Highway Maintenance, Young Members Coordinating Council, Subcommittee on Safety and Operations Group Young Member, Transportation Infrastructure Group, Subcommittee on Transportation Infrastructure Group Young Members, Subcommittee on Young Members, Section - Highway Maintenance, Joint Young Members Subcommittee (AKR00 and AKT00), Section - Infrastructure Management and System Preservation, International Coordinating Council

The 3-Minute Thesis Competition is an exciting cross-cutting and interdisciplinary opportunity for young professionals to showcase their research in a concise, engaging way that effectively conveys the key objectives and findings of their research in 3 minutes to attendees from diverse areas of the transportation industry. Following the presentations, there will be a forum featuring keynote speakers and a panel of expert judges. During this interactive forum, the speakers and judges provide valuable feedback on communication skills, offer constructive comments on the presentations, and answer questions from the audience. This competition is open exclusively to young professionals under the age of 35 who are attending the TRB Annual Meeting.

3MT Judging Panel (P25-20494)
Trenton Clark/Virginia Asphalt Association, Judith Corley-Lay/No Organization, Kimberly Eccles/VHB, Carol Lewis/Texas Southern University, Leila Hajibabai/North Carolina State University, Chieh Ross Wang/Oak Ridge National Laboratory
The Talk That Sticks: Captivate and Communicate (P25-21418)
Jerome Horne/Maryland Transit Administration

1021

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 150B

Leveraging Innovation: Preparing for the Future of Highway Infrastructure Preservation, Maintenance, and Renewal

Rob Zilay, Dye Management Group, Inc., presiding
Brad Allen, Applied Pavement Technology, Inc., presiding
Sponsored By Standing Committee on Maintenance and Operations Management

Technology and customer expectations are changing rapidly, and highway infrastructure faces threats from climate change, extreme weather, and increasing traffic loads. As transportation agencies look to technology to support efficient preservation, maintenance, and renewal of the infrastructure, preparing for transformational change is essential. This interactive workshop will lead participants through a series of exercises, based on NCHRP Report 750, Volume 7. Participants explore promising technologies in construction, materials, traffic operations, asset management, and maintenance; related benefits, costs, and risks of adopting advanced technologies; identify implementation opportunities; and consider ways to support implementation.

Introduction and Workshop Overview: How to Prepare for Future Challenges through Implementing Innovative Technologies (P25-21465)
Brad Allen/Applied Pavement Technology, Inc.
Construction & Materials: Transformational Technologies and Practices for Highway Preservation, Maintenance, and Renewal (P25-21466)
Gregory Duncan/Applied Pavement Technology, Inc.
Asset Management: Transformational Technologies and Practices for Highway Preservation, Maintenance, and Renewal (P25-21467)
Steven Builta/Applied Pavement Technology, Inc.

(continued)

Traffic and Operations: Transformational Technologies and Practices for Highway Preservation, Maintenance, and Renewal (P25-21468)
Deepak Gopalakrishna/ICF
Interactive Activity: Prioritizing Promising Practices and Technologies (P25-21469)
Brad Allen/Applied Pavement Technology, Inc.
Interactive Activity: Action Planning to Support Implementation (P25-21470)
Brad Allen/Applied Pavement Technology, Inc.
Report Out and Discussion (P25-21471)
Brad Allen/Applied Pavement Technology, Inc.

1022

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 204AB
Advances in Seismic Research and Practices for Safe and Secure Bridges
Sreenivas Alampalli, Stantec, presiding
Monique Head, University of Delaware, presiding
Sponsored By Standing Committee on Bridge and Structures Management, International Coordinating Council, Standing Committee on Testing and Evaluation of Transportation Structures, Standing Committee on Bridge and Structures Management, Subcommittee on Safety and Security of Bridges and Structures, Standing Committee on Bridge Preservation

Earthquakes have the potential to cause not only financial loss but also impact on quality of life. Despite significant recent research, there has been considerable damage in recent earthquakes (e.g., Turkey in 2023) and there have been moderate earthquakes in the east coast of the United States, where many agencies are not well prepared to respond. This workshop will visit advances and implementation efforts in seismic areas, including post-seismic inspection guidelines in low and moderate seismic areas, adopting best practices, and identifying research and implementation gaps. This workshop focuses on these aspects with invited presentations and a discussion with representatives from research, practice, and policy makers.

1. FHWA Efforts in Research, Implementation, and Technology Transfer for Seismic and Multi-Hazard Resilience (P25-20373)
Jia-Dzwan Shen/Federal Highway Administration (FHWA)
2. Recent Developments in Seismic Design of Bridges, Implementation, and Further Research Needs (P25-20370)
Albert Nako/Oregon Department of Transportation, Nicholas Murray/Alaska Department of Transportation and Public Facilities
3. Developments in Seismic Design of Bridges – Then, Now, and Future (P25-20371)
Anurag upadhyay/Stantec
4. Post-Seismic Bridge Inspection Guidelines; and Implementation and Lessons Larned During Resent Earthquakes (P25-20372)
Sreenivas Alampalli/Stantec, Paul Campisi/New York State Department of Transportation, Jerome O'Connor/O'CONNOR ENGINEERS PLLC
5. Panel Discussion with Presenters and Roundtable Discussion (P25-20374)
Monique Head/University of Delaware, Sreenivas Alampalli/Stantec

1023

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 140

Gendered Differences in Crash Frequency, Injury, and Outcomes

Léa Ravensbergen, McMaster University, presiding

Sponsored By Standing Committee on Women and Gender in Transportation, Standing Committee on Transportation and Public Health

Preliminary research has found that American women are 17% more likely than men to die in the event of a car crash and 73% are more likely to sustain serious injuries in a front-end collision. Little research has been dedicated to understanding and reducing this gender gap in transport-related morbidity and mortality. This workshop aims to develop a concrete research program on gendered analyses of crash frequency, injury, and outcomes. The workshop will begin with a brief overview of the key takeaways from the 7th International Conference on Women and Gender in Transportation which took place in September 2024. This will be followed by interactive activities and discussions with the goal of developing a concrete research program.

Takeaways from the 2024 Women and Gender in Transportation Conference (P25-21127)
Léa Ravensbergen/McMaster University
Introductions (P25-21128)
Léa Ravensbergen/McMaster University
Wrap-up and Next Steps (P25-21129)
Léa Ravensbergen/McMaster University
Activity: Develop a Research Program (P25-21130)
Meghna Chakraborty/UNC Highway Safety Research Center
State of the Research: Moderator Introduction (P25-21131)
Jenna Sinclair/Federal Highway Administration (FHWA)
State of the Research: Panelist 1 (P25-21132)
Megan Wier/Oakland Department of Transportation
State of the Research: Panelist 2 (P25-21133)
Elizabeth Lafferty/National Highway Traffic Safety Administration (NHTSA)
State of the Research: Panelist 3 (P25-21134)
Catherine McCullough/Verity Now

1024

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 146B

Community Engagement: Who's on First?

Terri Lotti, HNTB, presiding

Sponsored By Standing Committee on Historic and Archeological Preservation in Transportation, Standing Committee on Public Engagement and Communications

This workshop will highlight the different offices and personnel that coordinate, consult, and engage persons along a surface transportation project. Aside from project members responsible for reaching out to the public (e.g., the National Environmental Protection Act, communication specialists), other disciplines such as archaeologists, architectural historians, and ecologists also communicate with affected property owners. How do we effectively address community, cultural, and natural resources throughout the life of a project? How do these different conversations with affected property owners and federal responsibilities (e.g., environmental justice, Section 106) conflict? How can we align our efforts to make outreach more effective and meaningful across the disciplines and different stakeholders?

Welcome, Agenda Overview, and Introductions (P25-21232)
Terri Lotti/HNTB, Lauran Switzer/Arcadis
Panelist 1 (P25-21233)
Jamille Robbins/North Carolina Department of Transportation
Panelist 2 (P25-21234)
Katina Lear/Georgia Department of Transportation
Panelist 3 (P25-21235)
Erica Schneider/Ohio Department of Transportation

(continued)

Panelist 4 (P25-21236)
Rebekah Dobrasko/Texas Department of Transportation
Workshop Instructions and Rotations (P25-21237)
Michael Garau/Kimley-Horn and Associates, Inc.

1025

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 146C
Change My Mind: Transportation Debate Challenge
Diana Herriman, FEMA, presiding
Ian Barnes, Fehr & Peers, presiding
Anne Strauss-Wieder, Rutgers University, New Brunswick, presiding
Sponsored By Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity, Standing Committee on Community Resources and Impacts, Standing Committee on Critical Transportation Infrastructure Protection, Standing Committee on Freight Transportation Planning and Logistics, International Coordinating Council

This fast-paced workshop features two teams of two going head-to-head in debates certain to reveal new opportunities for future research in resiliency, disaster response, evacuations, risk management & more: Move the Goods or the People - should impacted populations be evacuated, or should they stay put and have supplies delivered to them? Pay Now or Pay Later - should leaders invest in protecting assets against unknown potential future events, or save money for a rainy day and make repairs as needs arise? Who Is Responsible - should local communities take more responsibility for disaster response / recovery activities than government agencies? Audience vote will determine who made the most convincing arguments. Will they change your mind?

Advocate 1 (P25-20910)
Eleftheria Kontou/University of Illinois, Urbana-Champaign
Advocate 2 (P25-20911)
Charles Edwards/University of North Carolina, Chapel Hill
Advocate 3 (P25-20912)
Jose Holguin-Veras/Rensselaer Polytechnic Institute (RPI)
Advocate 4 (P25-20913)
Sandra Rothbard/Freight Matters
Advocate 5 (P25-20914)
Meredith Milam/Fehr & Peers
Advocate 6 (P25-20915)
Jason Pack/Fehr & Peers
Advocate 7 (P25-20916)
Igor Linkov/U.S. Army Corps of Engineers (USACE)
Advocate 8 (P25-20917)
Julie Eaton Ernst/HNTB
Advocate 9 (P25-20918)
Heidi Nelkie/Lindahl Reed
Advocate 10 (P25-20919)
Trayce Hockstad/Alabama Transportation Institute
Advocate 11 (P25-21176)
Mosi London/Arlington County (VA) DES/DOT
Advocate 12 (P25-21408)
Clay Barnes/Cambridge Systematics, Inc.

1026 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 147B

Opportunities to Integrate Greenhouse Gas Emissions Considerations in Transportation Planning

John Davies, Federal Highway Administration (FHWA), presiding

David D'Onofrio, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Air Quality and Greenhouse Gas Mitigation, Standing Committee on Performance Management

Through the Every Day Counts (EDC-7) initiative, the Federal Highway Administration (FHWA) is developing a comprehensive program of resources, best practice examples, outreach, technical assistance, and peer-to-peer learning opportunities to advance the state of practice on integrating greenhouse gas (GHG) assessment and reduction targets in transportation planning. This workshop will feature examples from peer agencies on strategies and methods for including GHG emissions considerations in planning activities, including methods to analyze emissions in the transportation planning process.

Panel 1: Overview of Opportunities for Integrating GHG Considerations in the Transportation Planning Process (P25-20762)

Catherine Duffy/ICF

Panel 1: State DOT Perspective (P25-20763)

Ari Lattanzi/Vermont Agency of Transportation

Panel 1: Missoula MPO Perspective (P25-20853)

Aaron Wilson/Missoula MPO

Panel 1: State DOT Perspective (P25-21136)

Deron Lovaas/Maryland Department of Transportation

Panel 2: Overview of Methods for Conducting GHG Analysis in the Transportation Planning Process (P25-20854)

Michael Grant/ICF

Panel 2: Oregon DOT's Use of Strategic Planning and Project Level Tools (P25-20855)

Tara Weidner/Oregon Department of Transportation

Panel 2: MPO Perspective on Using Travel Models and Other Tools (P25-20856)

Jacob Riger/Denver Regional Council of Governments (DRCOG)

Research Needs Wrap Up (P25-20857)

Michael Grant/ICF

1027 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 146A

Charging Infrastructure Reliability

Ximon Zhu, Numobility, presiding

Alan Jenn, University of California, Davis, presiding

Sponsored By Standing Committee on Transportation Energy, Standing Committee on Alternative Fuels and Technologies

This workshop aims to address critical challenges in electric vehicle charger reliability and interoperability. It will explore the latest methodologies for assessing charger performance and durability across different systems and environments. The session will include discussions on international standards for charger compatibility, innovative solutions for real-time monitoring and diagnostics, and strategies for enhancing the user experience in diverse operational contexts. Participants will gain insights into optimizing charger infrastructure for maximum efficiency and reliability.

Measuring Electric Vehicle Charging Infrastructure Reliability in California (TRBAM-25-04241)

Chaitanya Vaishnavi Karanam/University of California, Davis, Erinne Boyd/University of California, Davis, Alan Jenn/University of California, Davis, Gil Tal/University of California, Davis, Aaron Rabinowitz/University of California, Davis

EV Charging Reliability (P25-20858)

Kameale Terry/ChargerHelp

EV Charging Standards (P25-20859)

Dhananjay Anand/U.S. Department of Energy (DOE)

EV Charging Standards and OEMs View (P25-20860)

Frank Menchaca/Society of Automotive Engineers

(continued)

EV Charging Experience (P25-20861)
Kristi Moriarty/National Renewable Energy Laboratory (NREL)
Chargepoint Perspective (P25-20862)
Mal Skowron/ChargePoint, Inc.
Electrify America Perspective (P25-20863)
Maika Polamalu/Electrify America

1028 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 144AB
Powering Change: Shaping the Future of Zero-Emission Bus Transportation
Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Guillermo Calves, HNTB, presiding
Sponsored By Standing Committee on Bus Transit Systems, International Coordinating Council, Standing Committee on Geographic Information Science, Standing Committee on Transit Management and Performance, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Public Transportation Planning and Development

The workshop will cover a wide array of topics, including zero-emission buses' (ZEBs') technological innovations, policy and regulation, environmental impacts, financial viability and economic considerations, equity and social justice, case studies and best practices, collaboration and stakeholder engagement, and other pertinent deployment considerations. The overarching goal remains to foster a forward-thinking discourse on ZEBs' role in advancing sustainable and equitable urban transportation.

Session 1: FTA Insights & U.S. Transit Agency Leadership (P25-20724)
Jennifer Frost/Dallas Area Rapid Transit (DART)
FTA's Zero Emission Bus Research and Innovation (P25-20102)
Mohammed Yousuf/Federal Transit Administration (FTA), Patricia Happ/Federal Transit Administration (FTA)
Data-Driven Planning: Building a Resilient, Future-Ready Transportation Authority (P25-20334)
Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design
ZEB Blueprint for Silicon Valley: Opportunities, Challenges and Potential Solutions (P25-20726)
Deborah Dagang/Santa Clara Valley Transportation Authority (VTA)
Session 2: International Experience, Practices, and Insights (P25-20725)
Guillermo Calves/HNTB
The ZEB Transition: Lessons Learned From US and Global Experience (P25-20148)
Lisa Jerram/American Public Transportation Association (APTA)
Zero-Emission Bus: Challenges and Achievements (P25-20344)
S.K. Chang/National Taiwan University
How to Develop Green and Smart Public Transport: An International and Systematic Perspective (P25-20266)
Junyi Zhang/Southeast University
Implications of Transit Fleet Electrification Transition for Infrastructure, Operations, and Maintenance: Some Canadian Experience (P25-20335)
Doug Parker/Arcadis
Session 3: Panel Discussion & Q&A (P25-20727)
Chun-Hung Peter Chen/Santa Clara Valley Transportation Authority (VTA)

1029 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 144C

Navigating the Rising TIDES: Exploring the Present and Future of Transit Data Standards

Michael Eichler, Washington Metropolitan Area Transit Authority, presiding

Sponsored By Standing Committee on Transit Data, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Transit Management and Performance, Standing Committee on Public Transportation Planning and Development

TIDES (Transit ITS Data Exchange Specification) is a new, open standard to access and manage data generated by transit technology systems. It is currently managed by MobilityData, the nonprofit that oversees general transit feed specification. This workshop will demonstrate current TIDES implementations; crowdsource innovative uses of TIDES data, including National Transit Database reporting and performance dashboards; and collaboratively explore opportunities to extend TIDES to new data sources and new use cases for industry and research.

Welcome (P25-20289)
Todd Allen/Federal Transit Administration (FTA)
Introduction to TIDES (P25-20394)
John Levin/Metro Transit, Minneapolis-St. Paul
Why Data Standards Matter (P25-20395)
Eric Plosky/MobilityData
Awash in TIDES, Practical Implementation and Use at Metro Transit (P25-20396)
Joseph Reid/Metro Transit, Minneapolis-St. Paul
How Swiftly Measures and Makes Performance Data Available to Agencies...and How Open Standards Can Help! (P25-20397)
Ritesh Warade/Swiftly, Inc.
Generalizing transit modeling and analytics using TIDES (P25-20780)
Jason Gordon/Korbato
From Open Data to Analytics: The Story of Our Learnings from ABOD (Analyze Bus Open Data) in England, UK (P25-20698)
Michael Jacklin/Ito World Ltd.

1030

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 143C

Artificial Intelligence and Machine Learning Strategies and Remote Sensing for Railway Infrastructure Condition Assessment, Part 1 (Part 2, Session 1062)

Stephen Wilk, Association of American Railroads, presiding

Sponsored By Standing Committee on Railroad Infrastructure Design and Maintenance

Railroad track monitoring is essential for maintaining safe railroad operations. Artificial intelligence (AI) and machine learning (ML) strategies with regard to track infrastructure and remote sensing have the potential to improve safety and maintenance decisions using track- and way-side inspection systems. This two-part workshop aims to discuss state-of-the-art inspection technologies, AI/ML current and future capabilities and challenges, and how they can enhance railroad safety and decision making.

Part 1 - Vision and Needs (P25-21041)
Stephen Wilk/Association of American Railroads
Safety Briefing and Introduction (P25-20758)
Adam Bankston/BNSF Railway
Vision on Artificial Intelligence Implementation (P25-20759)
Hugh Thompson/Federal Railroad Administration (FRA)
Part 2: Artificial Intelligence Evaluation (P25-21225)
Stephen Wilk/Association of American Railroads
Overview of FRA-Sponsored Artificial Intelligence Research and How It Affects Safety and Efficiency (P25-21019)
Abe Meddah/Federal Railroad Administration (FRA)

(continued)

Machine Learning for Forecasting Track Degradation Rate (P25-21023)
Saeed Goodzarzi/HNTB
Smart Maintenance: Using Artificial Intelligence to Pre-Emptively Address Railway Faults (P25-21025)
Spencer Czajkowski/Network Rail Consulting
Optimising Digital Twins: Leveraging Ontologies for Parameterisation Generation in SUMO and the Birmingham Rail Virtual Environment (P25-21029)
Joseph Preece

1031 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 143AB
Playing Chess Not Checkers: Disruptions as the Status Quo
Daniel Haake, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Trucking Industry Research, International Coordinating Council, Standing Committee on Freight Rail Transportation, Freight Systems Group, Marine Group

Freight disruptions—related to infrastructure, geopolitical, and supply chain incidents—are now the norm. This workshop will feature two-panel discussions. The first will focus on U.S. domestic challenges. The second will focus on international challenges. Members of each panel will be asked targeted questions to capture real-world lessons from their experiences. Following each panel, a group activity will identify the implications of this new normal, what recent experiences have taught us, and most importantly, capture advice for participants of the next (or current) freight disruption crisis.

California's Experience (P25-20426)
Christine Casey/California State Transportation Agency (CalSTA)
International Perspectives #1 (P25-20722)
Walter Kemmsies/The Kemmsies Group, LLC
International Perspectives #2 (P25-21140)
Georgia Ayfantopoulou/Hellenic Institute of Transport
International Perspectives #3 (P25-21141)
Jose Holguin-Veras/Rensselaer Polytechnic Institute (RPI)

1032 **CM** (3.00)

Sunday, 09:00 a.m. - 12:00 p.m., Convention Center, 145A
Artificial Intelligence in Aviation: Opportunities and Challenges for Safety and Security
Cheng Wang, Minnesota State University, Mankato, presiding
Nubia Del Carpio, George Mason University, presiding
Gaël Le Bris, WSP, presiding
Sponsored By Standing Committee on Aviation Safety, Security and Emergency Management, Subcommittee on Young Members-Aviation, Standing Committee on Aviation Economics and Forecasting, Standing Committee on Airfield and Airspace Performance, Subcommittee on Aviation Safety, Standing Committee on New Users of Shared Airspace

What are the potential implications of the introduction of artificial intelligence (AI) in aviation? How could AI be used to enhance flight safety? What impact does AI have on safety and security in the aviation industry? In this workshop, we will identify, explore, and discuss the vast opportunities AI presents, such as advanced security measures, predictive analytics for safety, real-time monitoring, improved decision making, resilience to new and emerging threats, and AI-driven risk management.

AI Essentials Unleashed: Dive into the Future Technology (P25-20459)
Brian O'Donnell/OST-R/Volpe Center
Driving Innovation: Visionary AI Strategies for Transforming the Department (P25-20461)
Mike Horton/Office of the Secretary of Transportation (OST)
Panel Discussion: FAA Perspective (P25-20463)
Trung Pham/Federal Aviation Administration (FAA)
Panel Discussion: U.S. Department of Transportation Perspective (P25-20833)
Mike Horton/Office of the Secretary of Transportation (OST)

(continued)

Panel Discussion: Volpe Center Perspective (P25-20834)
Brian O'Donnell/OST-R/Volpe Center
Panel Discussion: 17 Solutions Perspective (P25-20835)
Alex Murray/17 Solutions LLC
Poster: Statistical Learning and Large Language Models for Enhanced Data Extraction and Analysis of Aviation Accident Investigation Reports (P25-21481)
Joao Souza Dias Garcia/Embry Riddle Aeronautical University, Dothang Truong/Embry Riddle Aeronautical University
Poster: Pilot Mental Workload Assessment Using fNIRS-based Brain Effective Connectivity During Crosswind Approach and Landing (P25-21482)
Chenyang Zhang/Southwest Jiaotong University, Shihan Luo/Southwest Jiaotong University, Shi Cao/University of Waterloo, Ya Shu/China Academy of Building Research, Chaozhe Jiang/Southwest Jiaotong University
Poster: Noncontact Perception for Assessing Pilot Mental Workload during the Approach and Landing under Various Weather Conditions (P25-21484)
Chenyang Zhang/Southwest Jiaotong University, Shihan Luo/Southwest Jiaotong University, Wenbing Zhu/Southwest Jiaotong University, Hua Chen/Southwest Jiaotong University, Jiajun Yuan/University of China, Chaozhe Jiang/Southwest Jiaotong University
Poster: The Future of Airports: Smart Airports at the Era of Information Technologies (P25-21486)
Gaël Le Bris/WSP, Loup-Giang Nguyen/WSP
Poster: The Future of Airports: Enhancing Aviation Safety Under a Growing and More Diverse Traffic (P25-21489)
Gaël Le Bris/WSP, Loup-Giang Nguyen/WSP
Poster: Benchmark to Accelerate Artificial Intelligence (AI) in Aviation Safety-Critical Systems: A Case Study on Developing Uncrewed Aircraft Systems Detection Dataset based on Generative Adversarial Networks and Variational Autoencoders (P25-21495)
Chenyu Huang/University of Nebraska, Chuyang Yang/Embry Riddle Aeronautical University, Dominik Li/University of California, San Diego
Poster: Studying pilots' Situation Awareness and takeover performance during the process from autopilot control to manual flying using a flight simulator (P25-21514)
Wendy Ding/University of Waterloo

Sunday, 10:00 a.m. - 02:00 p.m., Convention Center, Hall A
Careers in Motion Networking Fair
Sponsored By Executive Committee

Transportation professionals from all career levels are encouraged to attend this high-energy networking event to learn about available positions from across sectors and various modes. Attendees will have the opportunity to meet and chat with hiring managers, receive feedback on their qualifications, and learn firsthand about job opportunities.

1033

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, Salon C
Low-Income Reduced Fare Programs: Lessons from Shared Micromobility and Public Transit Systems
Calvin Thigpen, Lime, presiding
Lee Biernbaum, Massachusetts Department of Transportation, presiding
Sponsored By Standing Committee on Bicycle Transportation, International Coordinating Council, Joint Subcommittee on Emerging Vehicles for Low Speed Transportation (with ACH10, ANB40, and AP020), Standing Committee on Equity in Transportation, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Public Transportation Marketing and Fare Policy

In recent years, public transit agencies and shared micromobility programs alike have expanded reduced fare programs for low-income travelers. Through panel presentations and interactive breakout sessions, this workshop will share the latest research on reduced fare programs, addressing travel behavior and equity outcomes, policy implications, and financial considerations for agencies and operators.

(continued)

Keynote: Low-Income Reduced Fare Programs (P25-20980)
Candace Brakewood/University of Tennessee, Knoxville
Discounts, Incentives, and Rewards: Oh My! Leveraging Digital Identity to Improve the Affordability of Travel Options for People with Lower Incomes (P25-20981)
Lilly Shoup/Rebel
MBTA Income-eligible Reduced Fares: Streamlining Program Design with Technical Integrations (P25-20982)
Arthur Prokosch/Massachusetts Bay Transportation Authority (MBTA)
Metro Lift: Making Reduced Fares Easy (P25-21526)
Mark Irvine/Washington Metropolitan Area Transit Authority
Free Transit for Homeless Youth (P25-21527)
Noah Kelly/McGill University
Exploring the Determinants of Transit Fare Affordability (P25-21528)
Sajad Askari/University of Illinois, Chicago
Discounted Micromobility: Expanding Choices for People With Few Options (P25-20983)
Alexa Delbosc/Monash University
The Benefits of Free Fares: Outcomes From a Shared Micromobility Pilot in Grand Rapids, Michigan (P25-20984)
Kevin Manaugh/McGill University
The high price of reduced fares: Investing in shared micromobility low-income programming (P25-21529)
Ted Randell/District Department of Transportation
An equity-focused approach to zero fare, reduced fare, and targeted fares programs in transit and shared mobility services (P25-21530)
Alvaro Villagran/Shared-Use Mobility Center
The Intersection of Shared Micromobility and Transportation Equity (P25-21531)
Laura Mallonee/North American Bikeshare & Scootershare Association
Learning from each other (P25-21532)
Karina Ricks/CityFi

1034

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 102B
Artificial Intelligence and Human Factors in Vehicle Transportation: Innovations and Future Directions
Shan Bao, University of Michigan, presiding
Jing Feng, North Carolina State University, presiding
Yi-Ching Lee, George Mason University, presiding
Sponsored By Standing Committee on Human Factors of Vehicles, Standing Committee on Vehicle-Highway Automation

This workshop will explore the impact of artificial intelligence (AI) on human factors in vehicle transportation, covering state-of-the-art research and practices. Topics include AI in automation, driver monitoring, intelligent traffic management, cooperative driving automation, large language models for in-vehicle information systems, and driver behavior regulation. Experts from academia, industry, and government will discuss advancements and future directions. The workshop will foster collaboration and knowledge exchange.

What the CA Self-Driving Data Tells Us About Gaps in HF Research (P25-20566)
Mary Cummings/George Mason University
Evaluating Driving Behaviors of Simulated Agent Models with Human Data (P25-20568)
Shuyuan Liu/Waymo
Improving Intersection Safety Using AI + Human Factors (P25-20569)
Brian Philips/Federal Highway Administration (FHWA)
Pedestrian Behavior Prediction to Improve AV-Pedestrian Interactions (P25-20571)
Renran Tian/North Carolina State University
Video Analytics for Highway Safety - Alive and Well (P25-20572)
Michael Griffith/Transoft Solutions

1035

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, Salon B

Crowd and Cloud Powered Transportation Systems Management and Operations Data Exchanges to Advance Operations and Safety

Vaishali Shah, Applied Enterprise Management Corporation, presiding
Blake Hansen, Olsson, presiding
Sponsored By Standing Committee on Freeway Operations, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Intelligent Transportation Systems, Standing Committee on Managed Lanes

This workshop will explore research needs for crowd and cloud-powered TSMO Data Exchanges to enhance operations, safety, and more. As crowdsourced data plays an increasing role in all areas of transportation systems—asset management, construction, and particularly in transportation systems management, operations, and safety—effective data exchanges are crucial for maximizing its value. The event includes an OEM panel, followed by discussions on opportunities and collaborative models for evaluating new crowdsourced data and analytics services.

Indiana DOT on OEM Data (P25-20936)
Edward Cox/Indiana Department of Transportation
Maricopa Association of Governments on OEM Data (P25-20937)
Wang Zhang
General Motors on OEM Data (P25-20938)
Harnit Anand/GM Future Roads
Google Maps on Data Exchange (P25-20939)
Andrew Stober/Google Maps
INRIX on Data Exchange (P25-20940)
Terri Johnson/Inrix, Inc.

1036

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, Salon A

How Do We Evolve and Adapt Managed Lanes from Here?

Bhanu Kala, Goleyo, presiding
Laura Huizinga-Barton, Lindsay Transportation Solutions, presiding
Sponsored By Standing Committee on Managed Lanes, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Intelligent Transportation Systems, Standing Committee on Freeway Operations, Standing Committee on Vehicle-Highway Automation, Standing Committee on Highway Capacity and Quality of Service, Standing Committee on Highway Traffic Monitoring

How can managed lanes become a hub of the systemwide integrated mobility? How do you finance such inclusive mobility, navigating the barriers of siloed pots by mobility and infrastructure type? With vehicle and infrastructure automation and connectivity evolving annually, can and should managed lanes serve as a testbed for such newer technologies before wider deployment? If so, how can managed lanes collaborate with other network entities, such as public transit, highways, and traffic signal to enable such testbeds? Wider adoption of managed lanes will aid with the above-mentioned global mobility focus areas, but what strategies are required to expand managed lanes to other states in the United States and to areas outside of North America?

Financing Inclusive Mobility to Enhance Managed Lanes' Systemwide Role (P25-20670)
Dan Lamers/North Central Texas Council of Governments, Binyam Reja/World Bank, Jerry Valdez/New Mexico Department of Transportation, Shaleen Srivastava/Goleyo
Should Managed Lanes Be the Cradle for Automation and Connectivity? (P25-20669)
Glenn HAVINOVISKI/JMT, Inc., Joe Hutchinson/Cintra, Hari Sripathi/Virginia Department of Transportation
How Can We Accelerate Managed Lanes' Adoption in Emerging Markets? (P25-20665)
Casey Emoto/Santa Clara Valley Transportation Authority (VTA), Nathan Masek/Mid Region Council of Government, Adrian Moore/Reason Foundation, Gregory Jones/Federal Highway Administration (FHWA)
Research Needed to Grow, Expand, and Advance Managed Lanes (P25-20951)
Nick Wood/Texas A&M Transportation Institute

(continued)

Focus Area for Next Year's Workshop (P25-20952)
Laura Huizinga-Barton/Lindsay Transportation Solutions

1037

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 103A

Digital Twins Powered by Traffic Simulation, Artificial Intelligence, Machine Learning, and Big Data for Real-World Deployment Testing and Validation
Kaan Ozbay, New York University, presiding
Sanhita Lahiri, Virginia Department of Transportation, presiding
Sponsored By Standing Committee on Traffic Simulation, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Freeway Operations, Subcommittee on Simulation (SimSub), ACP80(1), Joint Subcommittee of ACP80, ACP20, ACP25, ACP35, ACP40, ACP50, ACP55, AEP40, AMS10

This workshop will focus on the development of digital twins as a decision-support tool for varying applications with time scales ranging from the near-real-time operations and management to long-term planning of complex transportation systems. Moreover, the role of artificial intelligence and machine learning that will be required to be incorporated into the digital twin applications to make them operationally feasible and effective will also be discussed.

Enhancing Digital Twins with Reinforcement Learning (P25-21003)
Eugene Vinitsky/New York University
StreetSavii: AI Assistant for Complete Streets that are safe and efficient (P25-21007)
Rahul Mangharam/University of Pennsylvania
Generative AI-Based Human-Autonomy Teaming on Connected and Automated Vehicles (P25-21231)
Ziran Wang/Purdue University
AI/ML enhanced Digital-Twin Based Risk-Aware Intelligent Mobility Simulation and Analytics for Incident Management Operations in New York City (P25-21006)
Zilin Bian/New York University
From Traffic Simulation to Mobility Digital Twin: Concept and Strategies (P25-21008)
Hwasoo Yeo/Korea Advanced Institute of Science and Technology
Digital Twin for Urban Resilience: Modeling Transportation and Water Infrastructure Interoperability (P25-21009)
Venktesh Pandey/North Carolina A&T State University
Simulating traveler decision making and traffic using POLARIS for Digital Twin Applications: Methodology and large-scale case studies (P25-21010)
Omer Verbas/Argonne National Laboratory
Testing and Evaluation of Multiscale Infrastructure-Vehicle Cooperative Control in Simulation and Digital Twins (P25-21011)
Jeff Ban/University of Washington
Revolutionizing Logistics and Supply Chains with Digital Twin Technology (P25-21012)
Tho Le/Purdue University
Panel Discussion on the Role of AI/ML and Big Data in the future research, development, and deployment opportunities of DT's (P25-21013)
Daniel Work/Vanderbilt University, Rahul Mangharam/University of Pennsylvania, Eugene Vinitsky/New York University

1038

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 150A

Transportation Big Data Sources and Equity

Sara Khoeini, WSP, presiding

Tom Vo, Southern California Association of Governments, presiding

Michael Fontaine, Virginia Transportation Research Council, presiding

Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Transportation Demand Forecasting, Standing Committee on Equity in Transportation

As technology for passively collecting big data sources evolves, and vendors offer diverse data formats reflecting transportation system performance, two key equity-related questions arise: How representative is transportation big data across various population dimensions, given privacy concerns and technological challenges in assembling this data? What are the most effective ways to use big data for analyzing equity in transportation? Case studies from various sectors will be presented. The workshop agenda consists of two panel sessions each focusing on one key question raised above. Each panel consists of: Introduction Lightning Presentations by Panelists Audience Participation and Discussion Panel Discussion Conclusion And Next Steps

An Introduction to Equity in Big Transportation Data (P25-20225)

Tierra Bills/University of California, Los Angeles

Prospects and Challenges of Using Location-Based Services Data in Travel Behavior Analysis (P25-20226)

Fariba Siddiq/National Renewable Energy Laboratory (NREL)

A Few Thoughts on Big Data Representativeness from Ohio (P25-20227)

Gregory Giaimo/WSP

Applying Big Data to Equity Analyses: Studying Bike Lanes in New York and Public Transit in Chicago (P25-20230)

Steven Turell/Replica, Albab Noor/Replica

Leveraging Origin-Destination “Big Data” for Equity Analysis in Atlanta (P25-20233)

Guy Rousseau/Atlanta Regional Commission

Evaluating Transportation Equity Issues, Data Needs, and Gaps (P25-20234)

Todd Litman/Victoria Transport Policy Institute

Big Data, Bigger Problems (P25-20235)

Hunter Owens/California Department of Transportation

Equity in Transit: Case Study from Seattle (P25-20228)

Anurag Komanduri/LOCUS Inc.

Panelist (P25-20231)

Alex Karner/University of Texas, Austin

Panelist (P25-20232)

Jesus Barajas/University of California, Davis

1039

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 150B

Synergizing Sensing and Artificial Intelligence Data into Digital Twin Models

Steven Parker, University of Wisconsin, Madison, presiding
Zhixia Li, University of Cincinnati, presiding
Colin Brooks, Michigan Tech Research Institute, presiding
Yelda Turkan, Oregon State University, presiding

Sponsored By Standing Committee on Information Systems and Technology, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Geographic Information Science, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Visualization in Transportation

Digital twin models are transforming the way transportation systems are designed, monitored, and managed. This interactive workshop invites transportation professionals, researchers, and enthusiasts to dive into the dynamic field of integrating sensing and artificial intelligence technologies into digital twin models. Participants will be encouraged to share their perspectives, challenges, and success stories to foster a collaborative learning environment and a platform for open discourse.

Co-Moderator (P25-20649)
Zhixia Li/University of Cincinnati
Co-Moderator (P25-20650)
Colin Brooks/Michigan Tech Research Institute

1040 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 151A

Remote Work and Its Impact on Mobility and Land Use: Modeling the Good, the Bad, and the Ugly

Veronique Van Acker, Luxembourg Institute of Socio-Economic Research, presiding
Giovanni Circella, Ghent University, presiding
Venu Garikapati, National Renewable Energy Laboratory (NREL), presiding
Thomas Rossi, Cambridge Systematics, Inc., presiding

Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices, International Coordinating Council, Standing Committee on Traveler Behavior and Values, Standing Committee on Transportation Demand Forecasting, Standing Committee on Transportation Demand Management, Standing Committee on Transportation-Related Noise and Vibration, Standing Committee on Economic Development and Land Use

Remote work is often seen as a solution to urban congestion, air pollution, and rural depopulation. Still, it can cause rebound effects like more non-work trips and added pressure on rural infrastructure. This workshop will explore remote work's positive and negative impacts on mobility, land use, labor, and housing markets and how insights are integrated into transportation forecasting models. This workshop starts with expert presentations from various regions. The second part is more interactive, using Concept Mapping, a participatory-based approach combining ideation, idea sorting, and idea rating. The workshop's outcome is a collectively built conceptual framework on how to model the mobility and land use impacts of remote work.

Welcome and Introductions (P25-20671)
Venu Garikapati/National Renewable Energy Laboratory (NREL), Veronique Van Acker/Luxembourg Institute of Socio-Economic Research, Thomas Rossi/Cambridge Systematics, Inc.
Heterogeneity in Telework Behavior in the Post-Pandemic Area (P25-21118)
Hamid Rezaei/Florida International University
Time Divide and Remote Work: Exploring Emissions, Health, and Equity Implications Using Time Use Data (P25-20851)
Mahmudur Fatmi/University of British Columbia
To What Extent Does Post-Pandemic Teleworking Influence Intentions for Residential Location Choice in Scotland? (P25-21119)
Mostafa Ilham/Edinburgh Napier University

(continued)

Telework Practices, Residential Practices, Intention to Move and Residential Location: A Case Study from Lisbon (P25-20852)
João de Abreu e Silva/IST-ID
Policy Response Options to the New Normal and Urban Doom Loops (P25-21513)
Michael Wilkerson/ECONorthwest
Concept Mapping Exercise: How Do We Plan and Build Healthy, Inclusive, and Sustainable Cities for a Future with Remote Work? (P25-20672)
Veronique Van Acker/Luxembourg Institute of Socio-Economic Research
Panel Discussion: Final Reflections (P25-21121)
Kay Axhausen/Swiss Federal Institute of Technology (ETH Zurich), Xinyi Wang/Massachusetts Institute of Technology

1041 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 151B
Doctoral Research in Transportation Modeling and Travel Behavior Analysis
Rolf Moeckel, Technische Universität München: Technische Universitat Munchen, presiding
Patricia Mokhtarian, Georgia Institute of Technology, presiding
Khandker Nurul Habib, University of Toronto, presiding
Yanfeng Ouyang, University of Illinois, Urbana-Champaign, presiding
Ram Pendyala, Arizona State University, presiding
Kuilin Zhang, Michigan Technological University, presiding
Sponsored By Standing Committee on Transportation Network Modeling, Standing Committee on Traffic Flow Theory and Characteristics, Standing Committee on Transportation Planning Policy and Processes, Standing Committee on Transportation Planning Analysis and Application, Standing Committee on Travel Survey Methods, Standing Committee on Traveler Behavior and Values, Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices, Standing Committee on Transportation Demand Forecasting, Standing Committee on Transportation Demand Management, Standing Committee on Transportation-Related Noise and Vibration

This workshop aims to provide a platform for younger TRB attendees to present their newest research on transportation modeling and travel behavior analysis. Doctoral researchers or recent doctoral graduates present their research in 5-minute presentations. Presentations are grouped into four blocks, and a debater will ask the presenters questions after each block of four presentations. The audience will also have the opportunity to add questions. The discussion with and between doctoral researchers helps to shed light on current research issues.

Barriers and Opportunities for Resource Access Experienced by Marginalized Populations in the Hybrid Digital Era (P25-20617)
Gretchen Bella/Northwestern University
What Factors Influence the Adoption and Use of Dockless Bike-Share? A Case Study from the Sacramento Region (P25-20618)
Hossain Mohiuddin/Morgan State University
An Imitation Learning Framework through Adaptive Learning Process for On-Demand Mobility Services (P25-20620)
Jaehyung Lee/Yonsei University
Transferring Lab-Collected Eye-Tracking Insights to Investigate the Decoy Effect in Online Choice Experiments (P25-20621)
Ding Jiaxuan/National University of Singapore
Towards a New Paradigm of Activity-Based Travel Demand Modeling: Activity Scheduling in Physical and Virtual Space (P25-20623)
Md Asif Hasan Anik/Dalhousie University
Would You Drive, Ride, or Fly to the Airport? Mode Choice Insights about Electric Air Taxis for Long-Distance Airport Travel (P25-20626)
Atul Subedi/Utah State University
Advanced Modeling and Optimization of Ride Sourcing Drivers' Routing Behavior (P25-20628)
Guocheng Jiang/University of Massachusetts, Amherst
A Family of Accessibility Measures (P25-20630)
Anastasia Soukhov/McMaster University

(continued)

Just Transition to Electric Vehicles in Disadvantaged Communities: Integrating Transportation, Energy and Climate Justice (P25-20631)
Abdirashid Dahir/Ohio State University
Drivers and Barriers to Electric Vehicle Adoption: A Study of Public Perceptions, Secondary Market Preferences, and Policy Design (P25-20634)
Bruno Cesar Krause Moras/Purdue University
Investigating Heterogeneity in Private Vehicle Ownership, Preferences towards Alternative-Fuel Vehicles, and Adoption of Shared Mobility Options (P25-20641)
Xiatian Iogansen/University of California, Davis
Modeling and Planning for Future Multimodal Transportation Systems with Household-owned Driverless Vehicles (P25-20643)
Younghun Bahk/University of California, Irvine
Modeling Commuting Travel Behavior and Assessing the Potential Impact of Private Autonomous Vehicles (P25-20644)
Fei Xue/Beijing University of Technology
Optimizing Curb Space in the Era of New Mobility and Big Data: A Framework for Modeling Behavior, System Impacts, and Policy Interventions (P25-20657)
Jiachao Liu/Carnegie Mellon University

1042

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 152B
Data and Dollars: Crafting a Compelling Story About Asset Management
Michael Garau, Kimley-Horn and Associates, Inc., presiding
Walter (Jeff) Moore, Michael Baker International, Inc., presiding
Sponsored By Standing Committee on Public Engagement and Communications, Standing Committee on Transportation Asset Management

Asset management practitioners are tasked with collecting data for use by internal and external stakeholders. However, identifying the correct data to tell the right story is a challenge. This interactive workshop will walk through the process of developing communication strategies for transportation asset management teams. Participants will work through multiple scenarios to evaluate various techniques.

Seattle's New Waterfront - Improving Asset Management & Lifecycle Planning Within Capital Programs (P25-20513)
Emily Burns/Seattle Department of Transportation
Metropolitan Planning Organization (MPO) Messaging Perspectives (P25-20515)
Jeffrey Neal/NCTCOG
The Act-89 Story and Lessons Learned (P25-20518)
Laura Zale/Southeastern Pennsylvania Transportation Authority (SEPTA)

1043 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 152A
Accelerating Project and Program Delivery Through Innovative and Alternative Financing
Albert Racciatti, Halmar International / ASTM North America, presiding
Mariana Torres-Montoya, International Finance Corporation, presiding
Steven DeWitt, ACS Infrastructure Development, Inc., presiding
Sponsored By Standing Committee on Economics and Finance, Subcommittee on Public-Private Partnerships, Standing Committee on Project Delivery Methods

Innovative approaches are being used to leverage existing funding sources to accelerate the delivery of large improvement programs, breaking free of the constraints of traditional "pay go" methods. Through presentations and breakout exercises, participants will learn effective strategies from several notable agencies that are accelerating multi-billion-dollar programs with innovative and alternative finance strategies designed to expedite delivery, promote competition, and optimize risk sharing.

(continued)

Workshop Concept and Goals (P25-20359)
Mariana Torres-Montoya/International Finance Corporation, Albert Racciatti/Halmar International / ASTM North America
Setting the Stage: Alternative Finance/Project Delivery Strategies and Risk Transfer (P25-20356)
Steven DeWitt/ACS Infrastructure Development, Inc.
Case Studies: Accelerated Project and Program Delivery (P25-20357)
Amna Cameron/North Carolina Department of Transportation, Jaclyn Hartman/Maryland Department of Transportation, Alistair Sawers/Massachusetts Bay Transportation Authority (MBTA)
Breakout Session: P3 Structures for Accelerated Project Delivery (3:30 pm) (P25-20358)
Steven DeWitt/ACS Infrastructure Development, Inc.

1044

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 202B
Putting Climate Change on Trial: Examining the Intersection of Climate Change and Climate Resilience with Tort Liability for Transportation Organizations
Terri Parker, Missouri Department of Transportation, presiding
Sponsored By Standing Committee on Tort Liability and Risk Management, Standing Committee on Environmental Issues in Transportation Law

As climate change transforms the physical world, it is also transforming the legal landscape. Transportation officials must adapt their planning, design, operation, and maintenance of transportation facilities. Attorneys representing transportation departments must also adapt their legal strategies. This workshop will examine these evolving legal issues through the lens of a mock trial. Participants will see the “outcome” of climate resilience planning (or the lack of planning) in a mock trial setting. Participants will then identify ways to avoid negative outcomes by working with legal staff.

Putting Climate Change on Trial (P25-20061)
Heidi Skinner/County of San Diego, Edward Boling/Perkins Coie, LLP

1045

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 207B
The Role of Precast Concrete in the Sustainability of Transportation Infrastructure: Approaches and Challenges
Bassem Andrawes, University of Illinois, Urbana-Champaign, presiding
Andrew Wagner, HDR, presiding
Sponsored By Standing Committee on Concrete Bridges, Standing Committee on Advanced Concrete Materials and Characterization, International Coordinating Council

This workshop will provide participants with an overview of the green concrete technologies that are either successfully implemented or showing promise for implementation in precast concrete (PC) transportation infrastructure. PC is produced in a controlled environment, which makes it ideal for introducing new and innovative technologies that are quite challenging for cast-in-place concrete. The workshop will discuss the efforts made by researchers and practitioners in advancing transportation sustainability using eco-friendly concrete as well as the challenges facing the practical application of these new concretes in transportation infrastructure. Industry and research experts affiliated with the Transportation Infrastructure Precast Innovation Center will share their knowledge and lead the panel discussion with the participants.

Revolutionizing Precast Concrete Production: Innovative Paths Towards Ultra-Sustainable Transportation Infrastructure Systems (P25-21046)
Mirian Velay-Lizancos/Purdue University
Designing with Long-Life In Mind Using Surface Resistivity and High Portland Cement Replacement Contents (P25-21044)
Tyson Rupnow/Louisiana Department of Transportation and Development
Working with Alternative Cements and SCMs: New Materials Require New Tests and Specifications (P25-21045)
Lawrence Sutter/Sutter Engineering LLC
Precast Concrete Pavement Design to Achieve Sustainable Development Goals (P25-21043)
Tommy Nantung/Indiana Department of Transportation

(continued)

Introduction (P25-21108)
Bassem Andrawes/University of Illinois, Urbana-Champaign
Panel Discussion (P25-21109)
Bassem Andrawes/University of Illinois, Urbana-Champaign

1046

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 156
Integrating AASHTO Guidelines for Performance-Based Seismic Design of Highway Bridges
Nicholas Murray, Alaska Department of Transportation and Public Facilities, presiding
Sponsored By Standing Committee on Seismic Design and Performance of Bridges, Standing Committee on Innovative Highway Structures and Appurtenances, Standing Committee on Steel Bridges, Standing Committee on Concrete Bridges, Subcommittee on Geoseismic Issues of Bridges (with AKG70), Standing Committee on Foundations of Bridges and Other Structures

This workshop will explore current practices and future opportunities for practicing engineers to incorporate the recently published AASHTO Guidelines for Performance-Based Seismic Design of Highway Bridges. These guidelines were a result of the widely supported NCHRP Project 12-106 (NCHRP Research Report 949). Learn how these guidelines enable bridge designers to account for smaller seismic events at different performance states, enhancing structural resilience and reducing downtime and repair expenses.

Background and Methodology of the AASHTO PBSD Guidelines (P25-20340)
Lee Marsh/WSP, Stuart Bennion/WSP
Caltrans Risk-Based Seismic Design (CT-RBSD) – Evolution of Caltrans Seismic Design Practice (P25-20341)
Yeo Yoon/California Department of Transportation
Multi-level Event Design in South Carolina (P25-20342)
Ty Stokes/HDR
Direct Displacement-Based Design and Future Research (P25-20343)
Mervyn Kowalsky/North Carolina State University, Thomas Murphy/Modjeski and Masters, Inc.
The Willamette River (Van Buren) Bridge in Corvallis, Oregon (P25-20458)
Andy Howe/DOWL

1047

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 103B
Resilience Starts with 100-Year Pavement Foundations
John Siekmeier, MnDOT - retired, presiding
Tom Yu, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials, Subcommittee on Geotechnical Asset Management, Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials, Standing Committee on Transportation Earthworks, Standing Committee on Geotechnical Instrumentation and Modeling, Standing Committee on Foundations of Bridges and Other Structures, Standing Committee on Geosynthetics, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Subcommittee on Sustainable and Resilient Pavements, Subcommittee on Young Members, Standing Committee on Pavement Structural Testing and Evaluation

Four cross-cutting presentations will share examples of: Maintenance activities resulting from pavement foundation problems. Construction activities that enhance pavement foundations and increase surface layer resilience. Design activities that maximize resilience and long-term pavement system performance. Asset management activities that establish records that improve maintenance, construction, and design. The four cross-cutting presentations will be followed by breakout groups and subsequent discussions with state department of transportation representatives, private-sector companies, and academic colleagues. Participants will share their thoughts and experiences and develop specific action steps that are expected to accelerate implementation.

Maintenance Activities Resulting from Pavement Foundation Problems (P25-20674)
Tom Scullion/Texas A&M University

(continued)

Enhancing Pavement Foundations to Increase Flexible Pavement Resilience (P25-20675)
Ester Tseng/TEST, Inc., Imad Al-Qadi/University of Illinois
Design Activities that Maximize Resilience and Long-Term Pavement System Performance (P25-20676)
DAN KING/Iowa State University
Geotechnical Asset Management Activities that Improve Pavement System Performance (P25-20677)
Sara Ghatee/Connecticut Department of Transportation

1048

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 101
Transportation Earthworks: Design, Installation, Evaluation, and Sustainability of Lightweight Fills
Nico Sutmoller, Aerix Industries, presiding
Jennifer Nicks, Federal Highway Administration (FHWA), presiding
Jie Han, University of Kansas, presiding
Sponsored By Standing Committee on Transportation Earthworks, Standing Committee on Geosynthetics, Standing Committee on Stabilization of Geomaterials and Recycled Materials

This workshop examines the design, construction, evaluation, and sustainability of lightweight fills, which can replace traditionally compacted backfills to reduce or eliminate soil improvement requirements. The workshop will start with a state of the practice presentation, focusing on two case studies with problems; group exercises; and solutions and then have a panel discussion with panelists representing government, industry, and academia. Participants will be grouped to discuss possible options and the pros and cons to deal with the problems presented in the case histories. The panel discussion will share recent research results and applications, with emphasis on lessons learned in design, installation, evaluation, and sustainability.

State of the Practice in Lightweight Fills for Transportation Applications (P25-21026)
Erol Tutumluer/University of Illinois, Urbana-Champaign
Case Study 1: Project Problem Presentation - Foamed Glass Aggregate (P25-21027)
Cody Russell/New York State Department of Transportation
Project Solution: Selection, Design, Construction, QA/QC, and Performance (P25-21028)
Theresa Loux/Aero Aggregates
Case Study 2: Project Problem Presentation - Lightweight Cellular Concrete (P25-21030)
Ryan Maw/Gerhart Cole Inc
Project Solution: Selection, Design, Construction, QA/QC, and Performance (P25-21031)
Ryan Maw/Gerhart Cole Inc
Panel Discussion (P25-21042)
Ari Menitove/Utah Department of Transportation

1049

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 206
Revisiting and Refining Asphalt Binder Specifications: What Have We Learned and What Are We Still Missing?
Jhony Habbouche, Asphalt Institute, presiding
Faustina Keuliyan Rodriguez, Heritage Research Group, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement, Standing Committee on Production and Use of Asphalt, Standing Committee on Asphalt Materials Selection and Mix Design, Standing Committee on Asphalt Mixture Evaluation and Performance, Standing Committee on Design and Rehabilitation of Asphalt Pavements

The primary objective of this workshop is to provide insights into the logistics for refining and revisiting specifications for asphalt binders. This includes addressing impediments in transition from research to implementation and highlighting issues related to specifications and specific materials. The workshop will incorporate lessons learned and case studies from state departments of transportation. Despite advancements in asphalt binder formulations, issues such as premature pavement failures persist, prompting reassessment of current specifications. Recent research proposes new tests or criteria to screen binders with uncertain performance prospects, highlighting the necessity for revisions of asphalt binder specifications.

(continued)

Revisiting and Refining Asphalt Binder Specifications - Setting the Stage (P25-20077)
Jhony Habbouche/Asphalt Institute
The Evolution of the Performance Graded Asphalt Binder Specification (P25-20078)
R. Michael Anderson/Asphalt Institute
A Collaborative Approach to Transforming Asphalt Binder Specifications – Texas Perspective (P25-20079)
Enad Mahmoud/Texas Department of Transportation, Amit Bhasin/University of Texas, Austin
Time for a Change: Why Indiana DOT is Making Major Changes to Binder Specifications (P25-20080)
Matt Beeson/Indiana Department of Transportation
Leveraging Surrogate Testing: Insights from iCCL (P25-20081)
Christopher Desmond/Maine Department of Transportation
Better Binder Testing Through Chemistry (P25-20082)
Kelly Senger/Illinois Department of Transportation
A Binder Supplier's Perspective (P25-20083)
Kevin McGlumphy/Associated Asphalt an Ergon Company
A Contractor's Perspective (P25-20084)
Andrew Hanz/MTE Services
Revisiting and Refining Asphalt Binder Specifications - Closing Remarks (P25-20085)
Faustina Keuliyan Rodriguez/Heritage Research Group

1050

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 201
Toward Low-Carbon Concrete, Part 2 (Part 1, Session 1018)
Jason Weiss, Oregon State University, presiding
Thomas Van Dam, Wiss, Janney, Elstner Associates, Inc., presiding
Sponsored By Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Tunnels and Underground Structures, Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete, Standing Committee on Structures Maintenance

This workshop will cover what low-carbon concrete means. Practical methods to reduce the carbon footprint of concrete by reducing the powder content, reducing the clinker content, and increasing the life cycle will be presented. This includes the use of Type IL (Portland Limestone Cement), supplementary cementitious materials, novel materials, and technologies. Examples will be covered to demonstrate how barriers to change can be overcome. Discussions of codes for low-carbon concrete, environmental product declarations, and life-cycle assessments will be presented. A panel discussion will cover successes and challenges as a path for the future to improve the sustainability of concrete transportation infrastructure.

Validation Arithmetic for the Influence of Unique Products in Concrete Mixes (P25-20018)
Bernard Izevbekhai/Minnesota Department of Transportation
Strategies to Accelerate Decarbonization in the Cement and Concrete Industry (P25-20019)
Karthik Obla/National Ready Mixed Concrete Association, Brian Killingsworth/National Ready Mixed Concrete Association
Evaluation of Reactivity and Performance of Non-traditional SCMs (P25-20020)
Jan Olek/Purdue University
Use of Ground-glass Pozzolans Towards a Low-carbon Concrete Technology (P25-20021)
Prasad Rangaraju/Clemson University
The Potential for Carbon-Enriched Concrete Constituents to Reduce Emissions (P25-20022)
Erin Stewartson/Federal Highway Administration (FHWA)
Long-Term Reduction in Permeability with Low-Carbon Concretes Resulting in Additional Carbon Reduction (P25-20023)
Neal Berke/Tourney Consulting Group, Kyle Stanish/Tourney Consulting Group
Panel Discussion and Wrap-up (P25-20024)
Jason Weiss/Oregon State University, Thomas Van Dam/Wiss, Janney, Elstner Associates, Inc.

1051

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 207A

Roads, Tracks, and Runways: Life-Cycle Assessment in Civil Infrastructure Policy and Practice

Amlan Mukherjee, WAP Sustainability, presiding
Heather Dylla, Construction Partners Inc., presiding
Gonzalo Rada, WSP, presiding
Sponsored By Section - Pavements, Standing Committee on Quality Assurance Management, Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Aggregates, Subcommittee on Sustainable and Resilient Pavements, Standing Committee on Freight Rail Transportation, Standing Committee on Railroad Infrastructure Design and Maintenance

A recent policy push to decarbonize transportation infrastructure with funding promoting the use of Enivronmental Product Declaration (EPDs) for purchasing “substantially low carbon” construction materials. With limited guidance on integrating EPDs into procurement processes, there is a need to bring together diverse perspectives from government and industry to examine effective ways in which EPDs can be used to further the goals of sustainable project delivery. This workshop will examine alternative approaches to using life cycle assessment (LCA) in the engineering, procurement, and construction of highways, rail, and aviation infrastructure.

Agency Panel Discussion (P25-21373)
LaToya Johnson/Federal Highway Administration (FHWA), Navneet Garg/Federal Aviation Administration (FAA), Michael Johnsen/Federal Railroad Administration (FRA), Curt Turgeon/Minnesota Department of Transportation, Luke Bassis/Port Authority of New York and New Jersey
Next Steps in Green Labels: Moderated by EPA (P25-21374)
Joseph Shacat/U.S. Environmental Protection Agency (EPA), Peter Bacas/U.S. Environmental Protection Agency (EPA)
Industry Perspectives (P25-21376)
James Willis/National Asphalt Pavement Association, Brian Killingsworth/National Ready Mixed Concrete Association, Pasi Lautala/Michigan Technological University
Interactive moderated group discussion (P25-21377)
Heather Dylla/Construction Partners Inc.
Wrap up and next steps (P25-21378)
Amlan Mukherjee/WAP Sustainability

1052

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 202A

Integrating Future Climate Projections into Pavement Design: What Would It Take?

Leslie Myers, Federal Highway Administration (FHWA), presiding
Austin Jarrell, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Design and Rehabilitation of Asphalt Pavements, Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials, Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Asphalt Mixture Evaluation and Performance, Subcommittee on Sustainable and Resilient Pavements, Subcommittee on Young Members, Standing Committee on Design and Rehabilitation of Concrete Pavements, Standing Committee on Pavement Structural Testing and Evaluation, Standing Committee on Extreme Weather and Climate Change Adaptation

Climate change may produce nonstationary climate impacts resulting in inadequate pavement structures using current design processes. There is need to incorporate future climate projections in design processes using a multidisciplinary approach to ensure that pavements designed and constructed today can withstand future climate conditions. The workshop will identify barriers for implementing future climate projections in mechanistic-empirical pavement design in the context of structural design analysis and pavement foundations. This will include summarizing agency experience, lessons learned, successes and failures, and the current state of knowledge for incorporating future climate projections into mechanistic empirical pavement design.

Overview of Future Climate Projections and Relation to Transportation Infrastructure (P25-21198)
Gerald Kauffman

(continued)

Opening Remarks (P25-21197)
Austin Jarrell/Federal Highway Administration (FHWA), David Vivanco/Oklahoma Department of Transportation
Current Research and Implementation Efforts for Incorporating Future Climate Projections in Mechanistic Empirical Pavement Design (P25-21199)
Benjamin Underwood/North Carolina State University
State DOT Perspective on Incorporating Future Climate Projections in Pavement Design and Multidisciplinary Collaboration Needs (P25-21200)
Steven Olmsted/Arizona Department of Transportation
Pavement Foundation Needs for Future Climate Incorporation (P25-21201)
Jim Pappas/AECOM
Presenter Panel Q&A (P25-21202)
David Vivanco/Oklahoma Department of Transportation
State DOT Panel Discussion and Q&A (P25-21203)
Mary Jane Hayden/Florida Department of Transportation, Jenny Li/Texas Department of Transportation, Steven Olmsted/Arizona Department of Transportation, Affan Habib/Virginia Department of Transportation
Moderator-Led Discussions (P25-21204)
Amir Golalipour/Federal Highway Administration (FHWA), Dr. Soheil Nazarian/University of Texas, El Paso, Tom Yu/Federal Highway Administration (FHWA), David Timm/Auburn University, James Bryce/West Virginia University, James Mack/CEMEX
Report Out (P25-21205)
Caitlin Purdy/Rowan University
Open Discussion (P25-21206)
David Vivanco/Oklahoma Department of Transportation
Ending Remarks (P25-21207)
Caitlin Purdy/Rowan University

1053

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 204AB
Integrating Non-Destructive Evaluation Technologies into Bridge Preservation and Management
Michael Brown, Wiss, Janney, Elstner Associates, presiding
Hoda Azari, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Bridge Preservation, Standing Committee on Structures Maintenance, Standing Committee on Bridge and Structures Management

To promote effective bridge preservation, states have used non-destructive testing and evaluation (NDT-E) techniques to evaluate and prioritize bridge needs and develop project scopes. This workshop will engage experts and stakeholders to discuss the integration of NDT-E methodologies into preservation practices. State department of transportation (DOT) participants will share experiences, lessons learned, and best practices related to NDT-E and its uses for bridge management (life-cycle planning) and decision making. Interactive discussions, case studies, and hands-on demonstrations will draw from experiences of nationally recognized industry, DOTs, and Federal Highway Administration experts. The workshop will inform participants about recent advancements that can be applied to steel and concrete bridges.

Welcome and Opening Remarks, Objectives and Goals of the Workshop (P25-21473)
Michael Brown/Wiss, Janney, Elstner Associates, Richard Dunne/Greenman-Pedersen, Inc.
The History of Non-Destructive Evaluation in Bridge Preservation (P25-21474)
Glenn Washer/University of Missouri, Columbia, Michael Brown/Wiss, Janney, Elstner Associates, Richard Dunne/Greenman-Pedersen, Inc.
Evaluation of Bridge Decks for Preservation: A Case Study (P25-21475)
Mohamed ElBatanouny/Wiss, Janney, Elstner Associates, Inc., Andy Foden/HNTB
Evaluation of In-service Post-tensioning Systems: A Case Study (P25-21476)
Andy Foden/HNTB, Shane D Boone/BDI Bridge Diagnostics, Inc.
Evaluation of Fatigue-fracture of Steel Elements: A Case Study (P25-21477)
Curtis Schroeder/Wiss, Janney, Elstner Associates

(continued)

Experiences with Non-destructive Evaluation for Bridge Preservation (P25-21478)
Nancy Huether/Michigan State University, Okemos, James Nelson/Iowa Department of Transportation, Steven Austin/Texas Department of Transportation, Felix Padilla/Florida Department of Transportation, Annette Adams/Virginia Department of Transportation
Future Directions in NDE for Bridge Preservation (P25-21479)
Anne Rearick/Indiana Department of Transportation, Hoda Azari/Federal Highway Administration (FHWA)
Hands-on Demonstration: Steel and Concrete Bridge Evaluation (P25-21480)
Marybeth Miceli/Miceli Infrastructure Consulting, LLC

1054

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 146B
Strategies for Transportation Agencies to Address Road Safety for People Experiencing Homelessness
Anthony Boutros, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Equity in Transportation

Are people experiencing homelessness living on or near the right of way that your agency manages? Are your agency's crews interacting with people experiencing homelessness during their routine maintenance, inspection or construction work? Are people experiencing homelessness disproportionately killed or seriously injured on your roadways? If you answered yes to any of these questions, or if you have additional questions related to homelessness and the transportation system, this workshop is for you! This workshop is interactive and includes multiple activities to make sure the discussion and outcomes are helpful and actionable for transportation practitioners – insights may also be of interest to researchers, consultants and interested stakeholders. The workshop features (1) inspiring examples implemented by State and local agencies and (2) actionable tools and strategies you can implement in your State. Presenters include experts from Federal, State and local agencies as well as researcher.

FHWA Case Study on Promising Practices for Transportation Agencies to Address Road Safety Among People Experiencing Homelessness (P25-21095)
Anthony Boutros/Federal Highway Administration (FHWA), Megan Dere/Federal Highway Administration (FHWA), Joanne Waszczak/Federal Transit Administration (FTA)
Rapid Spotlight: Applying Ethnographic Methods for Meaningful Involvement (P25-21097)
Melissa Chiovenda/Federal Highway Administration (FHWA)
Training TxDOT Staff and Crew in Mental Health and First Aid (P25-21098)
Lori Wagner/Texas Department of Transportation
Job Training Programs and Workforce Development for People Experiencing Homelessness (P25-21099)
Miguel Arellano/Texas Department of Transportation, Lori Wagner/Texas Department of Transportation
Developing an FAQ: What do you still need to know? (P25-21100)
Anthony Boutros/Federal Highway Administration (FHWA)
Rapid Data Activity: Can you add a question to the Point in Time (PIT) Count? (P25-21101)
Anthony Boutros/Federal Highway Administration (FHWA)
Integrating Homelessness into NEPA: Lessons Learned in Practice (P25-21177)
Miguel Arellano/Texas Department of Transportation
Innovative Data Tools and Analysis Strategies (P25-21178)
Ashley Meehan/Centers for Disease Control and Prevention, Jesse Mintz-Roth/San Jose Department of Transportation
with Public Health and Homeless Service Response Systems to Address Road Safety among People Experiencing Homelessness (P25-21179)
Ashley Meehan/Centers for Disease Control and Prevention
Homelessness on the Road: Understanding and Responding to Homelessness in State Transportation Settings (P25-21521)
Hao Ding/University of California, Los Angeles

1055 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 140

The Transportation Perspective on Human Trafficking and the Impact on Well-Being, Health, and Communities

John Habermann, Texas A&M Transportation Institute, presiding
Felipe Aros-Vera, Ohio University, presiding
Ipek Sener, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Transportation and Public Health, Standing Committee on Native American Transportation Issues, International Coordinating Council

This session will feature experts who will delve into the intersections of human trafficking with public health, public well-being, law, transit systems, Indigenous communities, freight networks, and airports. Following presentations, attendees will engage in an idea exchange and development session to identify research gaps. The resulting refined list of priorities will be submitted to NCHRP, AASHTO, and others. Human trafficking and transportation has the interest of several committees (e.g., Law and Transportation, Native Americans, Transit, Freight, and Public Health). Other communities that are invited include human trafficking researchers and non-governmental organizations (e.g., victim advocacy groups, Truckers Against Trafficking).

Welcome and Introductions (P25-20554)
John Habermann/Texas A&M Transportation Institute
Panel Discussion: Human Trafficking Intersection with Different Sectors of Transportation (P25-20556)
Ipek Sener/Texas A&M Transportation Institute
Panel (Presentation): Transportation Law (P25-20560)
Trayce Hockstad/Alabama Transportation Institute
Panel (Presentation): Airports (P25-20562)
Felipe Aros-Vera/Ohio University
Panel (Presentation): Indigenous/Missing and Murdered Indigenous Persons (P25-20563)
Margo Hill/Eastern Washington University
Panel (Presentation): Transit (P25-20564)
Jodi Godfrey/University of South Florida
Panel (Presentation): Freight (P25-20565)
Kylla Lanier/Truckers Against Trafficking
Table Exercises / Breakout Session / Conclusion (P25-20567)
Felipe Aros-Vera/Ohio University

1056

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 146C

Measuring the Impacts and Performance of Transportation Resilience Efforts

Maria Pena, Gannett Fleming, Inc., presiding
Suseel Indrakanti, Cambridge Systematics, Inc., presiding
Melissa Savage, Jacobs, presiding
Sponsored By Standing Committee on Critical Transportation Infrastructure Protection, Standing Committee on Performance Management, Standing Committee on Transportation Asset Management, Standing Committee on Systems, Enterprise, and Cyber Resilience

Transportation agencies have increased their focus on incorporating resilience improvements to minimize the impact of disruptions. To make informed investment in resilience strategies, there is a need for tools and performance measures to track the progress toward improving system resilience. Having a consistent set of resilience performance measures (RPMs) will accelerate the cost-effective deployment of investments and the incorporation of resilience into standard practices. This interactive workshop will present a set of key RPMs for the opportunity to run table-top exercises providing the necessary data to assess the effectiveness of illustrative resilience strategies.

1057

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 146A

Optimizing the Selection of Traffic-Related Air Pollution Mitigation Strategies from the Lens of Environmental Justice and the Built Environment

Marianne Hatzopoulou, University of Toronto, presiding
Sharon Liljenwall, Oregon Department of Transportation, presiding
Sponsored By Standing Committee on Air Quality and Greenhouse Gas Mitigation

Emissions from traffic-related activities negatively impact the environment and quality of life. In addition, certain communities bear disproportionate health burdens because they are exposed to a higher concentration of pollutants. The aim is to learn from their experiences by exploring their effective strategies, challenges encountered, lessons learned, and methods of community engagement. The outcome of the workshop would be to understand how all agencies need to work together at all levels (local, state, and federal) to share resources to even the playing field and reduce health effects from air pollution exposure for underrepresented communities. A list of mitigation measures will be developed for several situations.

Panel Discussion (P25-20830)
Regan Patterson/University of California, Los Angeles, Abhilash Vijayan/Sonoma Technology, Inc., Carolyn Nelson, P.E./Pipeline and Hazardous Materials Safety Administration (PHMSA)

1058

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 145B

Transit Data Challenge: Innovative Analytical Tools to Improve Public Transit

Paulina Ruiz, Foothill Transit, presiding
Sponsored By Standing Committee on Transit Management and Performance, Standing Committee on Public Transportation Planning and Development, Standing Committee on Transit Data

The Transit Data Challenge is an opportunity for analysts to demonstrate an innovative tool, method, or product that uses data to improve decision making and get results for public transit. The submission topics range from operations to planning and maintenance to internal administration. The objectives of the challenge are to highlight data's impact in public transit, foster information sharing across public transit, and introduce more people to the research and connections that TRB provides.

HomeBound Tool (P25-20712)
Daniela Shuman/Massachusetts Institute of Technology
Fare Payment Compliance Monitoring Tool (P25-20316)
Mahdi Azhdari/University of Massachusetts, Amherst
GTFS2Code: LLM-Powered Transit Data Analysis Tool (P25-20697)
Saipraneeth Devunuri/University of Illinois, Urbana-Champaign
Battery Electric Bus Estimator Tool (P25-20715)
Ehab Ebeid/Foursquare Integrated Transportation Planning
Demand-Response vs. Fixed-Route Analysis Tool (P25-20699)
Liang Zhai/Kittelson & Associates, Inc. (KAI)
Safety Investigation Workflow Application (P25-20709)
Michael Melencio/Massachusetts Bay Transportation Authority (MBTA)
Bus Delay Decomposition Model (P25-20705)
Yunwei Hu/Massachusetts Institute of Technology
Transit Accessibility Analysis Tool (P25-20718)
Melissa Gaughan/King County (WA) Metro Transit

1059 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 144AB

Enhancing Suburban, Rural, Tribal, and Island Mobility: The Role of Microtransit, Mobility Hubs, Placemaking, and Emerging Innovations

Jonathan Brooks, The Goodman Corporation, presiding

Sponsored By Standing Committee on Rural, Intercity Bus, and Specialized Transportation, Rural Transportation Issues Coordinating Council, Standing Committee on Pedestrians, Standing Committee on Native American Transportation Issues, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Passenger Intermodal Facilities, Standing Committee on Ferry Transportation, International Coordinating Council

This workshop will delve into the potential of on-demand microtransit, mobility hubs, and other transit innovations to enhance mobility in suburban, rural, tribal, and island communities. It will cover opportunities, challenges, emerging practices, and innovative approaches. Additionally, the workshop will discuss operational models, funding, and policy considerations. Part 1 will focus on operating microtransit and mobility hubs in these communities. Part 2 will explore the intersections of microtransit, ferries, mobility hubs, and placemaking. Speakers will include representatives from on-demand microtransit operations, technology providers, policymakers, and researchers. Discussion will encompass transit, walking, biking, and ferries.

Welcome (P25-20210)
Jonathan Brooks/The Goodman Corporation
Workshop Why? (P25-20211)
Lisa Ballard/David Evans and Associates, Inc., Adam Cohen/University of California, Berkeley
Rural Microtransit: State of the Practice (P25-20209)
Alanna McKeeman/Foursquare Integrated Transportation Planning
Placemaking with Mobility Hubs: Context Matters (P25-20213)
Jonathan Brooks/The Goodman Corporation
Town Hall Conclusion: Taking Action (P25-20214)
Jonathan Brooks/The Goodman Corporation

1060 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 144C

Delivering Post-Pandemic Services

Alexander Barron, Imperial College London, presiding

Sponsored By Standing Committee on Urban Rail Transit Systems, Standing Committee on Public Transportation Planning and Development, Standing Committee on Passenger Rail Transportation

Following the pandemic, transit providers across the world have reviewed their services to ensure that they are relevant and attractive to both existing and potential new riders in today's "new normal." This workshop will bring together a national and international perspective on the latest service patterns and service levels across light rail, metro, commuter rail, and intercity rail systems. The focus will be on what has changed, why, the outcomes of those changes, and any further changes on the horizon. Session will organize activities that attendees will be asked to discuss the current and future service needs of various customer profiles (e.g. airport traveller, downtown office worker, university student). Each table will be assigned a different profile and the groups will then report findings back to the wider group, with the opportunity to discuss the different needs and the various barriers and enablers to different service offerings.

Post-Pandemic Service Changes and Considerations from a Global View (P25-20953)
Alexander Barron/Imperial College London
Findings on the Future of Commuter Rail (P25-20954)
Paul Lewis/Deutsche Bahn International USA, Inc. (DBI-USA)
2023 Service Changes that Respond to Post-Pandemic Needs (P25-20955)
Matt Broughton/Metro Transit (MN)
Rethinking of Services Post-Pandemic (P25-20956)
Kareen El Beyrouty/Washington Metropolitan Area Transit Authority

1061

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 149

Psychological Safety and Emotional Well-Being in the Workplace: Transforming Transportation Safety
Lisa Staes, USF Center for Urban Transportation Research, presiding
Sponsored By Standing Committee on Transit Safety and Security

In this interactive workshop, participants will learn to foster psychological safety in the workplace, which is crucial for productivity and emotional well-being. They will focus on self-awareness and relationship building and practice enhancing emotional intelligence through listening, conflict management, and positive communication. These skills are essential for boosting employee retention, morale, safety, and cultivating a positive organizational culture.

Igniting the Spark and Creating Change: Understanding Emotional Well-being in the Transport Sector (P25-20437)
Karen Philbrick/Mineta Transportation Institute
Practices and Strategies for Building Psychological Safety (P25-20441)
Michael Coplen/TrueSafety Evaluation, LLC
The intersection of Emotional Intelligence and Psychological Safety: Supporting Culture Initiatives (P25-20444)
Darlene Slaughter/Washington Metropolitan Area Transit Authority
Psychological Safety's Role in Conflict: The Good, the Bad and the Ugly (P25-20455)
Ed Watt/WattADR

1062

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 143C

Artificial Intelligence and Machine Learning Strategies and Remote Sensing for Railway Infrastructure Condition Assessment, Part 2 (Part 1, Session 1030)
Stephen Wilk, Association of American Railroads, presiding
Sponsored By Standing Committee on Railroad Infrastructure Design and Maintenance

Railroad track monitoring is essential for maintaining safe railroad operations. Artificial intelligence (AI) and machine learning (ML) strategies with regard to track infrastructure and remote sensing have the potential to improve safety and maintenance decisions using track- and way-side inspection systems. This two-part workshop aims to discuss state-of-the-art inspection technologies, AI/ML current and future capabilities and challenges, and how they can enhance railroad safety and decision making.

Part 3: Artificial Intelligence Inspection (P25-21226)
Stephen Wilk/Association of American Railroads
Artificial Intelligence Inspection with BNSF (P25-21033)
Arthur Bilheri/BNSF Railway
Monitoring Asset Condition Change (P25-21034)
Asger Eriksen/Zetica Limited
How Machine Learning and Artificial Intelligence Helped Solve Unique Condition Problems on Concrete Ties (P25-21021)
David Pagliuco/Loram Technologies Inc
Ongoing Work with CSX (P25-21035)
Marcus Dersch/University of Illinois, Urbana-Champaign
Edge-Computing Based Track Inspection (P25-21036)
Yu Qian/University of South Carolina
Part 4: Sensing Technology (P25-21227)
Stephen Wilk/Association of American Railroads
Space-Based InSAR to Monitor Larger Landslides (P25-21037)
Michael Hendry/University of Alberta
Advances in Sensing Technology (P25-21038)
Pasi Lautala/Michigan Technological University
Industry Needs for Passenger/Commuter Rail (P25-21039)
Evan Whatley/National Railroad Passenger Corporation

(continued)

Railroad Applications of Distributed Acoustic Sensing (P25-21040)
Ashish Jain/Sensonic, Inc.

1063

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 143AB
Integrating Artificial Intelligence in Logistics, Supply Chains, and Freight Planning: Navigating Challenges and Unlocking Opportunities
Sushant Sharma, Texas A&M Transportation Institute, presiding
Fatemeh Ranaiefar, Fehr & Peers, presiding
Anne Strauss-Wieder, Rutgers University, New Brunswick, presiding
Kaveh Shabani, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Freight Transportation Planning and Logistics, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Freight Transportation Data, Section - Transportation Systems Resilience, Standing Committee on Freight Transportation Economics and Regulation, Subcommittee on Freight Modeling, Standing Committee on International Trade and Transportation, Joint Subcommittee on Supply Chains (with AT025, AT045, and AW010), Standing Committee on Urban Freight Transportation, Standing Committee on Agriculture and Food Transportation, Standing Committee on Intermodal Freight Transport

This workshop is tailored for freight practitioners and researchers from both the public and private sector eager to explore how artificial intelligence (AI) can address challenges in freight planning, supply chains, and logistics. It will feature talks and discussions on the growing influence of AI in logistics, supply chains, and freight planning opening new possibilities and solutions. The goal of the workshop is to develop problem statements for further exploration and generate ideas to pursue in committee meetings and conference sessions. The speakers will include a mix of industry professionals and academics.

Key Questions about AI in Logistics, Supply Chain, and Freight Planning (P25-20837)
Anne Strauss-Wieder/Rutgers University, New Brunswick
AI Innovations in Freight Transportation: Enhancing Safety, Sustainability, and Economic Growth (P25-20839)
Ashutosh Prasad/KoiReader Technologies
Perspectives on Artificial Intelligence on Ports (Port of Long Beach) (P25-20960)
Nyariana Maiko/Port of Long Beach
AI and Technology Updates from FMCSA (P25-20961)
Ankur Saini/Federal Motor Carrier Safety Administration (FMCSA)

1064 **CM** (3.00)

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 145A
Airport Slot Allocation and Capacity Management
Konstantinos Zografos, University of Lancaster, presiding
Tatjana Bolic, University of Westminster, presiding
Michael Hanowsky, Woolpert, Inc., presiding
Sponsored By Standing Committee on Airfield and Airspace Performance, International Coordinating Council

The objective of the workshop is to bring together academics, practitioners, and policy makers to discuss issues related to airport slot allocation and capacity management at congested airports. The workshop will involve presentations of recent search developments in this area and discussions on the implications of the research results on policy and practice. The focus of the workshop will be on issues related to (1) optimal setting of airport capacity and delays, (2) models and algorithms for optimum slot allocation, and (3) market-based approaches for airport slot allocation. The targeted audience of the workshop will be researchers, practitioners (consultants, airlines, airports), and policy makers.

Optimizing Slot Allocation Decisions (P25-20434)
Konstantinos Zografos/University of Lancaster
Auction Based Airport Slot Allocation (P25-20438)
Michael Ball/University of Maryland, College Park
Airport Capacity Declaration and Slot Allocation (P25-20440)
Ralph Tamburro/Port Authority of New York and New Jersey

(continued)

Do more US airports need slot controls? (P25-20442)
Mark Hansen/University of California, Berkeley
SOSTA Extension (P25-20445)
Andrea Gasparin/Universita degli Studi di Trieste
Estimating values of slot substitutions in GDP (P25-20447)
Jing Xu/University of California, Berkeley

1065

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 147B
Aviation Applications of Pavement-Transportation Computed Assisted Structural Engineering (PCASE) 7
Katie Chou, Stantec, presiding
Sponsored By Standing Committee on Aircraft/Airport Compatibility

Historically, the Pavement-Transportation Computed Assisted Structural Engineering (PCASE) software has been used by the U.S. military for the design and evaluation of airfield and road pavements in accordance with the Unified Facilities Criteria. Over the years, it has also seen widespread use by both consulting firms and academia, both within the United States and internationally. This workshop will first provide an overview of the capabilities of the newest release of this software (PCASE 7.07) for the aviation industry. Focus will then shift toward working layered elastic design problems and conclude by evaluating an existing pavement structure.

Introduction to PCASE (P25-20781)
Jeremiah Stache/U.S. Army Engineer Research and Development Center, Katie Chou/Stantec
Downloading PCASE (P25-20782)
George Stubblefield/U.S. Army Corps of Engineers (USACE)
Handling traffic (P25-20783)
Jeremiah Stache/U.S. Army Engineer Research and Development Center
Example: setting up a pattern (P25-20784)
George Stubblefield/U.S. Army Corps of Engineers (USACE)
Layered elastic design (P25-20785)
Jeremiah Stache/U.S. Army Engineer Research and Development Center
Example: rigid pavement (P25-20786)
George Stubblefield/U.S. Army Corps of Engineers (USACE)
Backcalculating layer moduli in LEEP (P25-20787)
Jeremiah Stache/U.S. Army Engineer Research and Development Center
Example: import FWD file and backcalculate moduli (P25-20788)
George Stubblefield/U.S. Army Corps of Engineers (USACE)
Evaluating pavements: APs, AGLs, ACN/PCN & ACR/PCR ratios (P25-20789)
Jeremiah Stache/U.S. Army Engineer Research and Development Center
Example: evaluate pavement structure in LEEP (P25-20790)
George Stubblefield/U.S. Army Corps of Engineers (USACE)
Open discussion and Q&A (P25-20791)
Katie Chou/Stantec

1066

Sunday, 01:30 p.m. - 04:30 p.m., Convention Center, 209AB

Knowledge and Know-How Supply Chain Workshop

Erika Witzke, CPCS Transcom, presiding
Shannon McLeod, American Association of Port Authorities, presiding
Jolene Hayes, Fehr & Peers, presiding
Kevin Keller, HDR, presiding
Joseph Bryan, WSP, presiding
Daniel Hackett, Hackett Associates, LLC, presiding
Sponsored By Standing Committee on Inland Water Transportation, Standing Committee on Freight Rail Transportation, Freight Systems Group, Standing Committee on Freight Transportation Planning and Logistics, Standing Committee on International Trade and Transportation, Joint Subcommittee on Supply Chains (with AT025, AT045, and AW010), Standing Committee on Intermodal Freight Transport, Marine Group, Standing Committee on Ports and Channels, Standing Committee on Marine Environment, Standing Committee on Ferry Transportation

This is an engaging and interactive workshop that combines a trivia game with in-depth discussions led by supply chain experts to enhance knowledge and expertise in supply chain management. Participants will compete in teams to answer trivia questions related to various aspects of supply chain management, including global trade, logistics, transportation, warehousing, and resiliency and test knowledge of key concepts, industry trends, best practices, and historical milestones in supply chain operations. Following each round of trivia, experts will provide related insights, share real-world experiences, and offer ideas for future research, including optimizing supply chain performance, overcoming challenges, and identifying emerging trends.

1067

Sunday, 02:30 p.m. - 04:00 p.m., Convention Center, Ballroom AB

New Attendee Engagement Session

Ann Brach, Transportation Research Board, presiding
Sponsored By Technical Activities Council

Attend and learn about the many opportunities available through engagement in TRB. Get tips on navigating the Annual Meeting and making the most of your time during the week. Learn about the value of continued participation through TRB technical committees. Understand the available tools, resources, programs, and extensive research capabilities available to transportation professionals through TRB. The session includes a networking segment to introduce you to the committee leadership in your area of interest—a first step in your journey to establishing lifelong professional networks through TRB.

Sunday, 04:00 p.m. - 07:00 p.m., Convention Center, Hall D&E

Exhibit Hall Opening Reception

Sponsored By Technical Activities Council

The opening of the Exhibit Hall includes the popular reception with light hors d'oeuvres and cash bars. Visit over 200 exhibits, including the TRB booth, showcasing the many transportation-related products and services. View the floor plan and interactively search for exhibiting organizations on the Mobile App.

Monday, January 06 (Sessions 2001 - 2094, 2096 - 2242)

2001

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon A
Emerging Topics in Bicycling and Micromobility
Kari Watkins, University of California, Davis, presiding
Sponsored By Standing Committee on Bicycle Transportation

This lectern session will present on a range of emerging topics affecting bicycling and micromobility modes covering technology applications, bike sharing, e-bikes, and even "bike buses."

Who Are the Marginal Purchasers? Examining Induced Adoption from Income-Conditioned E-Bike Rebates in British Columbia, Canada (TRBAM-25-04810)
Polina Polikakhina/No Organization, Alexander Bigazzi/No Organization, Amir Hassanpour/No Organization
Bike Buses: An Evaluation of an Emerging Active Transportation to School Intervention (TRBAM-25-02755)
Evan Howington/Portland State University, Nathan McNeil/Portland State University, John MacArthur/Portland State University
Bike-Share Station Location Optimization Leveraging Ridership Dynamics (TRBAM-25-04911)
Ghazaleh Mohseni Hosseinabadi/York University, Mehdi Nourinejad/York University, Peter Park/York University
Do Only Cyclists Support Cycling? A Case Study of Montreal (TRBAM-25-05477)
Jerome Laviolette/McGill University, Zahra Zarabi/McGill University, Lexi Kinman/McGill University, Kevin Manaugh/McGill University, Owen Waygood/McGill University
Exploration of Conflict Patterns of Bicycle Based on Different Infrastructures Under Connected and Autonomous Environments (TRBAM-25-06277)
Donghee Oh/Hanyang University, Geunhwi Park/Hanyang University, Yeji Sung/Hanyang University, Seunghwan Kim/Hanyang University, Juneyoung Park/Hanyang University

2002

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 103A
The State of Transit Signal Priority (TSP): What Are the Successes and Challenges for TSP Implementations?
Kevin Lee, Illumine Transportation, LLC, presiding
Sponsored By Standing Committee on Traffic Signal Systems

Agencies are planning for and implementing the "next generation" transit signal priority systems. This session explores the successes and challenges of these implementations from both the technology and agency perspectives.

Chicago Transit Authority, Illinois (P25-20890)
Angela Ng/Chicago Transit Authority
Massachusetts Bay Transportation Authority, Massachusetts (P25-20888)
Jay Jackson/Massachusetts Bay Transportation Authority (MBTA)
Regional Transportation District - Denver, Colorado (P25-20889)
Douglas Monroe/Regional Transportation District (Denver)
Thru Green (P25-20886)
David Nguyen/ThruGreen
LYT (P25-20884)
Timothy Menard/LYT
Kimley-Horn (P25-20885)
Douglas Gettman/Kimley-Horn and Associates, Inc.
Miovision (P25-21522)
Nathan Earls/Miovision Technologies, Inc.
Wrap Up (P25-21139)
Jijo Mathew/Purdue University, Tom Stiles/SWARCO McCain Inc.

2003

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon C

Traffic Flow with Connected and Autonomous Vehicles

Danjue Chen, North Carolina State University, Raleigh, presiding

Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

This session focuses on the integration and applications of connected and autonomous vehicles in traffic flow theory.

Traffic Wave Properties for Automated Vehicles During Traffic Oscillations via Analytical Approximations (TRBAM-25-06310)

Yang Zhou/University of Wisconsin, Madison, Sixu Li/University of Wisconsin, Madison, Wissam Kontar/University of Wisconsin, Madison, Fan Pu/University of Wisconsin, Madison, Anupam Srivastava/University of Wisconsin, Madison, Soyoung Ahn/University of Wisconsin, Madison

Calibrating Car-following Behaviors for Automated and Human-driven Vehicles under Naturalistic Traffic Conditions: Intelligent Driver Model Parametric Differences (TRBAM-25-06282)

Pedram Beigi/George Washington University, Mohaiminul Haque/George Washington University, Wissam Sleiman/George Washington University, John Hourdos/George Washington University, Hani Mahmassani/George Washington University, Alireza Talebpour/George Washington University, Samer H. Hamdar/George Washington University

Trajectory Planning Method for Vehicles Approaching Signalized Intersections Based on Expected Risk (TRBAM-25-01678)

Haozhan Ma/Southeast University, Chen Qian/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University

Optimal Trajectory Design of Connected Automated Vehicles Platoon: A Unified Modeling Approach Using Space-time-speed Grid Networks (TRBAM-25-01218)

Yangsheng Jiang/Southwest Jiaotong University, Junjie Huangfu/Southwest Jiaotong University, Guosheng Xiao/Southwest Jiaotong University, Yongxiang Zhang/Southwest Jiaotong University, Zhihong Yao/Southwest Jiaotong University

A Cooperative Control Strategy for Connected and Automated Vehicles in Heterogeneous Traffic Flow at Multi-Lane On-Ramp Areas (TRBAM-25-00482)

Wenzhang Yang/Southeast University, Xu Chen/Southeast University, Yuxuan Hou/Southeast University, Chen Wang/Southeast University, Hao Wang/Southeast University

2004

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon B

Doctoral Student Research in Transportation Safety: A Lectern-Poster Session

Peter Savolainen, Michigan State University, presiding

Sponsored By Standing Committee on Safety Performance and Analysis, Standing Committee on Statistical and Econometric Methods

The Standing Committees on Safety Performance and Analysis (ACS20) and Statistical Methods (AED60) are pleased to sponsor a special hybrid session that will highlight ongoing work by Ph.D. students who are nearing the completion of their doctoral research in the area of transportation safety. This session will be comprised of a series of short (3-minute) presentations, followed by a moderated poster session that will allow for more extensive discussions on individual projects.

Exploring the Impacts of Driving Anxiety on Young Drivers' Travel Safety and Performance (P25-21154)

Gongda Yu/University at Buffalo, SUNY

Predicting Traffic Crash Severity: A BERT-Based Modeling Approach for Integrating Structured and Unstructured Data (P25-21155)

Haneul Park/Ajou University

Investigating the Influence of Socioeconomic Factors on the Relationships Between Road Characteristics and Traffic Crash Frequency and Severity (P25-21156)

Mahsa Jafari/Ryerson University: Toronto Metropolitan University

(continued)

Spatio-Temporal Analysis of Pedestrian Crashes: Unraveling Socio-Demographic Influences and Trends (P25-21157)
Manmohan Joshi/University of Connecticut
Enhancing Transportation Safety with Connected Vehicle Data: Frameworks for Real-Time Crash Detection and Stop Sign Safety Monitoring (P25-21158)
Raghupathi Kandiboina/Iowa State University
Modeling Risk Perception, Developing Risk Perception-Integrated Car Following Models, and Analyzing Control Transition in Semi-Automated Vehicles Using Machine Learning and Deep Learning Techniques: A Driving Simulator Approach (P25-21159)
Saumik Sakib Bin Masud/University of Kansas
Comprehensive Analytics of Automated Vehicles' Effectiveness, Benefits, and Crash Severity (P25-21160)
Shengxuan Ding/University of Central Florida
Understanding Driver-Pedestrian Interactions to Predict Driver Yielding: Naturalistic Open-source Dataset Collected in Minnesota (P25-21161)
Tianyi Li/Saint Louis University
Proactive Crash Risk Estimation at Urban Roundabouts using Non-Stationary Extreme Value Models under Heterogenous Traffic Conditions (P25-21162)
Vinayaraj V S/Indian Institute of Technology, Bombay
Cyber-attack Impacts in Mixed-Flow Traffic: Driving Simulator Study (P25-21163)
Yangjiao Chen/Georgia Institute of Technology
Enhancing Pedestrian Safety at Unsignalized Crosswalks Using Machine Learning-Based Predictive Models (P25-21165)
Kaliprasana Muduli/Indian Institute of Technology, Roorkee
Role of Unobserved Heterogeneity in Injury Severity Analysis of Active Traveller: Applications of Advanced Econometric Models (P25-21166)
Natakorn Phuksuksakul/Queensland University of Technology

2005

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 150A
Using Data to Support Sustainability and Emergency Response in Cities
Michael Fontaine, Virginia Transportation Research Council, presiding
Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Subcommittee on Urban Big Data, Joint Subcommittee on Travel Time Speed and Reliability (with ACP70)

Cities and metropolitan areas have been exploring new and innovative approaches to using data to solve critical problems. In this session, interesting applications of data to support emergency response and sustainability analyses in cities and regions will be discussed.

Emergency Vehicle Travel Time and Speed Study in San Francisco (TRBAM-25-00494)
Dana Weissman/San Francisco Municipal Transportation Agency, Jennifer Ziebarth/San Francisco Municipal Transportation Agency, Grace Chen/San Francisco Municipal Transportation Agency, Drew Levitt/San Francisco Municipal Transportation Agency, Alex Demisch/San Francisco Municipal Transportation Agency
An Urban Digital Twin Framework for Sustainable Transportation and Smart Cities: A Case Study of Austin, TX (TRBAM-25-06017)
Yiming Xu/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Huihai Wang/University of Texas, Austin
Assessment of the Impact of the Francis Scott Key Bridge Collapse on Regional Traffic (TRBAM-25-04528)
Sara Zahedian/University of Maryland, College Park, Mark Franz/University of Maryland, College Park, Dhairya Parekh/University of Maryland, College Park, Przemyslaw Sekula/University of Maryland, College Park, Michael Pack/University of Maryland, College Park, Charles Lattimer/University of Maryland, College Park
Evaluating the Potential of the "15-Minute City" Concept in the United States via Activity-Based Mobility Patterns (TRBAM-25-02554)
Tanhua Jin/Ghent University, Kailai Wang/Ghent University, Yanan Xin/Ghent University, Jian Shi/Ghent University, Ye Hong/Ghent University, Frank Witlox/Ghent University

2006

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 150B

Enhancing Safety and Behavioral Research in Transportation Through Advanced Statistical and Econometric Methods

Silvia Varotto, École nationale des travaux publics de l'État, presiding

Sponsored By Standing Committee on Statistical and Econometric Methods

This session will feature some of the best studies submitted to the Standing Committee on Statistical and Econometric Methods for the 2025 TRB Annual Meeting, showcasing advanced approaches in traffic safety, crash risk forecasting, driving behavior analysis, and the integration of travel behavior with energy demand patterns.

Developing the Multivariate Negative-Binomial Lindley Generalized Linear Model: Methodological Innovations and Applications in Traffic Safety (TRBAM-25-00918)

Ali Khodadadi/Texas A&M University, Mohammadali Shirazi/Texas A&M University, Dominique Lord/Texas A&M University

Traffic Conflict-Based Crash Risk Forecasting Using Bayesian Self-Exciting Peak-Over-Threshold Model (TRBAM-25-00963)

Depeng Niu/University of British Columbia, Tarek Sayed/University of British Columbia

Assessing Markov Property in Driving Behaviors: Insights from Statistical Tests (TRBAM-25-04931)

Zheng Li/University of Wisconsin, Madison, Haoming Meng/University of Wisconsin, Madison, Chengyuan Ma/University of Wisconsin, Madison, Ke Ma/University of Wisconsin, Madison, Xiaopeng Li/University of Wisconsin, Madison

Application of MDCEV Fusion Approach to Link Residential Sector Energy Demand and Travel Behavior (TRBAM-25-02319)

Md Istiak Jahan/University of Central Florida, Naveen Eluru/University of Central Florida

2007 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 151A

Approaches to Improving the Selection of, Access to, and Travel Within Parks

Rinal Chheda, City and County of Denver, presiding

Sponsored By Standing Committee on Transportation Needs of National Parks and Public Lands, City Transportation Issues Coordinating Council, Rural Transportation Issues Coordinating Council

This session will discuss: 1) The tension between (and potential solutions for) meeting visitor demand and protecting resources, using Grand Canyon National Park as an example.2) The relationship between the quality and accessibility of parks, using Montreal, Canada, as a case study and 3) The considerations for using automatic tools to overcome the resource challenges associated with collecting and disseminating accurate trail management and accessibility data, with three National Wildlife Refuges as case studies.

Accommodating Visitor Activity and Vehicle Travel at Grand Canyon National Park's North Rim (TRBAM-25-00578)

Kelly Timmerman/Northern Arizona University, Steven Gehrke/Northern Arizona University

How Good is Your Basket of Parks? A Combined Index of Park Quality and Accessibility for Youth (TRBAM-25-02039)

Karl El-Murr/Polytechnique Montréal, Frederic Cournoyer/Polytechnique Montréal, Owen Waygood/Polytechnique Montréal, Genevieve Boisjoly/Polytechnique Montréal

Integrating Maintenance and Accessibility Assessments in Trail Management with Automated Trail Assessment Tools: Opportunities and Implications (TRBAM-25-04006)

Elizabeth Fittinghoff/Western Transportation Institute (WTI), Abigail Johnson/Western Transportation Institute (WTI)

2008 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 151B

Road Ecology: Bees, Butterflies, Fish, and Planning for Wildlife Connectivity

Kris Gade, Pima County Department of Conservation Lands and Resources, presiding

Meridith Krebs, Kimley-Horn and Associates, Inc., presiding

Sponsored By Standing Committee on Environmental Analysis and Ecology

This session addresses various topics related to the ecological aspects of transportation systems. Presentations will address topics ranging from the efficacy of installing diverters along the roadway in reducing the mortality of monarch butterflies, creating and enhancing habitat within linear rights of ways and innovative regulatory approaches to complying with the Endangered Species Act, as well as specific recommendations and guidelines for improving the ability of aquatic organisms to cross under roadway drainages. The final presentation will provide an overview of how Virginia DOT has integrated consideration of fish and wildlife needs into their planning, construction, and operations decisions and processes.

Introduction (P25-20930)

Kris Gade/Pima County Department of Conservation Lands and Resources

Implementation of Monarch Butterfly Roadkill Mitigation Measures (TRBAM-25-01358)

Carl Bierman/Texas A&M Transportation Institute

From Risk to Asset, Transforming the Perception of Rights-of-Ways and Their Uses with the Rights-of-Way as Habitat Working Group (P25-20304)

Caroline Hernandez/University of Illinois, Chicago, Dan Salas/University of Illinois, Chicago

FHWA's Aquatic Organism Passage (AOP) Implementation Guide (P25-20537)

Joe Krolak/Federal Highway Administration (FHWA), Gillian O'Doherty/Federal Highway Administration (FHWA)

Integrating Fish and Wildlife Considerations into Virginia DOT Decisions and Processes (P25-20305)

Amy Golden/Virginia Department of Transportation

2009

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 152A

Implementation of Concrete Materials Papers

Tyson Rupnow, Louisiana Department of Transportation and Development, presiding

Sponsored By Standing Committee on Research Innovation Implementation Management, Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete

This session includes presentations of four papers reviewed by one of the three concrete materials committees (AKM50, AKM60, AKM70). Respondents representing organizations that may implement the research will describe their interest in the work and potential additional steps needed to use the research in their organizations.

Development of Reduced Cementitious Materials Concrete (RCMC) Mixtures for Bridge Decks and Rails (TRBAM-25-01233)

Soumitra Das/University of Nebraska, Lincoln, George Morcous/University of Nebraska, Lincoln, Jiong Hu/University of Nebraska, Lincoln

National Laboratory Response (P25-20600)

John Kevern/National Renewable Energy Laboratory (NREL)

Electrically Conductive Concrete: Properties and Applications (TRBAM-25-02867)

Alyssa Sunga/Rowan University, Shahriar Abubakri/Rowan University, Gilson Lomboy/Rowan University, Islam Mantawy/Rowan University, Danielle Kennedy/Rowan University, Benjamin Watts/Rowan University

Concrete Producer Response (P25-20601)

James Mack/CEMEX

Enhancing Concrete's Resistance to ASR by Integrating Metakaolin-Carbon Nanotube Blends (TRBAM-25-02777)

Maria Konsta Gdoutos/University of Texas, Arlington, Rohitashva Kumar Singh/University of Texas, Arlington, Panagiotis Danoglidis/University of Texas, Arlington

State DOT Respondent (P25-20315)

Tyson Rupnow/Louisiana Department of Transportation and Development

(continued)

Field-Curing Methods for Evaluating the Strength of Concrete Test Specimens (TRBAM-25-02713)
Pranshoo Solanki/Illinois State University, Haiyan Xie/Illinois State University
State Department Of Transportation Respondent (P25-20602)
Maria Masten/Minnesota Department of Transportation

2010

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 202B
False Claims Act
Christine Ryan, Nossaman LLP, presiding
Sponsored By Standing Committee on Contract Law

This panel will provide different perspectives on False Claims Act investigations and claims during the development and implementation of transportation projects, and will explore the following questions: How do these cases arise? What is required to establish the elements of a False Claims Act claim? What does that mean from an investigatory standpoint? How do these claims differ from other types of claims on transportation projects? What are the best practices for avoiding false claims from public and private viewpoints?

Roles of Transportation Agency (P25-20679)
James Cownie/Minnesota Department of Transportation
Common False Claims Allegations in Construction (P25-20681)
Jennifer Flickinger/HKA-Global
Common Construction Claim Disputes (P25-20682)
Jill Jaffe/Nossaman LLP

2011

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 209C
Right-of-Way and Eminent Domain for Project Managers
Marc Butorac, Kittelson & Associates, Inc., presiding
Sponsored By Standing Committee on Eminent Domain and Land Use

Acquisition of right of way is a critical to project delivery, yet the framework governing that acquisition can be complex and may be poorly understood. What may be allowed under one set of rules may not be permissible under another even though both apply to the same project. Federal clearance may be insufficient to comply with State law, for instance. Early involvement of legal, right of way and appraisal professionals early in the environmental and design processes will help avoid unpleasant surprises that can jeopardize project schedules and budgets. This panel will discuss real world case studies and hypotheticals to demonstrate that "an ounce of prevention is worth a pound of cure" in right of way acquisition.

Panel Member (P25-20904)
Christopher Kramer/Nossaman LLP, Kyle Madsen/Texas Department of Transportation, Sejin Brooks/Nossaman LLP, John Smith/California Department of Transportation, Keith O'Brien/Arizona Department of Transportation

2012

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 201
Steel I-Girder Bridge Topics
Michael Culmo, CHA Consulting, Inc., presiding
Sponsored By Standing Committee on Steel Bridges

This session will cover various topics related to steel I-Girder bridges. Topics will include performance, load rating and detailing of steel I-Girder Bridges.

Thermal Response of Horizontally Curved Steel I-Girder Bridges with Various Support Conditions: Uniform Variation and Gradient in Deck and Exterior Girders (TRBAM-25-00499)
Bikesh Sedhain/University of Texas, Rio Grande Valley, Siang Zhou/University of Texas, Rio Grande Valley

(continued)

LRFR Load Rating of Curved Steel Plate Girder Bridges: an Illustration (TRBAM-25-01368)
Paul Biju-Duval/LUSAS, Philip Icke/LUSAS, Paul Lyons/LUSAS
Changes in Live Load Distribution of Steel Girder Bridges due to Girder Web Deterioration (TRBAM-25-05184)
Pinar Okumus/University at Buffalo, SUNY, Mary Boltri/University at Buffalo, SUNY
Connection of Cross Frames to Flanges of I-Girder Bridges (P25-20387)
Michael Culmo/CHA Consulting, Inc.

2013

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 207B
Rehabilitation of Culverts and Buried Structures
Michael Pluimer, University of Minnesota, Duluth, presiding
Sponsored By Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction

Enhancing Pipeline Corrosion Prediction through an Ensemble Bayesian Neural Network Model with Uncertainty Analysis (TRBAM-25-03079)
Bingyan Cui/Rutgers University, Hao Wang/Rutgers University
Engineered Cementitious Composite in Metal Culvert Repairs (TRBAM-25-00554)
Mary Sharifi/Virginia Department of Transportation, H. Celik Ozyildirim/Virginia Department of Transportation
Proof of Concept Evaluation of Ultra-High Performance Concrete Invert Linings for Corrugated Metal Pipe Culverts (TRBAM-25-05291)
Brian Lassy/University of Connecticut, Alexandra Hain/University of Connecticut, Kevin Zmetra/University of Connecticut, Sarira Motaref/University of Connecticut, Brandi Lyons/University of Connecticut
Unreinforced 3D Concrete Pipe Construction and Site Implementation: Opportunities and Challenges (TRBAM-25-02411)
Alireza Hasani/University of North Dakota, Boshra Besharatian/University of North Dakota, Sattar Dorafshan/University of North Dakota, Marc Maguire/University of North Dakota

2014

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 101
Opening Strength Criteria for Pavements: Time to Revisit
Leif Wathne, CP Tech Center, presiding
Sponsored By Standing Committee on Concrete Pavement Construction and Rehabilitation, Standing Committee on Design and Rehabilitation of Concrete Pavements

This session highlights recent groundbreaking research from MnROAD and the University of Pittsburgh on concrete pavement opening strengths. It also addresses the challenges with current opening strength requirements and demonstrates how contractors can improve efficiency and benefit from reduced strength thresholds for opening pavements.

MNDOT's Experience with Opening Strengths and Research at MnROAD (P25-20604)
Maria Masten/Minnesota Department of Transportation
New Criteria for Pavement Opening Strengths (P25-20605)
Lev Khazanovich/University of Pittsburgh
Contractor Perspectives on Current and Proposed Opening Strength Criteria (P25-20606)
Matthew Fonte/Fonte and Company

2015

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 207A

The (Un)clear Zone: New Perspectives on Trees and Roadsides

Willson McBurney, Moffatt & Nichol, presiding

Jeffrey Lormand, Parsons, presiding

Sponsored By Standing Committee on Landscape and Environmental Design, Standing Committee on Performance Effects of Geometric Design, Standing Committee on Roadside Safety Design, Standing Committee on Maintenance and Operations Management, Standing Committee on Roadside Maintenance Operations

In the US, the concept of the “clear zone,” keeping the roadside clear of fixed objectssuch as trees, is the dominant force shaping roadside tree policy. Other countriesprioritize environmental values, scenic quality, and other functions of the roadside overthe perceived safety of a clear roadside, yet many have far lower fatality rates than theUS. International research interviews revealed that roadside trees are considered environmental assets elsewhere and are protected as such. Landscape architects, state highway agency staff, the Association of American State Highway and Transportation Officials, and staff of the Federal Highway Administration can use these findings to shape roadside tree policy in the US.

The Clear Zone Abroad: An International Comparison of Roadside Tree Management (TRBAM-25-03487)

Ellen White/State University of New York, ESF, Robert Noland/State University of New York, ESF

Operationalizing Transportation Forestry as an Interdisciplinary Field for Urban Sustainability (P25-21174)

Pamela Murray-Tuite/Clemson University

The (Un)Clear Zone: Trying to Make Sense of Street Trees, Street Design, and Actual Safety Outcomes (P25-21175)

Wesley Marshall/University of Colorado, Denver

2016

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 204AB

Innovative Geotechnical Site Assessment and Testing

Matthew Riegel, HNTB, presiding

Sponsored By Standing Committee on Soil and Rock Properties and Site Characterization

Predicting the Thermal Properties of Unsaturated Soils with Machine Learning Models (TRBAM-25-04432)

Xiong Yu/Case Western Reserve University

Characterization of in-situ rock density with SH and Love-wave tomography: field data application (TRBAM-25-00724)

Ruoyu Chen/University of Florida, Khiem Tran/University of Florida, Michael McVay/University of Florida, Kunyu Yang/University of Florida

A Rapid Field Moisture Measurement Unit for Compaction Acceptance of Unbound Materials (TRBAM-25-04320)

Chuanjun Liu/Missouri University of Science and Technology, Xiong Zhang/Missouri University of Science and Technology, Jenny Liu/Missouri University of Science and Technology, Beshoy Riad/Missouri University of Science and Technology

Using the SSMini Pressuremeter for Compaction Quality Control (TRBAM-25-02581)

Paul Cosentino/Florida Institute of Technology, Brhane W Ygzaw/Florida Institute of Technology, Anuar Akchurin/Florida Institute of Technology, Thaddeus J Misilo III/Florida Institute of Technology

Innovative Correlations and Rapid Evaluation Methods for Key Geotechnical Parameters Using Methylene Blue Value (TRBAM-25-00934)

Hakan Sahin/Texas A&M University, Robert Lytton/Texas A&M University

2017

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 202A

Plastics in Asphalt: What Have We Learned So Far?

Derek Nener-Plante, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Production and Use of Asphalt, Standing Committee on Asphalt Materials Selection and Mix Design

The increasing global plastic waste crisis presents both a significant environmental challenge and an unprecedented opportunity for innovation in infrastructure development. Roughly five years ago a major push was made to use recycled plastics in asphalt mixtures, primarily from social media outlets. Ever since this push the asphalt community has been working on projects related to the feasibility, benefits, and challenges with using this material. This session will bring forward the latest in large-scale research on the use of recycled plastics in asphalt, with a primary focus on the impact to performance. Gain insights on the latest advancements and research that address the technical aspects of using recycled plastics in asphalt.

Introduction: Where are we on Recycled Plastic Use in Asphalt? (P25-20041)

Derek Nener-Plante/Federal Highway Administration (FHWA)

Using Recycled Plastics in Asphalt via the Dry Process: Lessons Learned from NCHRP and NCAT Test Track (P25-20042)

Fan Yin/National Center for Asphalt Technology (NCAT)

Compatibility of Asphalt Binder and Plastic: Simulation and a Thermodynamic Experimental Approach (P25-20043)

Andrew Peters/Louisiana Technological University, Nazimuddin Wasiuddin/Louisiana Technological University

2018

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 209AB

Advancements in the Characterization of Rutting of Asphalt Mixtures

Francisco Thiago Sacramento Aragão, Federal University of Rio de Janeiro, presiding

Sponsored By Standing Committee on Asphalt Mixture Evaluation and Performance

This session will explore recent advancements in asphalt pavement technologies, focusing on the critical issue of rutting and innovative approaches to mix design and performance evaluation. Four studies will be presented, showcasing research that provide insights into asphalt concrete material behavior, performance testing, and durability.

Assessing the Impact of Test Conditions on Indirect Tensile Test Results for Evaluating Rutting Potential in Asphalt Mixtures (TRBAM-25-04490)

Ilker Boz/Virginia Transportation Research Council, Aksel Seitllari/Virginia Transportation Research Council, Jhony Habbouche/Virginia Transportation Research Council, Stacey Diefenderfer/Virginia Transportation Research Council

Evaluating the Rutting and Moisture Resistance of Asphalt Mixes in Oklahoma Using IDT-HT Strength and HWTT Corrected Rut Depth and Stripping Number (TRBAM-25-05945)

Michael Olagunju/Oklahoma State University, Sina Mousavi Rad/Oklahoma State University, Mehdi Sadeghi/Oklahoma State University, David Vivanco/Oklahoma State University, Mohamed Elkashef/Oklahoma State University

Development and Validation of Nonlinear Model for Predicting Asphalt Concrete Rutting (TRBAM-25-00621)

Aravind Ramakrishnan/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign

Estimation of Repeated Load Permanent Deformation (RLPD) Parameters from Ideal Rutting Test (IDEAL-RT) for Texas Mechanistic-Empirical Flexible Pavement Design System (TxME) (TRBAM-25-01397)

Kin Ming Chan/Texas A&M Transportation Institute, Fujie Zhou/Texas A&M Transportation Institute

2019

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 102B

Improving Concrete Pavement Design

David Merritt, Transtec Group, Inc., presiding

Sponsored By Standing Committee on Design and Rehabilitation of Concrete Pavements

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Subgrade Modulus, k, and the Presence of a Base Layer (TRBAM-25-01500)
Anastasios Ioannides/U.S. Army Corps of Engineers (USACE), Jeb Tingle/U.S. Army Corps of Engineers (USACE)
Engineering Interlayers for Rigid Bases Under Jointed Plain Concrete Pavement Slabs (TRBAM-25-05487)
Angel Mateos/University of California, Berkeley, Miguel Angel Millan/University of California, Berkeley, Fabian Paniagua/University of California, Berkeley, John Harvey/University of California, Berkeley, Somayeh Nassiri/University of California, Berkeley, Jeffrey Buscheck/University of California, Berkeley
Characterizing Variability in the Development of Faulting within a Section (TRBAM-25-05376)
Charles Donnelly/Texas A&M University, Julie Vandenbossche/Texas A&M University
Seasonal Changes in the Joint Performance of Thin FRC Concrete Pavements and Overlays in Wet-Freeze Climate (TRBAM-25-06094)
Manik Barman/University of Minnesota, Duluth, Pranav Sharma/University of Minnesota, Duluth, Rohith Sabu/University of Minnesota, Duluth, Tom Burnham/University of Minnesota, Duluth

2020

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 102A
Highlights of Road Weather Research
Tae Kwon, University of Alberta, presiding
Sponsored By Standing Committee on Road Weather, Standing Committee on Winter Maintenance

This session will highlight recent research efforts that explore a range of weather impacts on roads. It will also explore ways to alleviate these impacts, ranging from examining the impacts of climate change on flood-damaged roads to winter weather warning systems for bridges.

A Data-Driven Approach to Identify Candidate Bridge Decks for Winter Weather Warning System Deployments (TRBAM-25-02426)
Jonathan Kay/Michigan State University, Timothy Gates/Michigan State University
Impacts of Climate Change on Road Networks in Australia and New Zealand: Using NTRO's iPAVe to Identify Flood-Damaged Pavements (TRBAM-25-04877)
Georgia O'Connor/National Transport Research Organisation, Tim Martin/National Transport Research Organisation, Sam Afkar/National Transport Research Organisation, James Grenfell/National Transport Research Organisation
Special Characteristics Assessment of Solar Irradiance Prediction in Highway Scenarios (TRBAM-25-03814)
Zhenqiang Han/Chang'an University, Chenrui Lan/Chang'an University, Liqun Hu/Chang'an University, Wei Jiang/Chang'an University, Aimin Sha/Chang'an University
Evaluating the Impact of Extreme Weather on Pavement Performance (TRBAM-25-02617)
Soumya Madireddy/University of Texas, Austin, Lu Gao/University of Texas, Austin, Jingran Sun/University of Texas, Austin

2021

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 103B
Pavement Maintenance Lectern Session
Andrew Braham, University of Arkansas, Fayetteville, presiding
Sponsored By Standing Committee on Pavement Maintenance

Pavement Performance Analysis for Overweighted Trucks in Texas (TRBAM-25-00075)
Danilo Inoue/University of Texas, Austin, Christian Sabillon-Orellana/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin
Data Rescaling Methods as Processing Stages for Clustering Road Pavement Segments Purposes (TRBAM-25-04195)
Cássio Oliveira/UFRGS - Curso d Pos-Graduacao, Lélio Brito/UFRGS - Curso d Pos-Graduacao, Celso Romeiro Júnior/UFRGS - Curso d Pos-Graduacao, Henrique Falck Grimm/UFRGS - Curso d Pos-Graduacao, Gabriel Santos/UFRGS - Curso d Pos-Graduacao
Investigation of Multi-Timestamp High-Resolution Joint Faulting Measurements Using 3D Pavement Surface Data (TRBAM-25-05886)
Ryan Salameh/Georgia Institute of Technology, Amirreza Parsaei/Georgia Institute of Technology, Yichang Tsai/Georgia Institute of Technology

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Utilizing Drone Technology for Pavement Surface Condition Evaluation at Truck Weigh Stations: A Case Study from the State of Virginia (TRBAM-25-05947)
Ali Zalghout/Kimley-Horn and Associates, Inc., Jalen Rich/Kimley-Horn and Associates, Inc., Connor Evanski/Kimley-Horn and Associates, Inc., Tim Miller/Kimley-Horn and Associates, Inc., Jonathan Groeger/Kimley-Horn and Associates, Inc., Hafeez Ullah/Kimley-Horn and Associates, Inc., Nick Mazzenga/Kimley-Horn and Associates, Inc.

2022

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 206
Data Analysis for Bridge Management
Anne Rearick, Indiana Department of Transportation, presiding
Saeed Nejad, Wiss, Janney, Elstner Associates, presiding
Sponsored By Standing Committee on Bridge and Structures Management

This session will consist of three presentations. The first will look at the development of a modal to assess scour risk and prioritize interventions for a railway network. The second presentation will look at modeling life expectancy and cost effectiveness for UHPC bridge retrofitting techniques. The third presentation will present different approaches for bridge element deterioration modeling.

Transport performance enhancement through risk-informed bridge management (TRBAM-25-02707)
Manu Sasidharan/University College London, Manuel Herrera/University College London, Gokcen Yilmaz/University College London, Ajith Kumar Parlikad/University College London, Jennifer Schooling/University College London
Modeling Life Expectancy and Cost Effectiveness for UHPC Bridge Retrofitting Techniques (TRBAM-25-02923)
Abid Hossain/Florida International University, Carlos M. Chang/Florida International University
Bridge element deterioration modeling using multiple approaches (TRBAM-25-04967)
Gaowei Xu/WSP, Bruce Connor/WSP, Richard Boadi/WSP, Philip Meinel/WSP, Ryan Bowers/WSP

2023 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 146C
Accessibility of Streetscapes and Measurement Tools
Todd Hansen, KFH Group, Inc., presiding
Sponsored By Standing Committee on Accessible Transportation and Mobility

Accessible pedestrian pathways for persons with disabilities and older adults help individuals travel independently and reach other mobility services and their destinations. In urbanized areas, factors from the built environment, sidewalk networks, and barriers or obstacles can have significant impacts on accessibility of pedestrians' travel. This session will feature presentations on cognitive impairments in urban environments, comparative walkability between different city neighborhoods, and auditing tools to assess pedestrian infrastructure.

Getting around on Foot: Older Adults' Walking Experiences and Perspectives on Neighborhood Walkability across Canada (TRBAM-25-04175)
Megan James/McGill University, Meredith Alousi-Jones/McGill University, Aryana Soliz/McGill University, Ahmed El-Geneidy/McGill University
The Traffic Behavior of Pedestrians with Mild Alzheimer's Disease or Mild Cognitive Impairment in Urban Areas, and Its Neuropsychological Predictors (TRBAM-25-01412)
Olga Fafouti/Delft University of Technology, Eleonora Papadimitriou/Delft University of Technology, Ion Beratis/Delft University of Technology, Dionysia Kontaxopoulou/Delft University of Technology, Stella Fragkiadaki/Delft University of Technology, Petros Stamatelos/Delft University of Technology, George Yannis/Delft University of Technology, Sokratis Papageorgiou/Delft University of Technology
Gold Standard? Comparison of Virtual Audits Using an Online Platform and Government Audits of Accessible Pedestrian Infrastructure (TRBAM-25-04557)
Sajad Askari/University of Illinois, Chicago, Devon Snyder/University of Illinois, Chicago, Chu Li/University of Illinois, Chicago, Michael Saugstad/University of Illinois, Chicago, Jon E. Froehlich/University of Illinois, Chicago, Yochai Eisenberg/University of Illinois, Chicago

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Pedestrian Asset Inspection System for Wheelchair-Mounted Video (TRBAM-25-05214)
Ziming Liu/Georgia Institute of Technology, Daniel Hunsaker/Georgia Institute of Technology, Huiying Fan/Georgia Institute of Technology, Pengyu Mo/Georgia Institute of Technology, Angshuman Guin/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology

2024

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 146B
Mitigation Tracking: Processes and Best Practices
Steve Archer, Maryland Department of Transportation, presiding
Sponsored By Standing Committee on Historic and Archeological Preservation in Transportation

Join us for an engaging event designed to enhance our understanding of effective mitigation strategies in transportation. Discover innovative approaches to tracking obligations and conditions, learn how Pennsylvania DOT is leveraging technology for better oversight, and explore improvements in federal processes for mitigation tracking. Following the presentations, participate in a lively panel discussion where experts will share insights and tackle key challenges in the field.

Keeping Track: State of Practice for Tracking No Adverse Effect with Conditions and Mitigation Obligations (P25-20398)
Camilla McDonald/WSP
Pennsylvania DOT's Multi-Platform Strategies for Tracking Mitigation (P25-20399)
Hannah Harvey/Pennsylvania Department of Transportation
Federal Railroad Administration Section 106 Mitigation Tracking: Process Improvements (P25-20836)
Amanda Murphy/Federal Railroad Administration (FRA), Cody Chase/Federal Railroad Administration (FRA)
Panel Discussion (P25-20429)
David Clarke/Federal Highway Administration (FHWA), John Martin/Delaware Department of Transportation

2025 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 146A
Societal and Environmental Justice Implications of Climate Change and Air Quality
Marianne Hatzopoulou, University of Toronto, presiding
Sponsored By Standing Committee on Air Quality and Greenhouse Gas Mitigation

This session brings together multiple perspectives to the topic of environmental justice. From climate mitigation to climate adaption, from air quality to road safety, the various facets of transport decarbonization and its societal implications are addressed. The burden and the solutions to climate change can have implications to equity and environmental justice, as captured in this session.

Evaluating Cumulative Emissions Exposure and Equity Outcomes of Different Transition Pathways to an Electric Vehicle Fleet (TRBAM-25-05444)
Meg Fay/University of Vermont, Gregory Rowangould/University of Vermont
Unveiling the Impact of Wildfires on Nanoparticle Characteristics and Health Disparities through Mobile and Fixed-Site Monitoring in Toronto, Canada (TRBAM-25-03257)
Junshi Xu/University of Hong Kong, Arman Ganji/University of Hong Kong, Milad Saeedi/University of Hong Kong, Cheol-Heon Jeong/University of Hong Kong, Yushan Su/University of Hong Kong, Tony Munoz/University of Hong Kong, Marshall Llyod/University of Hong Kong, Scott Weichenthal/University of Hong Kong, Greg Evans/University of Hong Kong, Marianne Hatzopoulou/University of Hong Kong
Crashes, Congestion, and Clean Air: Unraveling NOx Emission Patterns in Texas (TRBAM-25-05281)
Rohit Jaikumar/Texas A&M Transportation Institute, Rodolfo Souza/Texas A&M Transportation Institute, Madhusudhan Venugopal/Texas A&M Transportation Institute
Bridging CTM and Land-Use Regression: A High-Spatial Resolution Approach to Simulate Air Pollution Exposure Disparities Under Major Transportation Policy Scenarios (TRBAM-25-01352)
Jad Zalzal/University of Toronto, Laura Minet/University of Toronto, Jeffrey Brook/University of Toronto, Cristian Mihele/University of Toronto, Hong Chen/University of Toronto, Marianne Hatzopoulou/University of Toronto

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Cost and Human Health Trade-offs in Climate-feasible Pathways for U.S. Heavy-duty Trucks (TRBAM-25-00561)
Lih Wei Yeow/University of Toronto, Jean Schmitt/University of Toronto, Heather MacLean/University of Toronto, I. Daniel Posen/University of Toronto

2026 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 140
Life-Cycle Analysis of Various Road Treatment Options
Samer Dessouky, University of Texas, San Antonio, presiding
Sponsored By Standing Committee on Resource Conservation and Recovery

Pavement and Gravel-road surface treatments are important elements in road systems. Evaluation of the sustainability and environmental footprint of the various treatments is important for DOTs looking to meet sustainability goals and benchmarks. This session will explore the latest research into technologies and economical and environmental Life-Cycle Analysis related to various frost treatments and surface layer mix ratios.

Environmental and Economic Assessment of Engineered Water Repellency for Frost Mitigation in Low-Volume Flexible Pavements in Minnesota (TRBAM-25-05005)
Emmanuel Adeyanju/University of North Carolina, Charlotte, Emil Bautista/University of North Carolina, Charlotte, Michele Lanotte/University of North Carolina, Charlotte, John Daniels/University of North Carolina, Charlotte, Bora Cetin/University of North Carolina, Charlotte
Comparative Life Cycle Assessment and Cost Analysis of Frost-Resistant Gravel Road Treatments in Rural Iowa (TRBAM-25-04312)
Emmanuel Adeyanju/University of North Carolina, Charlotte, Emil Bautista/University of North Carolina, Charlotte, Michele Lanotte/University of North Carolina, Charlotte, John Daniels/University of North Carolina, Charlotte, Bora Cetin/University of North Carolina, Charlotte
A Framework for Integrating Machine Learning Model and Pavement Life Cycle Assessment to Optimize Asphalt Surface Layer Mix Ratios (TRBAM-25-02199)
Chang Xu/Southeast University, Xiao Chen/Southeast University, Qingwei Zeng/Southeast University, Wenxuan Zhang/Southeast University, Mingmao Cai/Southeast University, Shunxin Yang/Southeast University

2027 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 147A
Streamlining Bus Operations: A Close Look at Capacity and Reliability
Victoria Perk, University of South Florida, presiding
Sponsored By Standing Committee on Transit Capacity and Quality of Service

This session will explore new research in steamlining bus operations. Attendees will learn about two papers that delve into issues with bus capacity, and two papers that address bus travel time reliability. Research presented will explore midway stops in Guangzhoi, China, layover parking in Stockholm Sweden, deadheading in Brisbane, Australia, and a study decomposing observed trip travel timesdecomposing observed trip travel times.

Study on the Line Carrying Capacity of Midway Stop of Conventional Bus Considering Stop Characteristic and Line Composition (TRBAM-25-01014)
Qingyang Liu/Guangzhou Transport Reasch Institute, Yucong Hu/Guangzhou Transport Reasch Institute, Mingming Luo/Guangzhou Transport Reasch Institute, Lei Pan/Guangzhou Transport Reasch Institute
Bus Terminal Capacity – Layover Parking (TRBAM-25-03762)
Azhar Al-Mudhaffar/Region Stockholm
The Importance of Deadheads in Assessing the Travel Time Reliability of Buses: Case Study of Brisbane, Australia (TRBAM-25-00520)
Andrea Felea/University of Technology Sydney, Jasmine Sinclair/University of Technology Sydney, Kasun Wijayaratna/University of Technology Sydney
Decomposition and Sensitivity Analysis of Bus Travel Times (TRBAM-25-03670)
Yuxuan Wang/Polytechnique Montréal, Catherine Morency/Polytechnique Montréal, Martin Trépanier/Polytechnique Montréal

2028 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 145B
Competing for Space: Can We Move People and Goods with Synergy?
Baruch Feigenbaum, Reason Foundation, presiding
Sponsored By Standing Committee on Bus Transit Systems

As demand increases for the quick delivery of goods ordered online, the "competition" for curb space and increasing curb friction overall impacts the effective delivery of bus transit service. This session will present some ways both people and goods may be accommodated on transit systems, along with some recent research on the preferential treatment element that allows buses to move most reliably: dedicated bus lanes.

On-Demand Deliveries by Buses: Two New Proposals and KPI Comparisons (TRBAM-25-02017)
Gao Gao/Ningbo University, Zhengfeng Huang/Ningbo University, Pengjun Zheng/Ningbo University
Efficient Urban Transit Systems: Bridging Freight Logistics and Passenger Transport (TRBAM-25-04720)
Nastaran Tork/University of Minnesota, Twin Cities, Kwangho Baek/University of Minnesota, Twin Cities, Alireza Khani/University of Minnesota, Twin Cities
The Impact of Bus Lanes on Vehicular Miles Traveled (TRBAM-25-04850)
Arthur Getman/Replica, Albab Noor/Replica, Pam Stravitz/Replica, Jay Jackson/Replica, Martha Koch/Replica, Steven Andrews/Replica, Emily Lucas/Replica
Dedicated Bus Lanes: An Evaluation of Operational and Environmental Impacts (TRBAM-25-03548)
Qiyuan Jiang/Beijing Jiaotong University, Yizheng Wu/Beijing Jiaotong University, Yuxin Wang/Beijing Jiaotong University, Lewen Wang/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University

2029

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 144AB
Schedules, Optimization, and Service Recovery: New Research in Railroad Operating Technologies
Earl Jackson, City and County of Denver, presiding
Jeffrey Schultz, David Evans and Associates, Inc., presiding
Sponsored By Standing Committee on Railroad Operating Technologies

Ever wonder how train schedules are developed? Or how train service recovers after a disruption? During this session we will hear research on these topics as well as large language model based driver advisory system for high speed rail.

Joint Optimization of Train Stopping Plan and Capacity Allocation Scheme of High-Speed Railway Freight Train Considering Stochastic Demand (TRBAM-25-01812)
Zhuangbin Shi/Central South University, Xing Liu/Central South University, Yang Liu/Central South University, Guangming Xu/Central South University
Multi-Sensor Time Series Signal Representation Learning for High-Speed Train Traction System State Prediction (TRBAM-25-03068)
Zhiqiang Yang/Beijing Jiaotong University, Honghui Dong/Beijing Jiaotong University, Huipeng Zhang/Beijing Jiaotong University
Train rescheduling in a metro corridor considering confirm phase after unidirectional disruptions: Influence of confirm time and turn-around type (TRBAM-25-03016)
Xiaoyu Hao/Tongji University, Fangsheng Wang/Tongji University, Ruihua Xu/Tongji University
A Driver Advisory System Based on Large Language Model For High-speed Train (TRBAM-25-03683)
Yuchen Luo/Beijing Jiaotong University, Jing Xun/Beijing Jiaotong University, Wei Wang/Beijing Jiaotong University, Ruize Zhang/Beijing Jiaotong University, Zicong Zhao/Beijing Jiaotong University

2030

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 144C
Artificial Intelligence Methods in Track Design and Maintenance
Sanskruti Joshi, Kiewit Corporation, presiding
Sponsored By Standing Committee on Rail Transit Infrastructure Design and Maintenance

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A Holistic Approach to the Design of Revenue Service Adjustments to Accommodate Urban Rail System Maintenance (TRBAM-25-04962)
John Moody/Northeastern University, Haris Koutsopoulos/Northeastern University
Intelligent Detection of Fastener Defects in Ballastless Tracks Based on Deep Learning (TRBAM-25-00264)
wenlong ye/Southwest Jiaotong University, Wengao Liu/Southwest Jiaotong University, Shijie Deng/Southwest Jiaotong University, Juanjuan Ren/Southwest Jiaotong University
Automated Feature-Driven Web-Assembly Model Construction: A Demonstration with WJ-8 Railroad Fasteners (TRBAM-25-01908)
Haoran Niu/Central South University, Weidong Wang/Central South University, Shi Qiu/Central South University, Lichang Wang/Central South University, Jin Wang/Central South University
Contrasting Use of Artificial Intelligence in Condition Monitoring of Bridges and Track (P25-20962)
Maryam Tagh Bostani/HDR

2031

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 145A
The Influence of Automation in Freight Logistics
Bo Zou, University of Illinois, Chicago, presiding
Jose Holguin-Veras, Rensselaer Polytechnic Institute (RPI), presiding
Sushant Sharma, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Freight Transportation Planning and Logistics, Standing Committee on Urban Freight Transportation

This session explores how vehicle automation technologies impact logistics operations, including the technology acceptance considering the risk of theft, timetabling and dispatching of automatic guided vehicles in the context of smart manufacturing, and automatic guided vehicle path planning considering goods types.

Autonomous Delivery Vehicles Acceptance: The Moderating Role of Perceived Risk of Theft (TRBAM-25-04586)
Arsalan Esmaili/University of Washington, Seattle, Kayvan Aghabayk/University of Washington, Seattle, Sina Rejali/University of Washington, Seattle, Amin Mohammadi/University of Washington, Seattle, Amelia Regan/University of Washington, Seattle
An Integrated Timetable Optimization and Automatic Guided Vehicle Dispatching Method in Dynamic Smart Manufacturing Environment (TRBAM-25-05920)
Jiarong Yao/Nanyang Technological University, Chaopeng Tan/Nanyang Technological University, Yiming Xu/Nanyang Technological University
Conflict-Free Automated Guided Vehicle Path Planning Design Considering Goods Types (TRBAM-25-01296)
Xiaolin Tan/Sichuan Railway College, Shixiang Wan/Sichuan Railway College, Feiyu Song/Sichuan Railway College, Hhongyu He/Sichuan Railway College

2032

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 143C
Research in Airfield and Airspace Performance, Part 1 (Part 2, Session 3087)
Michael Hanowsky, Woolpert, Inc., presiding
Sponsored By Standing Committee on Airfield and Airspace Performance

Assessing Flight Delays for Sustainable Air Management: A Fusion of Deep Learning and Network Dynamics (TRBAM-25-00625)
Linxian Chen/Southeast University, Jingxu Chen/Southeast University, Xiuyu Shen/Southeast University
Federated learning-based spatial-temporal fusion approach for network-wide flight delay forecasting (TRBAM-25-00629)
Xiuyu Shen/Southeast University, Jingxu Chen/Southeast University

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Exploring Causal time-lag Relationships in Airport Networks Using a Depthwise Separable Attention Network (TRBAM-25-01173)
Mengyuan Sun/Nanjing University of Aeronautics and Astronautics, Yong Tian/Nanjing University of Aeronautics and Astronautics, Qianqian Li/Nanjing University of Aeronautics and Astronautics, Jiangchen Li/Nanjing University of Aeronautics and Astronautics, Chao Li/Nanjing University of Aeronautics and Astronautics, Xiao Huang/Nanjing University of Aeronautics and Astronautics, Haifeng Huang/Nanjing University of Aeronautics and Astronautics, Shunhang Hai/Nanjing University of Aeronautics and Astronautics
Attention-based Aircraft Trajectory Prediction Model Considering Close-range Spatial Interaction (TRBAM-25-01699)
Xingchen Dong/Nanjing University of Aeronautics and Astronautics, Yong Tian/Nanjing University of Aeronautics and Astronautics, Jiangchen Li/Nanjing University of Aeronautics and Astronautics

2033 **CM** (1.75)

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 143AB
The Complementary Roles and Responsibilities the Air and Space Transportation Industries Will Face While Using Shared Airspace in the Next 5 Years
Patricia Hynes, Commercial Space Progress Foundation, presiding
Sponsored By Standing Committee on New Users of Shared Airspace, Standing Committee on Aviation Administration and Policy, Standing Committee on Aviation System Planning

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Academic Perspective (P25-20796)
Moriba Jah/University of Texas, Austin
State Perspective (P25-20798)
Greg Campbell/Virginia Department of Aviation
Industry Perspective (P25-21135)
Phil Smith/Bryce Tech

2034

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, 147B
Research in Marine Environment
Megan O'Leary, Blue Sky Maritime Coalition, presiding
Sponsored By Standing Committee on Marine Environment

Impact of Using Ammonia-Based Fuel on Ship Operations (TRBAM-25-06115)
Jing Wang/University of Nebraska, Lincoln, Nathan Huynh/University of Nebraska, Lincoln, Roger Dougal/University of Nebraska, Lincoln, William Mustain/University of Nebraska, Lincoln
A Coordinated Planning Method for Port Transportation and Renewable Energy Systems Using a Joint Integrated Modeling and Mixed Integer Programming Framework (TRBAM-25-03759)
Linfeng Li/Wuhan University, Ming Zhong/Wuhan University, Xiaofeng Ma/Wuhan University, Haowei Zhao/Wuhan University, Muhammad Safdar/Wuhan University, John Douglas Hunt/Wuhan University
Decarbonization of Mobility in Inland and Coastal Sensitive Areas of the Centre Region of Portugal (TRBAM-25-00467)
Daniel Guerra/Universidade de Aveiro, Maria Cruz/Universidade de Aveiro, Margarida Coelho/Universidade de Aveiro

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Modeling Longitudinal Dynamics, Energy Efficiency, and Carbon Footprint of Cargo Vessels (TRBAM-25-00261)
Ahmed Aredah/Virginia Polytechnic Institute and State University, Hesham Rakha/Virginia Polytechnic Institute and State University

2035

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Ballroom A
Department of Transportation Leadership in Innovation: Saving Lives with Connectivity: Achieving the Potential of Vehicle-to-Everything Technology
Kristin White, Federal Highway Administration (FHWA), presiding
Sponsored By Executive Committee

In August 2024, as part of its commitment to reducing deaths and serious injuries on our nation's roadways, the U.S. Department of Transportation (USDOT) announced the Saving Lives with Connectivity: A Plan to Accelerate V2X Deployment. This plan will guide the implementation of vehicle-to-everything (V2X) technologies across the nation and support USDOT's commitment to pursue a comprehensive approach to reduce the number of roadway fatalities to zero. This panel will explore the practical realities of implementing the plan's targets, and collective actions that will be necessary from essential stakeholders named in the plan. V2X enables vehicles and wireless devices to communicate with each other and infrastructure to provide warnings prior to a potential crash.

FHWA Leadership in Innovation Panel (P25-21195)
Carlos Braceras/Utah Department of Transportation, Brad Stertz/Audi of America, Jason Conley/OmniAir Consortium, Laura Chace/ITS America, Gregory Winfree/Texas A&M Transportation Institute

2036

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Legal Resources
Craig Gustafson, Minnesota Department of Transportation, presiding
Sponsored By Section - Legal Resources

Data Security & Privacy Regulation in the U.S.: A 50-State Legislative Survey (TRBAM-25-02208) - B400
Trayce Hockstad/Alabama Transportation Institute, Mizan Rahman/Alabama Transportation Institute, Mashrur Chowdhury/Alabama Transportation Institute, Khandakar Ashrafi Akbar/Alabama Transportation Institute, Md Nahiyan Uddin/Alabama Transportation Institute, Latifur Khan/Alabama Transportation Institute
LEGAL ISSUES IN BEST VALUE SELECTION PROCUREMENT FOR HIGHWAY CONSTRUCTION (TRBAM-25-03021) - B402
Christofer Harper/Colorado State University, Mohammed Mehany/Colorado State University, Ghada Gad/Colorado State University

2037

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Geo-Environmental and Climate Impacts on Geomaterials
Benjamin Worel, Minnesota Department of Transportation, presiding
Sponsored By Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials

Cross section of presentations related to geo-environmental and climatic impacts on geomaterials highlighting vetiver roots and contaminated soils, Leachability assessment of SFDR layers, stabilization of subgrade materials by bacteria calcite precipitation, biological treatments of clay materials, evaluating climate resiliency of highway materials, and estimation of osmotic suction in freezing soils.

Heavy Metal Uptake of Vetiver Roots in Leachate Contaminated Soil (TRBAM-25-06324) - B450
Anika Mahzabin/Jackson State University, Sadik Khan/Jackson State University, Subrata Chandra Roy/Jackson State University, Saiful M. Islam/Jackson State University

(continued)

Long Term Performance and Leachability Assessment of Geopolymer Treated Base Stabilized Using Full Depth Reclamation Technique (TRBAM-25-05891) - B452
Abhitesh Sachdeva/Indian Institute of Technology, Roorkee, Gondaimei Rongmei Naga/Indian Institute of Technology, Roorkee, Praveen Kumar/Indian Institute of Technology, Roorkee
Evaluating Climate Resiliency of Highway Geo-Infrastructure Using Non-Destructive Subsurface Investigations (TRBAM-25-05621) - B440
Fariha Rahman/Jackson State University, A Q M Zohuruzzaman/Jackson State University, Sadik Khan/Jackson State University, Ian La Cour/Jackson State University
The Effect of Pre-mixing Biological Treatment Methods on Clay Bio-Brick Properties (TRBAM-25-03840) - B451
Xinyu Lu/No Organization, Changming Bu/No Organization, Shihui Liu/No Organization, Lin Li/No Organization, Yongfei Li/No Organization
Sustainable Subgrade Stabilization Using Indigenous Bacteria through Microbial Induced Calcite Precipitation for Infrastructure Development (TRBAM-25-03156) - B453
Nitin Tiwari/Southern Illinois University, Carbondale, Neelima Satyam/Southern Illinois University, Carbondale
Estimation of Osmotic Suction in Freezing Soils (TRBAM-25-02996) - B454
MICHEAL UDUEBOR/Florida Gulf Coast University, John Daniels/Florida Gulf Coast University, Mohammad Wasif Naqvi/Florida Gulf Coast University, Bora Cetin/Florida Gulf Coast University

2038

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Quantifying Moisture for Resilient Roadway Design and Construction
Tom Yu, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials

The Simulation and Verification of Electro-Osmotic Dewatering for Unsaturated Subgrade Soil (TRBAM-25-03883)
Jinsong Qian/Tongji University, Huiyi Ouyang/Tongji University, Xiang Li/Tongji University, Haiyang Liu/Tongji University, Xueyin Li/Tongji University
Assessment of Soil Moisture and Matric Suction Dynamics in Sand and Clay Through Electrical Resistivity Analysis (TRBAM-25-05708)
Saimum Hossain/Jackson State University, Mahdi Zulfikar/Jackson State University, A Q M Zohuruzzaman/Jackson State University, Sadik Khan/Jackson State University
The Role of Soil Suction and Nondestructive Testing Parameters in Investigation of Behavior of Soils and Granular Materials (TRBAM-25-06413)
Poura Arabali/Texas A&M University_ SME Inc, Robert Lytton/Texas A&M University_ SME Inc, Stephen Sebesta/Texas A&M University_ SME Inc
Numerical Determination of Hydraulic Conductivity of Aggregate Drainage Layer (TRBAM-25-00094)
Tangjie Wang/Chang'an University, Longjia Chu/Chang'an University, T.F. Fwa/Chang'an University

2039

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Deep Foundation and Excavation: Bridge Foundation System Election
Sharid Amiri, California Department of Transportation, presiding
Sponsored By Standing Committee on Foundations of Bridges and Other Structures

This poster session covers deep foundation pits and their impact on the surrounding environment with an Innovative method to evaluate the impact. The session also includes a study for a new proposed approach for foundation type selection, a departure from the conventional approach in practice.

Deformation Analysis and Reinforcement Measures for Deep Foundation Pit Excavation in Complex Environments (TRBAM-25-02824) - B433
Yunxiang Yan/Chang'an University, Jinxing Lai/Chang'an University, Xuan Shi/Chang'an University, Chi Liu/Chang'an University, Ke Wang/Chang'an University

(continued)

Prospects for Bridge Foundation System Selection; Case-Based Implementation and Adaptation (TRBAM-25-02899) - B434
Abolfazl Eslami/Louisiana Transportation Research Center (LTRC), Moses Karakouzian/Louisiana Transportation Research Center (LTRC), Amirhossein Ebrahimipour/Louisiana Transportation Research Center (LTRC), Masoud Nobahar/Louisiana Transportation Research Center (LTRC)

2040

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Characterization and Advances in Aggregate Utilization for Pavement Performance
Maziar Moaveni, Savannah State University, presiding
Sponsored By Standing Committee on Aggregates, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Joint Subcommittee on Unbound Granular Materials (with AKG00)

This session presents five studies on construction aggregates and pavement performance. Topics include reliable methods to determine deleterious material content in processed glass aggregate, economical GPR testing boxes, the impact of compaction on ultra-light foamed glass aggregates, the influence of aggregate gradation on granular-surfaced roads, and the effects of compaction techniques on tire-derived aggregates. Key findings highlight advancements in material testing protocols, optimal aggregate gradation for enhanced road performance, and improved compaction methods for sustainable infrastructure. Attendees will gain insights into novel approaches and practical applications in the construction and maintenance of resilient pavements.

Method Development for Determining Deleterious Material Content in Processed Glass Aggregate (PGA) (TRBAM-25-05504) - B482
Neha Subedi/Civil and Environmental Consultants, Inc., Matthew Scarborough/Civil and Environmental Consultants, Inc., Mandar Dewoolkar/Civil and Environmental Consultants, Inc., Fiona Nutbeam/Civil and Environmental Consultants, Inc.
Development of a Box for GPR Testing with Coarse Aggregates (TRBAM-25-04136) - B473
Aaron Rubin/Smith College, Lilliana Frantz/Smith College, Almanzo Gao/Smith College, Ginger Silverman/Smith College, Ashley Zhang/Smith College
Evaluation of the effect of Aggregate Gradation using California Bearing Ratio and Resilient Modulus for Blends of Recycled and Quarried Aggregates (TRBAM-25-03109) - B472
Mahsa Belalzadeh/Iowa State University, Jeramy Ashlock/Iowa State University, Umar Farooq/Iowa State University, Celso Santos/Iowa State University, Bora Cetin/Iowa State University
Effect of Compaction Mode on Small- and Large-Scale Laboratory Evaluation of Tire-Derived Aggregates for Mechanistic-Empirical Pavement Design (TRBAM-25-01499) - B483
Mohamad Yaman Fares/Michigan State University, Michele Lanotte/Michigan State University

2041

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Innovative Aggregates: Performance, Gradation, and Compaction in Pavement Design
Emil Bautista, Minnesota Department of Transportation, presiding
Kelly Cook, Edward C. Levy Co., presiding
Sponsored By Standing Committee on Aggregates

This session explores various studies on aggregate and bituminous mixes in pavement engineering. Topics include the impact of packing characteristics on bituminous mix properties, correlations between resilient modulus and other material properties, the relationship between recycled aggregate shapes and crushing behavior, and rapid aggregate gradation detection using smartphone images. Additionally, the session examines the mesostructure and anisotropy of large-size cement-stabilized macadam bases to optimize resistance to bulging deformation. These findings advance understanding and techniques in material engineering, offering practical solutions for improving pavement quality and efficiency.

Effect of Unbound Aggregate Packing on the Properties of Bituminous Mixtures (TRBAM-25-03787) - B511
P. V Arjun/Indian Institute of Technology, Kharagpur, Venkata Akhilesh Danam/Indian Institute of Technology, Kharagpur, Kusam Sudhakar Reddy/Indian Institute of Technology, Kharagpur, Arghya Deb/Indian Institute of Technology, Kharagpur

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Exploring Relationships Between Summary Resilient Modulus and California Bearing Ratio, Light Weight Deflectometer Modulus for Unbound Coarse Materials in Idaho (TRBAM-25-04303) - B513
S M Robinur Mohshin Chowdhury/Tennessee Department of Transportation, Emad Kassem/Tennessee Department of Transportation
Shape-Dependent Crushing Behavior of Recycled Aggregates: Experimental and Numerical Insights (TRBAM-25-01165) - B512
Peichen Cai/No Organization, Xuesong Mao/No Organization, Qian Wu/No Organization, Yueyue Wang/No Organization
An intelligent aggregate gradation method based on smartphone images (TRBAM-25-02986) - B514
Ke Zhang/Southeast University, Zhaohui Min/Southeast University, Xiatong Hao/Southeast University, Wei Huang/Southeast University, Kaimo Shao/Southeast University
Anisotropy and Lateral Compressive Strength of Large-Size Cement-Stabilized Macadam for Bulging Deformation Resistance: A Numerical Analysis (TRBAM-25-00040) - B515
Miao He/Tongji University, Lijun Sun/Tongji University, Liping Liu/Tongji University

2042

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Advancements in Aggregate Characteristics, Functionality, and Longevity in Pavements
Charles. Ochola, National Slag Association, presiding
Sponsored By Standing Committee on Aggregates, Standing Committee on Stabilization of Geomaterials and Recycled Materials

This session explores three innovative research studies: microstructure analysis of ASR products in Alaskan bridge cores, effective recycling of feldspar powder (FP) in cement-stabilized macadam (CSM) for road engineering, and the use of quarry by-products (QB) for sustainable pavement foundations. Key findings include the influence of mineral phases on ASR gel composition, FP's potential as a fine aggregate in CSM improving mechanical properties and sustainability, and the superior strength and freeze-thaw durability of dolomitic QB materials due to hydrotalcite formation. These studies demonstrate significant advancements in concrete durability, recycling, and sustainable materials in construction.

Long-Term Performance of Alkali-Silica Reactive Aggregates in a 63-Year-Old Bridge in Alaska (TRBAM-25-00064) - B500
Jose Munoz Campos/Federal Highway Administration (FHWA), Chandni Balachandran/Federal Highway Administration (FHWA), Anant Shastry/Federal Highway Administration (FHWA), Richard Giessel/Federal Highway Administration (FHWA)
Long-Term Durability Assessment of Cement-Stabilized Aggregate Quarry By-Products: Potential Role of Hydrotalcite (TRBAM-25-02964) - B501
Taeyun Kong/University of Illinois, Urbana-Champaign, Chirayu Kothari/University of Illinois, Urbana-Champaign, Issam Qamhia/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Nishant Garg/University of Illinois, Urbana-Champaign, Tim Peters/University of Illinois, Urbana-Champaign, Andrew Stolba/University of Illinois, Urbana-Champaign
Feasibility Study of Using Feldspar Powder in Cement-Stabilized Macadam Bases (TRBAM-25-03196) - B510
Lingqing Yuan/Tongji University, Liping Liu/Tongji University, Lijun Sun/Tongji University, Qunyan Liu/Tongji University, Miao He/Tongji University, Liyu Guo/Tongji University

2043

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Innovations in Pavement Condition Evaluation

Ali Zalghout, Kimley-Horn and Associates, Inc., presiding
Travis Walbeck, National Center for Asphalt Technology (NCAT), presiding
Affan Habib, Virginia Department of Transportation, presiding
Gervas Wambura, JMT, Inc., presiding
Gerardo Flintsch, Virginia Polytechnic Institute and State University, presiding
Sponsored By Standing Committee on Pavement Condition Evaluation, Subcommittee on Innovations in Pavement Condition Evaluation

This poster session highlights a series of innovation in pavement condition assessment.

Evaluating Mobile LiDAR Intensity Data for Inventorying Durable Tape Pavement Markings (TRBAM-25-00576) - B553
Gregory Brinster/Purdue University, Mona Hodaei/Purdue University, Aser Eissa/Purdue University, Zechariah DeLoach/Purdue University, Joseph Bruno/Purdue University, Ayman Habib/Purdue University, Darcy Bullock/Purdue University
Pavement Point Cloud Upsampling based on Transformer: Toward Enhancing 3D Pavement Data (TRBAM-25-00602) - B554
Tianxiang Bu/Southeast University, Xiyin Liu/Southeast University, Junqing Zhu/Southeast University, Tao Ma/Southeast University
Exploration of Gradient and Elevation Detection for Automatic Identification of Minor Damages in ultra-Thin Layer Surface Wear Processes (TRBAM-25-00687) - B545
Yandi Zhang/No Organization, Bing HUI/No Organization, Ziye Ma/No Organization, Hainian Wang/No Organization
Rethinking Lightweight Distillation Network on Automatic Mobile Robot for Crack Segmentation Guided Measurement (TRBAM-25-00785) - B544
Jianqi Zhang/Chang'an University, Xu Yang/Chang'an University, Hainian Wang/Chang'an University, Wei Wang/Chang'an University
Automatic Pixel-Level Detection of Pavement Distress with CS-LBP Texture Analysis and Instance Segmentation (TRBAM-25-01175) - B542
Aidi Wang/Tongji University, Yichuan Peng/Tongji University, Hong Lang/Tongji University
Enhancing Pavement Crack Detection Using a Hybrid CNN-Transformer Architecture (TRBAM-25-01244) - B559
Yihao Deng/Shandong University, Huayang Yu/Shandong University, Pei Niu/Shandong University, Feng Guo/Shandong University
Construction and Optimization of Asphalt Pavement Texture Characterization Model Based on Binocular Vision and Deep Learning (TRBAM-25-01280) - B546
Miao Yu/Chongqing Jiaotong University, Rong Zhang/Chongqing Jiaotong University, Oudi Tang/Chongqing Jiaotong University, Zhanping You/Chongqing Jiaotong University, Dongzhao Jin/Chongqing Jiaotong University, Yalong Li/Chongqing Jiaotong University
Static Coplanar Array Capacitance Imaging Method for Internal Distress in Asphalt Materials (TRBAM-25-01819) - B540
Bin Shi/Southeast University, Xinyuan Cao/Southeast University, Xing Hu/Southeast University, Kang Yao/Southeast University, Xiang Wang/Southeast University, Qiao Dong/Southeast University
Concealed Damage Imaging in Asphalt Materials using Dynamic Coplanar Array Capacitance Tomography (TRBAM-25-01821) - B541
Bin Shi/Southeast University, Xinyuan Cao/Southeast University, Kang Yao/Southeast University, Xing Hu/Southeast University, Shiao Yan/Southeast University, Qiao Dong/Southeast University
Hidden Distress Imaging in Asphalt Mixtures Based on Sensitivity Field Optimization Strategy (TRBAM-25-01822) - B530
Bin Shi/Southeast University, Xinyuan Cao/Southeast University, Xing Hu/Southeast University, Kang Yao/Southeast University, Xiang Wang/Southeast University, Qiao Dong/Southeast University
Research on predicting road anti-skid performance based on data expansion and machine learning (TRBAM-25-02074) - B549
Yanan Wu/Tongji University, Chao Wang/Tongji University, Xingyi Zhu/Tongji University

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Semi-Automatic Crack Width Measurement Using an OrthoBoundary Algorithm (TRBAM-25-02473) - B557
Zhe Hu/Chang'an University, Zhe Li/Chang'an University, Jiupeng Zhang/Chang'an University
Condition Monitoring of Cold Region Pavement with Satellite-Based PS-InSAR (TRBAM-25-02516) - B531
Xiong Yu/Case Western Reserve University
Case Study of Manually Collected Pavement Cracking Data Compared to Vendor 3D Image Based Cracking Data using FHWA Publication Number FHWA-RC-20-005 Procedures (TRBAM-25-02701) - B547
Douglas Frith/Quality Engineering Solutions, Inc., Luis Ramirez/Quality Engineering Solutions, Inc., Andy Mergenmeier/Quality Engineering Solutions, Inc.
Rut Depth Measurement of Asphalt Pavement Based on Image Processing Method (TRBAM-25-03829) - B543
Zhenqiang Han/Chang'an University, Jiaqi Tang/Chang'an University, Liqun Hu/Chang'an University, Wei Jiang/Chang'an University, Aimin Sha/Chang'an University
A Study on Binocular Visual Characterization of Cracks Based on Swin-U (TRBAM-25-03833) - B556
Xie Min/Southeast University, Li Yicheng/Southeast University, Hu Jing/Southeast University
Proactive Perceptive Road: A Digital Twin-Driven Intelligent Road Infrastructure towards Active Road State State Perception and Deduction (TRBAM-25-04033) - B555
Tao Han/Southeast University, Tao Ma/Southeast University, Jiangyin Xiao/Southeast University
Forensic Analysis of Artificial Intelligence-Generated Fake Surface Crack Images in Transportation Infrastructure (TRBAM-25-04296) - B552
Pedram Bazrafshan/Drexel University, Arvin Ebrahimkhanlou/Drexel University
PaveCap: The First Multimodal Framework for Comprehensive Pavement Condition Assessment with Dense Captioning and PCI Estimation. (TRBAM-25-04743) - B550
Blessing Agyei Kyem/North Dakota State University, Eugene Denteh/North Dakota State University, Joshua Kofi Asamoah/North Dakota State University, Armstrong Aboah/North Dakota State University
Complex Shadow Removal in Pavement Imagery: Leveraging Diffusion Models for Advanced Solutions (TRBAM-25-04766) - B551
Tanner Muturi/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia, David Kesse/University of Missouri, Columbia
Unsupervised Deep Learning Model for Pavement Rutting Detection Based on Structural Light Imaging (TRBAM-25-05904) - B548
Yishun LI/University of Shanghai for Science and Technology, Lunpeng LI/University of Shanghai for Science and Technology, Shengchuan Jiang/University of Shanghai for Science and Technology, Ziyue Gao/University of Shanghai for Science and Technology, Yuchuan Du/University of Shanghai for Science and Technology
IRFUSIONFORMER: Enhancing Pavement Crack Segmentation with RGB-T Fusion and Topological-Based Loss (TRBAM-25-06391) - B558
Xiaohu Chen/Southeast University, Leilei Chen/Southeast University, Ruiqiang Xiao/Southeast University, Wenlu Yu/Southeast University, Yanjie Zhu/Southeast University

2044

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Pavement Structural Testing and Evaluation: Falling Weight Deflectometer, Traffic Speed Deflection Devices, Ground Penetrating Radar, Structural Modeling, and More
Alvaro Ulloa, Applied Research Associates, Inc., presiding
Gabriel Bazi, pulsuus, llc, presiding
Issam Khoury, Ohio University, presiding
Francisco Thiago Sacramento Aragão, Federal University of Rio de Janeiro, presiding
Daba Gedafa, University of North Dakota, presiding
Sponsored By Standing Committee on Pavement Structural Testing and Evaluation

Time-domain Expression of the Viscoelastic Poisson's Ratio in Asphalt Pavement (TRBAM-25-05628) - B520
Tianhong Yang/Chongqing Jiaotong University, Jianwei Fu/Chongqing Jiaotong University, Xiangjiang Liu/Chongqing Jiaotong University, Jiawei Li/Chongqing Jiaotong University, Zihan Xiao/Chongqing Jiaotong University
ACR-PCR Method for Bearing Capacity Evaluation of Rigid Airfield Pavements: Practice in China (TRBAM-25-05328) - B522
Jie Yuan/Tongji University, Jie Li/Tongji University, Lukuan Ma/Tongji University, Xiangyang Jia/Tongji University

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A Predictive Model for Fatigue Damage Evolution in Asphalt Pavements: Structural Behavior Function Analysis (TRBAM-25-05188) - B527
Yi Li/Delft University of Technology, Peng Lin/Delft University of Technology, Zhen Leng/Delft University of Technology, Lijun Sun/Delft University of Technology
Dynamic Damage Analysis of Airport Runway Rigid Pavement under Aircraft Taxi Loads (TRBAM-25-05159) - B535
Zengyi Wang/Tongji University, Jianming Ling/Tongji University, Ke Cheng/Tongji University, Jiake Zhang/Tongji University
Introducing A New Solution for Network Level Pavement Structural Evaluation Using Traffic Spead Deflectometer Device (TSDD), A Case Study of Mississippi Department of Transportation (TRBAM-25-04751) - B521
Mostafa Nakhaei/IMS Infrastructure Management Services, LLC, Jim Poorbaugh/IMS Infrastructure Management Services, LLC
A Temporal Study of Traffic Speed Deflectometer Device Data (TRBAM-25-04661) - B538
Xingdong Wu/Kansas State University, Mustaque Hossain/Kansas State University, Christopher A. Jones/Kansas State University, Rick Miller/Kansas State University, Curtis Eichman/Kansas State University, David Jacobson/Kansas State University
Artificial Neural Network Modeling of Fatigue Cracking in Asphalt Pavements: A FWD Data Approach (TRBAM-25-04280) - B525
Bishal Karki/University of Texas, Tyler, Mayzan Isied/University of Texas, Tyler, Mena Souliman/University of Texas, Tyler
Assessment of Structure Conditions inside Pavement using Ground Penetrating Radar and Falling Weight Deflectometer: Theory to Practice (TRBAM-25-04045) - B536
Zhen Liu/Pennsylvania State University, Bingyan Cui/Pennsylvania State University, Xue Wang/Pennsylvania State University
Mechanical Response and Damage Behavior Analysis of Asphalt Pavement Using a 3D Coupled Thermomechanical Multiscale Modeling Method (TRBAM-25-03738) - B539
Chao Wang/Dalian University of Technology, Xingyi Zhu/Dalian University of Technology, Yiren Sun/Dalian University of Technology
Research on the Causes of Arch Expansion Disease of Semi-Rigid Base Asphalt Pavement Based on Temperature Stress Analysis (TRBAM-25-03599) - B526
Jiang Yuan/Tongji University, Huailei Cheng/Tongji University, Lijun Sun/Tongji University, Jiahao Li/Tongji University
Emerging Challenges of Electric Truck Platooning on Flexible Pavement Performance (TRBAM-25-02969) - B534
Kairen Shen/Rutgers University, Hao Wang/Rutgers University
A Novel FWD Dispersion Curve Method: Leveraging FWD Data for Advanced Layer and Modulus Assessment (TRBAM-25-02438) - B537
Xue Wang/Penn State Altoona, Shihui Shen/Penn State Altoona, Phillip Donovan/Penn State Altoona, Luis Ramirez/Penn State Altoona, Steven Koser/Penn State Altoona, Zhen Liu/Penn State Altoona
A Numerical Investigation on the Role of Surface Macrotexture in Surface Reflection Method for Dielectric Measurement of Asphalt Pavement (TRBAM-25-02340) - B532
Heng Liu/Highway Technology Partners LLC, Hoda Azari/Highway Technology Partners LLC
Efficient Approaches for Estimating Pavement Structural Numbers from FWD and TSD Measurements for Network Level Pavement Management Applications (TRBAM-25-02217) - B533
Atish Nadkarni/Engineering and Software Consultants, Inc., Mahdi Nasimifar/Engineering and Software Consultants, Inc., James Bryce/Engineering and Software Consultants, Inc., Senthilmurugan Thyagarajan/Engineering and Software Consultants, Inc., Nadarajah Sivaneswaran/Engineering and Software Consultants, Inc.
Determining Pavement Strain from Deflection Slopes Using Plate Bending Theory (TRBAM-25-01110) - B524
Helene Pehrsson/Virginia Polytechnic Institute and State University, David Malmgreen-Hansen/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University, Samer Katicha/Virginia Polytechnic Institute and State University
Sensitivity of Traffic Speed Deflection Devices to Structural and Material Properties of Flexible Pavements (TRBAM-25-00417) - B523
Reza Kamalizadeh/University of Texas, El Paso, Cesar Tirado/University of Texas, El Paso, Dr. Soheil Nazarian/University of Texas, El Paso

2045

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Pavement Surface Properties: Tire and Pavement Noise, Friction, Rolling Resistance, and Ride

Tucker Stafford, Mississippi Department of Transportation, presiding

Sirous Alavi, Fugro USA Land Inc., presiding

Sponsored By Standing Committee on Pavement Surface Properties and Vehicle Interaction

Multiple papers selected for poster presentation involving pavement surface properties and vehicle interaction including tire/pavement noise, tire/pavement friction, tire/pavement rolling resistance, and roadway roughness.

Integrating spatial and attention mechanism in convolutional neural networks for friction coefficient prediction (TRBAM-25-01091) - B517

Zihang Weng/Hong Kong Polytechnic University, Chenglong Liu/Hong Kong Polytechnic University, Yuchuan Du/Hong Kong Polytechnic University, Zhen Leng/Hong Kong Polytechnic University, Difei Wu/Hong Kong Polytechnic University

Overall Pavement Skid Resistance Evaluation Based on Laterally Uneven Friction Coefficient Distrbution (TRBAM-25-01120) - B518

Zihang Weng/Tongji University, Yuchuan Du/Tongji University, Zhen Leng/Tongji University, Difei Wu/Tongji University, Chenglong Liu/Tongji University

Noise Reduction Performance and Maintenance Time of Porous Asphalt Pavement (TRBAM-25-01477) - B507

Gang Xu/Southeast University, Chunxi Li/Southeast University, Xiaojin LU/Southeast University, Xianhua Chen/Southeast University

Research on Noise reduction Performance and Decay Behavior of Porous Asphalt Mixtures under Blockage Conditions (TRBAM-25-01689) - B508

Hailiang Liang/Southeast University, Chunxi Li/Southeast University, Gang Xu/Southeast University, Xianhua Chen/Southeast University

Assessing the Road Pavement Roughness using a Smartphone's Accelerometer (TRBAM-25-01762) - B494

Ahmed Elgendy/Cairo University, Hassan Abdelwahab/Cairo University, Elhashemi Ali/Cairo University

Analysis of Tire-Pavement Interaction Modeling and Rolling Energy Consumption Based on Finite Element Simulation (TRBAM-25-01990) - B509

Qian Liu/Chang'an University, Jianzhong Pei/Chang'an University

A Novel Closed-Loop Assessment Method for Analyzing the Impact of Pavement Rutting on Driving Safety (TRBAM-25-02266) - B506

Daoxie Chen/Southeast University, Leilei Chen/Southeast University, yitong Min/Southeast University, Zhendong Qian/Southeast University

The Influence of Road Detritus Particle Size on Dry Skid Resistance and Surface Coverage (TRBAM-25-02337) - B484

Anissa Tajudin/University of Nottingham, Nick Thom/University of Nottingham, Gordon Airey/University of Nottingham, Tony Parry/University of Nottingham

Predictive Modeling of Skid Numbers on High-Speed New Mexico Interstate Highways Using Machine Learning (TRBAM-25-02469) - B529

B S Pushpendue Biswas/University of New Mexico, Md Saddam Hossain/University of New Mexico, Muhammad Tasnim Alam/University of New Mexico, Rafi Tarefder/University of New Mexico

Fundamentals of Network Evaluation of Pavement Texture Using Computer Vision Techniques (TRBAM-25-02585) - B528

Mohammad Fakhreddine/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign, Mani Golparvar-Fard/University of Illinois, Urbana-Champaign

Evaluation of Network-Level Condition of Bridge Ends Using Localized International Roughness Index (TRBAM-25-02940) - B516

Xiaoyang Jia/Tennessee Department of Transportation, Di Zhu/Tennessee Department of Transportation, Mark Woods/Tennessee Department of Transportation

Predicting Asphalt Pavement Friction Using Texture-Based Image Indicator (TRBAM-25-03047) - B503

Bingjie Lu/Rutgers University, New Brunswick, Xiaoyu Zhang/Rutgers University, New Brunswick, Hao Wang/Rutgers University, New Brunswick, Thomas Bennert/Rutgers University, New Brunswick

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Analysis of Rubber-Pavement Texture Contact Characteristics for Friction Prediction With Polishing Effect (TRBAM-25-03081) - B493
Xiaoyu Zhang/Rutgers University, New Brunswick, Hao Wang/Rutgers University, New Brunswick, Thomas Bennert/Rutgers University, New Brunswick
Developing a Neural Network-Based Model for Predicting Skid Resistance in Asphalt Pavements (TRBAM-25-04238) - B505
Bishal Karki/University of Texas, Tyler, Mayzan Isied/University of Texas, Tyler, Mena Souliman/University of Texas, Tyler
Modeling the Safety Impacts of Pavement Characteristics Using Continuous Pavement Friction Measurement Data to Support Pavement and Safety Management in Florida (TRBAM-25-04414) - B504
Huiqing Lyu/University of South Florida, Zhengyu Wang/University of South Florida, Pei-Sung Lin/University of South Florida, Qing Lu/University of South Florida, Emmeth Duran/University of South Florida, Guangming Wang/University of South Florida
Two-Step Deep-Learning Model for Pavement Friction Evaluation Using 8K 0.1-MM 3D Texture Data (TRBAM-25-04647) - B519
Guolong Wang/Montana State University, Bozeman, Kelvin Wang/Montana State University, Bozeman, Guangwei Yang/Montana State University, Bozeman
3D Texture Reconstruction of Asphalt Pavement Based on Multi-View Stereo Using Machine-Learning Assisted Feature Extraction and Matching (TRBAM-25-05183) - B492
YUHUI ZHOU/Tongji University, Hongren Gong/Tongji University, LIN CONG/Tongji University, LIUYING DENG/Tongji University
Network-Level Pavement Management based on Safety Evaluation and Friction Demand Analysis: An Illinois Case Study (TRBAM-25-05892) - B502
Run Hu/University of Illinois, Urbana-Champaign, Babak Asadi/University of Illinois, Urbana-Champaign, Ramez Hajj/University of Illinois, Urbana-Champaign, Erwin Kohler/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign, Priscilla Tobias/University of Illinois, Urbana-Champaign, Hao Wang/University of Illinois, Urbana-Champaign

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Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Maintenance Management Research Ranging from Prediction and Reliability to Artificial Intelligence Detection of Deficiencies
Omidreza Shoghli, University of North Carolina, Charlotte, presiding
Sponsored By Standing Committee on Maintenance Management Systems

This poster session will present maintenance management research ranging from performance prediction and reliability to AI detection of deficiencies

WBS-based TF-CM: A Novel Approach for Measuring Highway Maintenance Project Similarity Based on Budget Items' Structural and Physical Features (TRBAM-25-00323) - B420
Xuelian Wu/Chang'an University, Xiaoli Shi/Chang'an University, Maria Postorino/Chang'an University, Xiaotian Gong/Chang'an University
Multi-objective Optimization of Maintenance, Repair and Rehabilitation Schedule Considering Greenhouse Gas Emissions (TRBAM-25-00860) - B412
Lamiya Chowdhury/Pennsylvania State University, S. Ilgin Guler/Pennsylvania State University, Shelley Stoffels/Pennsylvania State University
Differentiated Maintenance Demand Analysis based on Spatial Heterogeneity of Urban Pavement Performance (TRBAM-25-01237) - B422
Qian Gao/Tongji University, Yuchuan Du/Tongji University, Chenglong Liu/Tongji University
Optimizing Pavement Maintenance and Rehabilitation Strategies for Large-Scale Pavement Networks: A Case Study of Wyoming (TRBAM-25-01272) - B423
Waleed Aleadelat/University of Wyoming, Bernard Boakye/University of Wyoming, Khaled Ksaibati/University of Wyoming
Friction Performance Models for Network-level Pavement Friction Management (TRBAM-25-02229) - B414
Hongbin Xu/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin
Introduction of Maintenance Modification Factor (MMF) for Highway Maintenance Benefits Cost Analysis (TRBAM-25-02395) - B424
Teng Wang/Kentucky Transportation Cabinet, Mohammad Majidi/Kentucky Transportation Cabinet, Reg Souleyrette/Kentucky Transportation Cabinet

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Automated Road Condition Analysis Using Cost-Effective RGB-D Sensors (TRBAM-25-02396) - B421
Yu-Ting Huang/Purdue University, Mohammad Jahanshahi/Purdue University, Nikkhil Sankar/Purdue University
Identification and Classification of Road Surface Defects Through Specialized Signals and Machine Learning (TRBAM-25-02420) - B410
Korkut Kaynardag/University of Central Florida, Daisuke Oshima/University of Central Florida, Fikret Catbas/University of Central Florida
Optimizing Pavement Maintenance: A Machine Learning Approach for Classifying and Forecasting Patch Area Using Multilayer Perceptron Model (TRBAM-25-04313) - B411
Sayla Prova/University of Texas, Tyler, Mayzan Isied/University of Texas, Tyler, Mena Souliman/University of Texas, Tyler
Enhanced Crack Segmentation Using META's Segment Anything Model (SAM) with Low-Cost Ground Truths and Multimodal Prompts (TRBAM-25-04786) - B413
Tanner Muturi/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia
Enhancing NYMTA Switch Machine Reliability through Data-Driven Maintenance (TRBAM-25-05016) - B431
Pedro Serigos/Cambridge Systematics, Inc., Satyen Patel/Cambridge Systematics, Inc., David Kraft/Cambridge Systematics, Inc.

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Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Current Issues in Transportation Energy
Mehrnaz Ghamami, Michigan State University, presiding
Sponsored By Standing Committee on Transportation Energy

Universal Pre-trained Transformer for Energy Consumption Prediction of Electric Vehicles (TRBAM-25-00143) - A166
Haichao Huang/Shanghai Jiaotong University, HONG-DI HE/Shanghai Jiaotong University, Kun Gao/Shanghai Jiaotong University, Yizhou Wang/Shanghai Jiaotong University, Zhe Zhang/Shanghai Jiaotong University
Towards ZEVs without SUVs? Simulating the Long-term Impacts of Regulation Design on Vehicle Size and GHG Emissions (2025-2035) (TRBAM-25-00351) - A134
Jonn Axsen/Simon Fraser University, Chandan Bhwardwaj/Simon Fraser University
Charging Patterns and Motives of Electric Vehicle Drivers: Insights from a Large-Scale Survey in Norway (TRBAM-25-00384) - A120
Junianna Zatsarnaja/Technical University Munich, Milad Mehdizadeh/Technical University Munich, Alim Nayum/Technical University Munich, Trond Nordfjærn/Technical University Munich, Katharina Reiter/Technical University Munich
ENHANCING URBAN ENERGY RESILIENCE: VEHICLE-TO-GRID (V2G) STRATEGIES WITHIN ELECTRIC SCOOTER BATTERY SWAPPING ECOSYSTEMS (TRBAM-25-00439) - A121
Yuan-Hsi Chien/National Taiwan University, I-Yun Lisa Hsieh/National Taiwan University
Impact of Carbon Charge Policy on Mode Shifts in Multi-Mode Public Transportation (TRBAM-25-00444) - A122
Chuyun Zhao/Central South University, Jinjun Tang/Central South University, Lipeng Hu/Central South University, Cheng Hu/Central South University, Guowen Dai/Central South University
Should Environmentalists Support the Gasoline Tax? (TRBAM-25-00517) - A123
Adam Millard-Ball/University of California, Los Angeles, Erick Guerra/University of California, Los Angeles
Grid Modernization and Cybersecurity: Policy Implications for Electric Vehicle Infrastructure (TRBAM-25-00553) - A130
Trayce Hockstad/Alabama Transportation Institute, Justin Fisher/Alabama Transportation Institute
Differences in Canadian Consumers' Awareness and Preferences for Zero-emissions Vehicles from 2013-2023 (TRBAM-25-00568) - A135
Zoe Long/Simon Fraser University, Jonn Axsen/Simon Fraser University, Viviane Gauer/Simon Fraser University, Taco Niet/Simon Fraser University
Vehicle Scrappage Programs Could Help Decarbonize Road Transportation (TRBAM-25-00995) - A124
Maxwell Woody/University of Michigan, Samuel Stolper/University of Michigan, Parth Vaishnav/University of Michigan, Gregory Keoleian/University of Michigan
Development of a Demand Forecasting Algorithm for Charging Facilities Based on the Electric Vehicle Travel Chain (TRBAM-25-01058) - A125
Ziang Chen/Southeast University, Yanjie JI/Southeast University, Zishuo GUO/Southeast University, Xinge LIU/Southeast University
The Cyber-Infrastructure Environmental Impacts of Autonomous Vehicles (TRBAM-25-01466) - A126
Kendrick Hardaway/Purdue University, Oscar Teran/Purdue University, Hua Cai/Purdue University

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On the parking, charging and vehicle-to-grid choices of electric vehicles (TRBAM-25-01525) - A110
Zhuoye Zhang/University of Hong Kong, Fangni Zhang/University of Hong Kong, Wei Liu/University of Hong Kong
Driving Reductions in Emissions Unlocking the Potential of Fuel Economy Targets in Saudi Arabia (TRBAM-25-01807) - A127
Ibrahem Shatnawi/King Abdullah Petroleum Studies and Research Center, Jeyhun Mikayilov/King Abdullah Petroleum Studies and Research Center
The Cost and Time Savings Potential of The Intelligent Charging Strategy for Electric Truck Trip (TRBAM-25-02060) - A128
qiujun qian/Southwest Jiaotong University, Mi Gan/Southwest Jiaotong University, Xiaoyuan Yang/Southwest Jiaotong University
Understanding Electric Vehicle Users' Charging Patterns and Selection Considerations at Public Charging Stations: Insights from a Survey Study (TRBAM-25-02078) - A118
Boyou Chen/University of Michigan, Transportation Research Institute, Huizhong Guo/University of Michigan, Transportation Research Institute, Feng Zhou/University of Michigan, Transportation Research Institute, Zhen Hu/University of Michigan, Transportation Research Institute, Jiaqi Sophie Huang/University of Michigan, Transportation Research Institute, Kai Wu/University of Michigan, Transportation Research Institute, Dominique Meroux/University of Michigan, Transportation Research Institute, Shan Bao/University of Michigan, Transportation Research Institute
A Two-sided Model for EV Market Dynamics and Policy Implications (TRBAM-25-02458) - A117
Haoxuan Ma/University of California, Los Angeles, Brian Y He/University of California, Los Angeles, Tomas Kaljevic/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
GAME ON OR GAME OVER: ASSESSING THE CLIMATE EMISSION IMPLICATIONS FROM TRANSPORTATION INFRASTRUCTURE SPENDING (TRBAM-25-02618) - A116
Corrigan Salerno/Transportation For America, Benito Perez/Transportation For America, Mehr Mukhtar/Transportation For America
Automaker's Electric Vehicle production and Pooling strategies: An analysis of the European Union Supply Side Regulation (TRBAM-25-02649) - A151
MINAL CHANDRA/University of California, Davis, Gil Tal/University of California, Davis
Exploring Interpretable Ensemble Models for Accurate Electric Vehicle Charging Session forecasting (TRBAM-25-03329) - A115
Irfan Ullah/Dalian Maritime University, Muzaffar Iqbal/Dalian Maritime University, Muneer Ahmad/Dalian Maritime University
The Dynamic Cost of Subsidies in Accelerating Global Electric Vehicle Adoption (TRBAM-25-03432) - A142
Tamara Sheldon/King Abdullah Petroleum Studies and Research Center, Rubal Dua/King Abdullah Petroleum Studies and Research Center
Zero Emission Zones for Zero Emission Vehicles: A Preliminary Analysis (TRBAM-25-03488) - A114
Jaehyun Ha/University of Southern California, Genevieve Giuliano/University of Southern California, Ruoyu Chen/University of Southern California, Vinay Amatya/University of Southern California
Electrification tipping point: charging everywhere before EV everywhere. (TRBAM-25-03532) - A136
Baotong Zhang/South China University of Technology, Zhenhong Lin/South China University of Technology, qianqian yan/South China University of Technology
Uncovering the Hidden Energy Costs of Autonomous Vehicle Systems and Service Deployment Strategie (TRBAM-25-03705) - A131
Ada Garus/European Commission Joint Research Center, Giovanni Albano/European Commission Joint Research Center, Gianmarco Baldini/European Commission Joint Research Center, Konstantinos Mattas/European Commission Joint Research Center, Bat-hen Nahmias-Biran/European Commission Joint Research Center, Biagio Ciuffo/European Commission Joint Research Center
Unveiling the Energy Impact of Vehicles' Automation: a first empirical estimation (TRBAM-25-03846) - A132
Giovanni Albano/JRC: European Commission Joint Research Centre, Konstantinos Mattas/JRC: European Commission Joint Research Centre, Alessandro Tansini/JRC: European Commission Joint Research Centre, Sándor Vass/JRC: European Commission Joint Research Centre, Riccardo Donà/JRC: European Commission Joint Research Centre, Ada Garus/JRC: European Commission Joint Research Centre, Fabio Sartori-Vieira/JRC: European Commission Joint Research Centre, Georgios Fontaras/JRC: European Commission Joint Research Centre, Bat-hen Nahmias-Biran/JRC: European Commission Joint Research Centre, Biagio Ciuffo/JRC: European Commission Joint Research Centre
Regional Critical Minerals Battery Demand and Reserves: The omitted role of trade and recycling (TRBAM-25-03919) - A150
Pablo Busch/University of California, Davis, Alissa Kendall/University of California, Davis, Gil Tal/University of California, Davis

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Can Information Design Resolve Electric Vehicle Charging Chaos? (TRBAM-25-03985) - A145
Qianni Wang/Northwestern University, Jiayang Li/Northwestern University, Xiaotong Sun/Northwestern University, Yu Nie/Northwestern University
Emerging Policy and Economics Research Priorities for Enabling the Electric Vehicle Sector (TRBAM-25-04145) - A140
Rubal Dua/King Abdullah Petroleum Studies and Research Center, Saif Almutairi/King Abdullah Petroleum Studies and Research Center, Prateek Bansal/King Abdullah Petroleum Studies and Research Center
Medium- and Heavy-duty Electric Truck Charging Assessment and Investment Needs to 2030 in California and the US: A Literature Review and A Proposed Vehicle/Charger Matrix (TRBAM-25-04504) - A160
Hong Yang/University of California, Davis, Marshall Miller/University of California, Davis, Lewis Fulton/University of California, Davis, Aravind Kailas/University of California, Davis
Poor Reliability of Public Charging Stations Can Impede the Growth of the Electric Vehicle Market (TRBAM-25-04669) - A113
Rubina Singh/University of Washington, Casey Quinn/University of Washington, Don MacKenzie/University of Washington
ANALYZING RESIDENTIAL CHARGING DEMAND FOR LIGHT-DUTY ELECTRIC VEHICLES IN COLORADO (TRBAM-25-04763) - A111
Zhaocai Liu/National Renewable Energy Laboratory (NREL), Polina Alexeenko/National Renewable Energy Laboratory (NREL), Matthew Bruchon/National Renewable Energy Laboratory (NREL), Mingzhi Zhang/National Renewable Energy Laboratory (NREL), Mithat John Kisacikoglu/National Renewable Energy Laboratory (NREL)
Battery Downsizing vs. Charging Management to Reduce Critical Raw Material Demand in Electric Mobility: Insights from a New York City Yellow Taxi Study (TRBAM-25-04772) - A100
Nicolò Daina/Columbia University, Pei-Yu Chang/Columbia University
Analysis of Load Profiles for Medium and Heavy-Duty Electric Vehicles: Implications for Grid Integration (TRBAM-25-05093) - A101
Olcay Sahin/Argonne National Laboratory, Brennan Borlaug/Argonne National Laboratory, Taner Cokyasar/Argonne National Laboratory, Natalia Zuniga-Garcia/Argonne National Laboratory, Charbel Mansour/Argonne National Laboratory
An Advanced Microscopic Energy Consumption Model for Automated Vehicle: Development, Calibration, Verification (TRBAM-25-05240) - A102
Ke Ma/University of Wisconsin,Madison, Zhaohui Liang/University of Wisconsin,Madison, Hang Zhou/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison
Spatially Resolved Domicile Charging Demands for Light-, Medium-, and Heavy-Duty Electric Vehicles in Virginia (TRBAM-25-05404) - A112
Matthew Bruchon/National Renewable Energy Laboratory (NREL), Zhaocai Liu/National Renewable Energy Laboratory (NREL), Yi He/National Renewable Energy Laboratory (NREL), Jesse Bennett/National Renewable Energy Laboratory (NREL)
Analyzing Public Sentiment Variations towards Electric Vehicles in the US: Evidence from Twitter (TRBAM-25-05483) - A103
Mingqi Yao/University of California, Irvine, Stephen Ritchie/University of California, Irvine
Charging event identification and charging behavior pattern mining of electric taxis based on trajectory data (TRBAM-25-05493) - A104
Mingxiang Gu/Tongji University, Zhengyu Duan/Tongji University
Evaluating Current and Anticipated Barriers to Full-scale Electrification of the Light-duty Vehicle Sector (TRBAM-25-05796) - A141
Ishant Sharma/University of Memphis, Prateek Bansal/University of Memphis, Rubal Dua/University of Memphis
Evaluating the Energy Savings Potential from Eco Routing of Heavy-Duty Battery Electric Trucks (TRBAM-25-05975) - A146
Emmanuel Hidalgo Gonzalez/University of California, Riverside, Alexander Vu/University of California, Riverside, Matthew Barth/University of California, Riverside, Kanok Boriboonsomsin/University of California, Riverside
Dynamic Modeling and Optimal Planning for the Simultaneous Integration of Electric Vehicles and Renewable Energy Sources into the Traffic-Power System (TRBAM-25-05981) - A105
Jose Acedo Aguilar/University of Texas, El Paso, Shian Wang/University of Texas, El Paso
Energy Consumption of Plug-in Hybrids: a Fleet and Vehicle Level Assessment (TRBAM-25-06322) - A133
Markos Ktistakis/European Commission, Alessandro Tansini/European Commission, Dimitrios Komnos/European Commission, Jaime Suarez-Corujo/European Commission, Georgios Fontaras/European Commission
IS A MODAL SHIFT ENOUGH TO REACH THE CLIMATE TARGETS? A CASE STUDY USING AN AGENT-BASED TRANSPORT SIMULATION FOR THE CITY OF LEIPZIG (TRBAM-25-06423) - A162
Gregor Rybczak/Technische Universität Berlin, Chengqi Lu/Technische Universität Berlin, Dominik Ziemke/Technische Universität Berlin, Kai Nagel/Technische Universität Berlin

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Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Issues in Alternative Fuels and Technologies

Eleftheria Kontou, University of Illinois, Urbana-Champaign, presiding

Sponsored By Standing Committee on Alternative Fuels and Technologies

Who owns Tesla? The relationship between electric vehicle adoption and regional characteristics in Texas Triangle (TRBAM-25-00185) - A158

Seung Jun Choi/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Tigris Mendez/University of Texas, Austin

Locations for Electric Truck Charging Stations and Impact of Battery Technology Improvement (TRBAM-25-00308) - A168

Zheyu Li/University of Maryland, College Park, Youngmin Choi/University of Maryland, College Park, Paul Schonfeld/University of Maryland, College Park

Decarbonizing Transportation Fuels: A Life Cycle Assessment of Green Energy-dense Fuels through the Electrochemical Conversion of Biogas and Fischer-Tropsch Synthesis (TRBAM-25-00330) - A170

Jayakrishnan Kaliyarmattom Ravindran/Universidade de Aveiro, Duncan P. Fagg/Universidade de Aveiro, Margarida Coelho/Universidade de Aveiro

Integrated operation strategy of electric micro-mobility vehicle battery-swapping system based on multi-agent hierarchical reinforcement learning (TRBAM-25-00522) - A186

Fan Zhang/Southeast University, Huitao Lv/Southeast University, Chenchen Kuai/Southeast University

Dynamic Battery-Swapping Recommendations for Electric Micro-Mobility Vehicles: Leveraging Deep Reinforcement Learning (TRBAM-25-00525) - A187

Huitao Lv/Southeast University, Fan Zhang/Southeast University, Chenchen Kuai/Southeast University

The Early-to-late Majority's Intention to Purchase Battery Electric Vehicles in the Post-Subsidy Era: A Case Study from Beijing, China (TRBAM-25-00805) - A205

Xinhao Ding/Fujian University of Technology, Jieru Zou/Fujian University of Technology, Feiyu Feng/Fujian University of Technology, Zekang Weng/Fujian University of Technology

How About Electric Vehicles? Sensing Owners' Experiences and Attitudes through Short Video and Text Analysis (TRBAM-25-00825) - A178

Qinyu Cui/South China University of Technology, Renjie Yuan/South China University of Technology, Guang Yang/South China University of Technology, Zemu Chen/South China University of Technology, Peiqun Lin/South China University of Technology

CDRpy: Data-Driven Decision Support for the Roll-out of public Charging Infrastructure in urban Areas (TRBAM-25-00864) - A177

Markus Fischer/Technical University of Munich, Wibke Michalk/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

Measuring Consumer Willingness to Enroll in Battery Electric Vehicle Smart Charging Programs (TRBAM-25-01317) - A152

Pingfan Hu/George Washington University, Brian Tarroja/George Washington University, Matthew D. Dean/George Washington University, Kate Forrest/George Washington University, Eric Hittinger/George Washington University, Alan Jenn/George Washington University, John Helveston/George Washington University

Electric Vehicle Charging Infrastructure and Adoption Rate in the United States (TRBAM-25-01322) - A176

Kwangyul Choi/Inha University, Anni Yang/Inha University, Hananeh Omidi/Inha University, Adam Anwar/Inha University

Uncovering Factors Affecting Consumers' Decisions for Pre-owned Electric Vehicles (TRBAM-25-01325) - A198

Sk. Mashrur/University of Toronto, Moataz Mohamed/University of Toronto

Gap in Requirements for Workplace Charging Between Demand and Supply Sides (TRBAM-25-01838) - A188

Ryosuke Kataoka/Toyota Central R and D Labs Inc, Tomoki Nishi/Toyota Central R and D Labs Inc, Ken Hidaka/Toyota Central R and D Labs Inc

An Information Gain-Based MCDM Approach for Optimizing Freight Electric Vehicle Charging Station Siting using GPS Data (TRBAM-25-02126) - A208

MENGZHUO ZHAO/Kean University, Dan Liu/Kean University

Electric Vehicle Preferences: How Do They Differ for Additional versus Replacement Household Vehicles? (TRBAM-25-02249) - A197

Felita Ong/University of Toronto, Sk Md Mashrur/University of Toronto, Moataz Mohamed/University of Toronto, Khandker Nurul Habib/University of Toronto

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Transfer Learning-Based Prediction of Electric Vehicle charging stations Demand: Bridging Data Gaps Between Colorado and Minnesota (TRBAM-25-02338) - A220
Farnoosh Roozkhosh/University of Georgia, Angela Yao/University of Georgia, Behnam Tahmasbi/University of Georgia
Integrating En Route and Home Proximity in EV Charging Accessibility: A Spatial Analysis in the Washington Metropolitan Area (TRBAM-25-02387) - A221
Asal Mehditabrizi/University of Maryland, Behnam Tahmasbi/University of Maryland, Saeed Saleh Namadi/University of Maryland, Cinzia Cirillo/University of Maryland
Used or New? Investigating Consumer Preferences in the Electric Vehicle Market (TRBAM-25-02448) - A201
Bruno Cesar Krause Moras/Purdue University, Christina Joslin/Purdue University, Konstantina (Nadia) Gkritza/Purdue University
Exploring EV Adoption in Various Contexts: A Descriptive and Integrated Choice Model Analysis in the US Midwest (TRBAM-25-02479) - A171
Omid Armantalab/University of Nebraska, Lincoln, Hania Afzal/University of Nebraska, Lincoln, Jason Hawkins/University of Nebraska, Lincoln
Evaluating the Impact of Charging Behavior and Electricity Rates on the Feasibility of Vehicle-to-Grid Integration under Carbon Constraints: A Case Study in California (TRBAM-25-02523) - A154
Hanif Tayarani/University of California, Davis, Alan Jenn/University of California, Davis, Gil Tal/University of California, Davis, Christopher Nitta/University of California, Davis
Innovative Rechargeable Cement-Based Solid-State Batteries for Self-Powered Intelligent Transportation Infrastructure (TRBAM-25-02547) - A210
Dandan Yin/Tennessee State University, Shihui Liu/Tennessee State University, Liqiang Yin/Tennessee State University, Catherine K. Armwood-Gordon/Tennessee State University, Lin Li/Tennessee State University
Bi-Level Optimization for Strategic Commercial Electric Vehicle Charging Station (EVCS) Placement (TRBAM-25-02735) - A207
Sayantan Tarafdar/University of Maryland, College Park, Yi Zhang/University of Maryland, College Park, Yaobang Gong/University of Maryland, College Park, Xianfeng Yang/University of Maryland, College Park
Analyzing the Daily Profitability from Vehicle-to-grid (V2G) Participation for Electric Vehicle (EV) Drivers: with a Progressive Duration-based Discharging Pricing Scheme (TRBAM-25-02925) - A137
Anqi Han/Hong Kong University of Science and Technology, Yichun Chen/Hong Kong University of Science and Technology, Jiewei Li/Hong Kong University of Science and Technology, Shiqi Ou/Hong Kong University of Science and Technology, Wei Wei/Hong Kong University of Science and Technology
Unveiling the Geographical Variations of Electric Vehicles Charging Satisfaction in the United States (TRBAM-25-02962) - A190
Xinyi (Sydney) Wu/Argonne National Laboratory, Yan Zhou/Argonne National Laboratory
Modeling Electric Vehicle Community-Charging Problem with Link-Charger-Flow Interactions: A Cross-Layer Modeling Approach (TRBAM-25-03015) - A191
Yang Song/Pennsylvania State University, Xianbiao Hu/Pennsylvania State University, Peiheng Li/Pennsylvania State University, Xuesong Zhou/Pennsylvania State University
Large Scale Charging Station Deployment Optimization for Electric Heavy-Duty Vehicles Using Trajectory-Extracted Schedule: A Case Study in Germany (TRBAM-25-03063) - A167
HAO-MING CHEN/Shanghai Jiao Tong University, HONG-DI HE/Shanghai Jiao Tong University, MARCEL PORSCHEN/Shanghai Jiao Tong University, KAI LU/Shanghai Jiao Tong University, Zhong-Ren Peng/Shanghai Jiao Tong University
Why Chinese Car Owners May Not Repurchase Electric Vehicles? (TRBAM-25-03067) - A143
Eui-Jin Kim/National University of Singapore, Rubal Dua/National University of Singapore, Prateek Bansal/National University of Singapore
A Computationally Efficient Battery Swapping Station Location Problem Optimization Model for Commercial Electric Vehicles under Demand Uncertainty: A Benders Decomposition-based Method (TRBAM-25-03135) - A203
Kangli Yan/Tongji University, Yuntao Guo/Tongji University, Xinghua Li/Tongji University, Xinwu Qian/Tongji University, Ting Jiang/Tongji University, Yuting Hu/Tongji University
Impacts of BEVs on Regional Transportation Accessibility: A California Case Study (TRBAM-25-03190) - A156
Aaron Rabinowitz/Institute of Transportation Studies (ITS), Chaitanya Vaishnavi Karanam/Institute of Transportation Studies (ITS), Gil Tal/Institute of Transportation Studies (ITS)
Unveiling the scaling properties of battery electric vehicle charging station choice and its influencing factors using a large-scale vehicle trajectory data (TRBAM-25-03291) - A204
Xinghua Li/Tongji University, Jieru Zou/Tongji University, Xinyuan Zhang/Tongji University, Yuntao Guo/Tongji University, Xinwu Qian/Tongji University, Minghui Zhong/Tongji University

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Investigating the Adoption Intentions of Battery Electric Vehicle Owners towards Battery Swapping Service (TRBAM-25-03295) - A206
Xinghua Li/Tongji University, Xing Liang/Tongji University, Yuntao Guo/Tongji University
Modelling Electric Vehicle Charging Infrastructure Utilization in Singapore by Integrating Urban Morphology and Socioeconomic Factors (TRBAM-25-03462) - A218
Sudarssan Nilavalagan/Institute of High Performance Computing, Manish Yadav/Institute of High Performance Computing, Joseph Chan Joo Keng/Institute of High Performance Computing, Rakhi Manohar Mepparambath/Institute of High Performance Computing
Are American Electric Vehicle Owners Quitting? (TRBAM-25-03486) - A144
Rubal Dua/King Abdullah Petroleum Studies and Research Center, Alexander Edwards/King Abdullah Petroleum Studies and Research Center, Utkarsh Anand/King Abdullah Petroleum Studies and Research Center, Prateek Bansal/King Abdullah Petroleum Studies and Research Center
Future Electric Vehicle Usage Forecasting Using Sequential Generative Adversarial Networks (TRBAM-25-03490) - A202
Xiaowei Chen/Purdue University, Omar Faruqe Hamim/Purdue University, Bruno Cesar Krause Moras/Purdue University, Konstantina (Nadia) Gkritza/Purdue University, Satish Ukkusuri/Purdue University
Exploring Public Engagement in Vehicle-to-Grid (V2G) Technology in China (TRBAM-25-03504) - A217
Qianqian Yan/South China University of Technology, Zhenhong Lin/South China University of Technology, Xiaoru Chen/South China University of Technology
A Continuum Approximation Approach for Optimal Planning of Urban Public Charging Infrastructure for Electric Vehicles (TRBAM-25-03605) - A216
Yichan An/Korea Advanced Institute of Science and Technology, Joseph Chow/Korea Advanced Institute of Science and Technology, Soomin Woo/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology
Charging Infrastructure Performance of Electrified Freight: A Case Study in the Illinois Autonomous and Connected Track (TRBAM-25-03672) - A215
Denissa Purba/University of Illinois, Urbana-Champaign, Eleftheria Kontou/University of Illinois, Urbana-Champaign
Quantitative Analysis of the Plug-in Electric Vehicle User's Online Comments in China (TRBAM-25-03706) - A138
Lanxin Shi/South China University of Technology, Yanzi Zhou/South China University of Technology, Shiqi Ou/South China University of Technology, Yonglin Wu/South China University of Technology, Xin He/South China University of Technology, Daniel Gomez/South China University of Technology, Zhenhong Lin/South China University of Technology
Impact of Users' Travel Patterns and Weather on the Optimum Capacity and Operation of Second-Life Batteries to Support Fast Charging in Michigan (TRBAM-25-03717) - A213
Hamid Mozafari/Michigan State University, Chenyang Deng/Michigan State University, Kunle Ademayo/Michigan State University, Mehrnaz Ghamami/Michigan State University, Annick Anctil/Michigan State University, Ali Zockaie/Michigan State University
Understanding the Perception Differences of Charging Infrastructure among Electric Vehicle (EV) and Non-EV Users: a Network Analysis Perspective (TRBAM-25-03733) - A200
Hossein Gazmeh/Rice University, Omar Faruqe Hamim/Rice University, Torsten Reimer/Rice University, Juan Loaiza-Ramírez/Rice University, Satish Ukkusuri/Rice University, Peter Todd/Rice University, Steven Jones/Rice University, Xinwu Qian/Rice University
Supporting EV Tourism Trips Through Intermediate and Destination Charging: A Case Study of Lake Michigan Circuit (TRBAM-25-03791) - A214
Amirali Soltanpour/Michigan State University, Alireza Rostami/Michigan State University, Sajjad Vosoughinia/Michigan State University, Mehrnaz Ghamami/Michigan State University, Ali Zockaie/Michigan State University, Robert Jackson/Michigan State University
Optimizing EV Charging Infrastructure: Leveraging Level-2 Chargers for Tourist Destinations and Long-Distance Trip Endpoints (TRBAM-25-03809) - A211
Amirali Soltanpour/Michigan State University, Alireza Rostami/Michigan State University, Behdad Ghafarnezhad/Michigan State University, Mehrnaz Ghamami/Michigan State University, Ali Zockaie/Michigan State University, Robert Jackson/Michigan State University
The Neglected Electric Vehicle Adoption Context: Barriers to Uptake in Rural Communities (TRBAM-25-03823) - A196
Alexandra Sbrocchi/McMaster University, Léa Ravensbergen/McMaster University, Mark Ferguson/McMaster University, Sadia Tasnim/McMaster University, Moataz Mohamed/McMaster University
Shared EV Charging Stations for the Austin Area: Opportunities for Public-Private Partnerships (TRBAM-25-04192) - A222
Lin Su/University of Texas, Austin, Kara Kockelman/University of Texas, Austin

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A Proposed Approach to Enhance Electric Vehicle Charging Behavior: Addressing Range Anxiety with a Novel Penalty Function (TRBAM-25-04216) - A223
Arsham Bakhtiari/No Organization, Ashraf Uz Zaman Patwary/No Organization, Francesco Ciari/No Organization, Amir Reza Mamdoohi/No Organization, Ali Moeini/No Organization, Ali Hajebrahimi/No Organization
Two-stage Mapping Model to Estimate Hydrogen Consumption for Fuel Cell Electric Trucks Based on Trajectories (TRBAM-25-04319) - A180
Zhiqiang Zhai/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Pengfei Fan/Beijing Jiaotong University, Lei Yu/Beijing Jiaotong University
Investigating Electric Vehicle Charging Location Preferences: A Survey-Based Analysis (TRBAM-25-04369) - A224
Sadjad Bazarnovi/University of Illinois, Chicago, Motahare Mohammadi/University of Illinois, Chicago, Sina Asgharpour/University of Illinois, Chicago, Yantao Huang/University of Illinois, Chicago, Nazmul Arefin Khan/University of Illinois, Chicago, Joshua Auld/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago
Optimal Placement of Electric Vehicle Charging Stations (TRBAM-25-04593) - A225
Iason Liagkas/University of Michigan, Neda Masoud/University of Michigan
Evaluating the Equity in Distribution Grid Access with California's Electric Vehicle Expansion (TRBAM-25-04597) - A155
Yanning Li/University of California, Davis, Alan Jenn/University of California, Davis, Wanshi Hong/University of California, Davis, Bin Wang/University of California, Davis
Optimizing On-site Green Hydrogen Consumption using Heavy-duty Hydrogen Fuel Cell Electric Vehicles (TRBAM-25-04628) - A226
Mohammad Reza Ghorbanali Zadegan/University of Texas, Austin, Zhaomiao Guo/University of Texas, Austin
Optimizing Hydrogen Fuel Delivery Costs: Analyzing the Cost-Effectiveness of Delivery Methods and Infrastructure Developments Across the United States (TRBAM-25-04788) - A161
John Bryant Cadiz/University of California, Davis, Laura Restrepo/University of California, Davis, Christopher Yang/University of California, Davis, Lewis Fulton/University of California, Davis
Peer-to-Peer Residential Charger Sharing: Exploring Public Perceptions in California (TRBAM-25-04817) - A153
Amin Akbari/University of California, Irvine, Matthew D. Dean/University of California, Irvine
Investigating the Emerging Challenges of Electric Vehicle Ownership: No-home Charging Infrastructure and the Case of Induced Travel Demand (TRBAM-25-05050) - A227
A. Latif Patwary/Oak Ridge National Laboratory, Md Sami Hasnine/Oak Ridge National Laboratory, Majbah Uddin/Oak Ridge National Laboratory, Asad Khattak/Oak Ridge National Laboratory
Optimizing Urban Infrastructure Planning for Electric Vehicles Considering Stochastic User Charging Behavior (TRBAM-25-05104) - A212
Alireza Rostami/Michigan State University, Behdad Ghafarnezhad/Michigan State University, Omer Verbas/Michigan State University, Mehrnaz Ghamami/Michigan State University, Ali Zockaie/Michigan State University
An Autonomous Modular Vehicle Technology (AMVT) based Emergency and On-demand Mobile Charging Service (TRBAM-25-05213) - A228
Amir Shafiee/University of Illinois, Chicago, Hanieh Rastegar Moghaddam Bajestani/University of Illinois, Chicago, Xi Cheng/University of Illinois, Chicago, Jane Lin/University of Illinois, Chicago
A Technical Review of the Impact and Emerging Research Opportunities in Vehicle-Grid Integration for Transportation (TRBAM-25-05257) - A230
Wan Li/Oak Ridge National Laboratory, Melrose Pan/Oak Ridge National Laboratory, Chieh Ross Wang/Oak Ridge National Laboratory
From Heuristic to Analytical: Understanding Public Adoption of Hydrogen Fuel Cell Vehicles Through Dual-System Theory (TRBAM-25-05318) - A231
Wanying Li/Beijing Jiaotong University, Toshiyuki Yamamoto/Beijing Jiaotong University, Hongzhi Guan/Beijing Jiaotong University, Qiusheng Zhang/Beijing Jiaotong University
A Method for Co-Optimizing Electric Vehicle Scheduling and Microgrid Management in Freight Logistics (TRBAM-25-05353) - A147
Luis Fernando Enriquez-Contreras/University of California, Riverside, Dongbo Peng/University of California, Riverside, Ruili Yao/University of California, Riverside, Matthew Barth/University of California, Riverside, Kanok Boriboonsomsin/University of California, Riverside
Consumer Adoption of Used Electric Vehicles (EVs): A Systematic Review of Literature (TRBAM-25-05462) - A157
Sina Nordhoff/University of California, Davis, Gil Tal/University of California, Davis

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Sensitivity Analysis of Utility Factor for PHEVs: Impacts of Travel Distance, Charging Behavior, and Battery Capacity (TRBAM-25-05503) - A181
Xue Lei/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Pengfei Fan/Beijing Jiaotong University, Hongyu Lu/Beijing Jiaotong University, Lei Yu/Beijing Jiaotong University
Geographical Analysis of Cost and Carbon Impacts Associated with Electrification of Heavy-duty Trucks in the US (TRBAM-25-05555) - A232
Nathan Goulet/Oak Ridge National Laboratory, Ruixiao Sun/Oak Ridge National Laboratory, Junchuan Fan/Oak Ridge National Laboratory, Vivek Sujan/Oak Ridge National Laboratory
A Comprehensive Review of Energy Efficient Technologies for Battery Electric Vehicles (TRBAM-25-05574) - A148
Abhinav Vyas/University of California, Riverside, Heejung Jung/University of California, Riverside, Guoyuan Wu/University of California, Riverside, Tao Zhan/University of California, Riverside, Seungju Yoon/University of California, Riverside, Kanok Boriboonsomsin/University of California, Riverside
Electrification of Off-Road Construction Vehicles - A Comparative Economic Analysis of Electric and Diesel Machinery (TRBAM-25-05711) - A233
Shakib Kafashan/University of California, Irvine, Jean-Daniel Saphores/University of California, Irvine
Mapping Vehicle Diffusion Dynamics in the United States (TRBAM-25-05768) - A172
Hania Afzal/University of Calgary, Omid Armantalab/University of Calgary, Jason Hawkins/University of Calgary
Electric Vehicles in Urban Delivery Fleets: How Far Can They Go? (TRBAM-25-05798) - A234
Dingtong Yang/University of California, Irvine, Michael Hyland/University of California, Irvine
Do We Have Enough Capacity of Service Areas for Battery Electric Trucks: Predictive Modeling of Energy Demand Variations Considering Fleet Electrification, Vehicle Weight, and Truck Cargo Load (TRBAM-25-05878) - A182
Zijun Zhu/Beijing Jiaotong University, Yizheng Wu/Beijing Jiaotong University, Leqi Zhang/Beijing Jiaotong University, Hongyu Lu/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Zhiqiang Zhai/Beijing Jiaotong University
Optimal Planning for Electric Vehicle Charging Stations: Balancing Produced and Attracted Demand (TRBAM-25-05903) - A235
Furqan Bhat/Indian Institute of Science, Ashish Verma/Indian Institute of Science
Enabling Infinite Drive: Optimal Location of In-Motion Wireless Power Transfer Systems for Trips in Urban-scale Region by Electric Vehicles (TRBAM-25-06221) - A192
Yudai Honma/University of Tokyo, Daisuke Hasegawa/University of Tokyo, Katsuhiro Hata/University of Tokyo, Xuesong Zhou/University of Tokyo, Michael Kuby/University of Tokyo, Takashi Oguchi/University of Tokyo
Planning Mobility-Aware Urban Electric Vehicle Charging Infrastructure (TRBAM-25-06333) - A236
Kamand khosravian/York University, Behnaz Naeimian/York University, Mehdi Nourinejad/York University, Peter Park/York University
Operational Efficiency Score: A new way of measuring Public charging stations' performance (TRBAM-25-01428) - A237
Robin Steuteville/National Renewable Energy Laboratory (NREL), Ranjit Desai/National Renewable Energy Laboratory (NREL)

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Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Transit Demand Forecasting and Post-Pandemic Ridership Trends
James Bunch, Mead & Hunt, Inc., presiding
Sponsored By Standing Committee on Public Transportation Planning and Development, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Transit Data

This session delves into forecasting transit ridership using advanced methods like machine learning and explores shifts in public transit use due to COVID-19. Studies analyze ridership patterns before and after the pandemic, examining socio-demographic changes, behavioral impacts, and the influence of policy and built environments on transit demand.

Strategies for Heavy Rail Ridership Forecasting using Statistical, Machine Learning, and Ensemble Time Series Methods (TRBAM-25-00183) - A240
Ashley Hightower/University of Tennessee, Knoxville, Candace Brakewood/University of Tennessee, Knoxville
Transit User Characteristics and Usage Patterns Before and After the COVID-19 Pandemic: Evidence from the 2017 and 2022 National Household Travel Surveys (TRBAM-25-03956) - A241
Saurav Pokharel/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

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Public Transit Use in Pandemic Year 2022: Which Groups Changed Usage? (TRBAM-25-04679) - A242
Rezwana Rafiq/University of California, Irvine, Michael McNally/University of California, Irvine
Who is Returning to Normal Ridership? A Socio-Demographic Study on Pre and Post-COVID-19 Public Transit Ridership in San Francisco (TRBAM-25-05817) - A243
Boni Kutela/Texas A&M Transportation Institute, Hellen Shita/Texas A&M Transportation Institute, Norris Novat/Texas A&M Transportation Institute, Mark Ngotonie/Texas A&M Transportation Institute, Abdallah Kinero/Texas A&M Transportation Institute, Neema Langa/Texas A&M Transportation Institute
Understanding the Impacts of COVID-Related Policy and Built Environment on Transit Ridership Considering Causality and Nonlinearity (TRBAM-25-02046) - A244
Zilu Ding/Tongji University, Enhui Chen/Tongji University, Jing Teng/Tongji University

2050

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Multimodal Transit Integration and New Mobility Solutions
Xavier Harmony, Northern Virginia Transportation Commission, presiding
Sponsored By Standing Committee on Public Transportation Planning and Development, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Bus Transit Systems

This poster session explores innovative approaches to integrating various transit modes. Topics include aerial cable cars, autonomous shuttles, bicycle-metro integration, and ride-hailing versus urban rail costs. Case studies highlight mode shift dynamics in evolving transit systems and the behavior of public transportation passengers. The session emphasizes the role of new mobility solutions in enhancing multimodal transit systems.

Reimagining Urban Public Transit: A Qualitative Expert Study on the Integration of Aerial Cable Cars into Transit Networks (TRBAM-25-00387) - A258
Morten Flesser/Technische Universitat Braunschweig, Amer Shalaby/Technische Universitat Braunschweig, Bernhard Friedrich/Technische Universitat Braunschweig
Roles of Urban Built Environment in Bicycle-Metro Integrated Usage: Topic Modeling Analysis (TRBAM-25-03177) - A245
Hui Bi/Southeast University, Xuejun Zhang/Southeast University, Yichang Shao/Southeast University, Liyang Hu/Southeast University, Zhirui Ye/Southeast University
Car, Bus, or Metro? Evaluating Mode Shift Dynamics through the Introduction of Mass Rapid Transit in a City's Evolving Transportation System (TRBAM-25-03803) - A246
Zahid Hasan Prince/Bangladesh University of Engineering and Technology, Adeeba Naz/Bangladesh University of Engineering and Technology, Md. Hadiuzzaman/Bangladesh University of Engineering and Technology, Sk. Md. Mashrur/Bangladesh University of Engineering and Technology
Competitiveness Analysis of Ride-Hailing and Metro Based on Generalized Costs: A Case Study in Xi'an, China (TRBAM-25-06353) - A247
Liangbin Cui/Chang'an University, Yajuan Deng/Chang'an University, Siliang Song/Chang'an University, Hongchang Liu/Chang'an University
Research on the Transfer Behavior of Public Transportation Passengers, a Method Based on Interpretable Machine Learning (TRBAM-25-03820) - A248
Zhe Zhang/Southeast University, Qi Cao/Southeast University, Weihan Chen/Southeast University, Gang Ren/Southeast University, Tongyu Hu/Southeast University, Wentao Wu/Southeast University, Cheng Wang/Southeast University

2051

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Transit, Urban Development, and Environmental Resilience

Peter Ohlms, Virginia Department of Transportation, presiding

Sponsored By Standing Committee on Public Transportation Planning and Development

This poster session addresses the connections between public transit, urban growth, and environmental challenges. It covers topics such as extreme heat exposure in transit systems, the effects of transit infrastructure on housing markets, and sustainable transportation. Case studies include the London Elizabeth Line, Lusaka's Paratransit, rail passenger patterns in China, and transit gaps in Taipei. The session emphasizes the role of transit in promoting sustainable urban environments and climate resilience.

Measuring Exposure to Extreme Heat in Public Transit Systems (TRBAM-25-00731) - A256
Luyu Liu/Auburn University, Xiaojiang Li/Auburn University, Xiang Yan/Auburn University, Rafael Pereira/Auburn University
A Framework for Assessing Cumulative Exposure to Extreme Temperatures During Transit Trip (TRBAM-25-05129) - A250
Huiying Fan/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Geyu Lyu/Georgia Institute of Technology, Angshuman Guin/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
From Core to Suburbs: Distinct Impacts of London Elizabeth Line Construction on Local Housing Markets (TRBAM-25-01381) - A251
Haixiao Liu/National University of Singapore, Weiyi Cao/National University of Singapore
Pathways to Sustainable Transportation: Lessons from Lusaka's Paratransit Mapping and Emissions Modeling (TRBAM-25-00725) - A252
Pietro Buffoni/University of Illinois, Chicago, Thet Hein Tun/University of Illinois, Chicago, Abdelrahman Melegy/University of Illinois, Chicago, Ghada Abdulaziz/University of Illinois, Chicago, Malindi Msoni/University of Illinois, Chicago
Deciphering the Spatial Heterogeneity in Distance Decay of Rail Passenger Transportation: Empirical Evidence in Guangdong Province, China (TRBAM-25-01501) - A253
Yongqi Deng/Tongji University, Jiaorong Wu/Tongji University, Jue Wang/Tongji University, Zili Tian/Tongji University
The Routes Not Taken: Causal Effects of Transit on Real Estate (TRBAM-25-05549) - A254
Amber DeJohn/UNC Chapel Hill, Matthew Palm/UNC Chapel Hill, Matthew Suandi/UNC Chapel Hill
Examining Public Transit Gap through Two-Dimensional Lens: A Case Study of the Taipei Metropolitan Area (TRBAM-25-03031) - A255
Yao-Feng Liu/National Chiao Tung University, Yi-Shih Chung/National Chiao Tung University
Spatially Varying Relationships Between Metrorail Ridership and Its Determinants in the Washington Metropolitan Area (TRBAM-25-03061) - A257
Zhan Peng/Tohoku University, Hiroyuki Iseki/Tohoku University

2052

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Methods in Evaluating the Transit Transfer Experience

Lisa Ballard, David Evans and Associates, Inc., presiding

Sponsored By Standing Committee on Passenger Intermodal Facilities

This poster session will delve into passenger intermodal facilities, focusing on large rail transit stations and transit oriented development stations. Presentations will examine pedestrian behavior, crowding, and the transfer experience, highlighting challenges and opportunities in improving transit transfers. The session features advanced modeling techniques and data analysis used to evaluate and enhance the transit transfer experience.

A Multi-Level Attention-Based Crowd Counting Method for Urban Rail Transit Stations (TRBAM-25-00510) - A290
Jianfan Wu/Beijing Jiaotong University, Zhengyu Xie/Beijing Jiaotong University
Dynamics of In-Station Time at Major Interchange Stations within Metro Systems (TRBAM-25-00844) - A291
Hui Wang/University of Hong Kong, Becky P.Y. Loo/University of Hong Kong
Modeling Pedestrian Behavior in TOD Stations: An Attractiveness-Based Approach (TRBAM-25-02854) - A292
Xiao Sun/Tongji University, Ling Hong/Tongji University, Mario Cools/Tongji University

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Where Should We Transfer? Bottleneck Identification and Transfer Station Recommendation in Public Transport Network Considering Passenger Spatiotemporal Heterogeneity (TRBAM-25-03644) - A293
Xiaoyin Shang/Southeast University, Xuewu Chen/Southeast University, Yue Zheng/Southeast University
Joint Resource Exchange and Pricing for Intercity Multimodal Transport Systems (TRBAM-25-01803) - A294
Xiaoshu Ding/Hong Kong University of Science and Technology, Sisi Jian/Hong Kong University of Science and Technology

2053

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Rural and Demand Response Transit
Jonathan Brooks, The Goodman Corporation, presiding
Sponsored By Standing Committee on Rural, Intercity Bus, and Specialized Transportation

This session explores innovative strategies for enhancing user satisfaction and equity in transit systems. Insights provided by presentations in this session can offer valuable guidance for transit planners and policymakers

Identifying Key Factors to Affect Heterogeneous User Satisfaction for Demand-Responsive Transit (DRT) using Ordered Logit Models (TRBAM-25-06254) - A285
Yoojin Park/HongIk University, Gyeongjae Lee/HongIk University, Jahun Koo/HongIk University, Sujae Kim/HongIk University, Sangho Choo/HongIk University
Trip Purpose and Demand Dynamics of On-Demand Transit: A Case Study of Memphis, Tennessee (TRBAM-25-06174) - A286
Aman Agrawal/University of Memphis, Sabyasachee Mishra/University of Memphis, John Lancaster/University of Memphis
Joint Design of Fixed-Route and Paratransit Services with Autonomous Pods (TRBAM-25-05686) - A287
Xiaoyu Yan/Northwestern University, Hongyu Zheng/Northwestern University, Yu Nie/Northwestern University
Multi-objective Optimization for the Sightseeing Bus Problem: Trade-off Between Tourists and Operator (TRBAM-25-02992) - A288
Zhou Jia/Southeast University, Di Huang/Southeast University, Zhiyuan Liu/Southeast University, Zhitao Hu/Southeast University
Exploring the Components of Regional Public Transport Inequality Using Decomposition of the Zenga Index in Haining, China, 2011-2020 (TRBAM-25-00685) - A298
Zhigang Yao/Chang'an University, Chenggui Tian/Chang'an University

2054

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Topics in Light Rail Transit
Ted Rosenbaum, DB Engineering & Consulting USA Inc., presiding
Sponsored By Standing Committee on Light Rail Transit

Energy-Efficient Train Timetable Optimization for Tram System Under Multi-Signal Priority Strategies (TRBAM-25-00103) - A297
Jing He/Kunming University, Fengyuan Wang/Kunming University, Yuting Duan/Kunming University, Zhoulou Yang/Kunming University, Sihui Long/Kunming University
Assessing the Impact of Light Rail Transit on Crime and Traffic Patterns: A Case Study of San Diego Blue Line Extension (TRBAM-25-00559) - A296
Luke Reynolds/San Diego State University, Sahar Ghanipoor Machiani/San Diego State University

2055

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

New Approaches with Transit Data for Understanding Ridership and Improving Operations: Artificial Intelligence, Machine Learning, and Statistical Models

Gregory Newmark, Morgan State University, presiding

Sponsored By Standing Committee on Transit Data, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Artificial Intelligence and Advanced Computing Applications

The data transit agencies collect can be almost as valuable as the fares. How can agencies better understand how well their operations serve the needs of their riders using these data? New approaches presented here include applied AI, machine learning (ML), statistical models, and optimization routines. All the cutting-edge analyses share a facility with big data and an application in understanding the patterns and predictions of transit ridership and satisfaction of riders.

Can Public Transit Demand Be Predicted Using Urban Imagery and Deep Learning? A Seperable Latent Vector Approach (TRBAM-25-06428) - A284

Eunseo Ko/HongIk University, Gitae Park/HongIk University, Sangho Choo/HongIk University

DST-TransitNet: A Dynamic Spatio-Temporal Deep Learning Model for Scalable and Efficient Network-Wide Prediction of Station-Level Transit Ridership (TRBAM-25-04969) - A268

Jiahao Wang/University of Toronto, Amer Shalaby/University of Toronto

Individual Movement Prediction Using Long-Term Smart Card Data: A Bayesian Method Considering Spatio-Temporal Correlation (TRBAM-25-01604) - A260

Dawei Li/Southeast University, Qi Dai/Southeast University, Tong Zhang/Southeast University

Train Schedule Generation of Urban Railway Network Using Automatic Fare Collection System Data (TRBAM-25-02837) - A261

Eun Lee/Texas A&M Transportation Institute, Sedong Moon/Texas A&M Transportation Institute, Hasik Lee/Texas A&M Transportation Institute

A Two-Stage Gaussian Mixture Model for Solving Passenger-to-Train Assignment Problem Based on Automated Fare Collection Data (TRBAM-25-01780) - A262

Zhuangbin Shi/Kunming University, Wei Shen/Kunming University, Yang Liu/Kunming University

Prioritization of Vulnerable Locations Affecting Bus Journey Time and Variability along an Urban Bus Route and its Integration with a Web-based Application (TRBAM-25-03598) - A270

Suman Ganguly/Indian Institute of Technology, Kharagpur, Bhargab Maitra/Indian Institute of Technology, Kharagpur

Real-Time Transit O-D Data Collection via Edge-AI-based Passenger Re-Identification (TRBAM-25-04590) - A271

Jiachen Ye/Rensselaer Polytechnic Institute (RPI), Talha Azfar/Rensselaer Polytechnic Institute (RPI), Ruimin Ke/Rensselaer Polytechnic Institute (RPI)

How Much Can Passengers Deviate from Their Commuting Schedule? A Flexibility Analysis of Passengers' Departure Time (TRBAM-25-04779) - A272

Suryakant Buchunde/University of Western Ontario, Yili (Kelly) Tang/University of Western Ontario

Transit Pulse: Utilizing Social Media as a Source for Customer Feedback and Information Extraction with Large Language Model (TRBAM-25-05115) - A267

Jiahao Wang/University of Toronto, Amer Shalaby/University of Toronto

Boarding Stop Inference with Uncertain Relationship between Bus Vehicles and Mobile Smart Card Readers (TRBAM-25-05795) - A276

Peng Zhou/Tongji University, Yu Shen/Tongji University, Yuxiong Ji/Tongji University, Yuchuan Du/Tongji University

Using Deep Learning and Google Street View Images to Assess Bus Stop Amenities (TRBAM-25-03059) - A266

Yilong Dai/University of Florida, Luyu Liu/University of Florida, Kaiyue Wang/University of Florida, Meiqing Li/University of Florida, Xiang Yan/University of Florida

Can Large Language Models Better Predict the Intention to Use Emerging Mobility Services? An Empirical Study (TRBAM-25-03136) - A277

Haoyang Wu/Tongji University, Yuntao Guo/Tongji University, Ning Wang/Tongji University, Xinghua Li/Tongji University

Exploring the Potential of Large Language Models in Analyzing Passengers' Perceptions of Transit Service Quality (TRBAM-25-05402) - A278

Shuli Luo/Chinese University of Hong Kong, Shenzhen, Sylvia He/Chinese University of Hong Kong, Shenzhen

Latent Profile Analysis of Multimodal Public Transport Users through Mobile Phone Ticketing Application Data (TRBAM-25-03680) - A280

Charalampos Sipetas/Aalto University, Zhiren Huang/Aalto University

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Exploring Nonlinear Relationships Between Travel Distance and Built Environment in Metro and Bus Networks Using Smart Card Data (TRBAM-25-00334) - A281
Yang Liu/Kunming University, Donglin He/Kunming University, Jiayou Lei/Kunming University, Mingwei He/Kunming University, Zhuangbin Shi/Kunming University
Prediction of Public Transit Demand Using Distancing Policy Information During COVID-19 Using Natural Language Processing (TRBAM-25-04019) - A282
Sungmin Kim/Korea University, Sunghi An/Korea University, Seunghee Ryu/Korea University, Seungmo Kang/Korea University
Modeling Crowdedness at Public Transport Stations During Special Events: A Comparative Study of Eleven Cities (TRBAM-25-06172) - A283
Wanrong Hu/Technical University of Munich, Qinglong Lu/Technical University of Munich, Ningkang Yang/Technical University of Munich, Constantinos Antoniou/Technical University of Munich

2056

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Current Trends in Passenger Rail Transportation Research
Lisa Nungesser, No Organization, presiding
Sponsored By Standing Committee on Passenger Rail Transportation

This poster session will feature the latest research in passenger rail transportation from around the world.

Impact of High-Speed Rail on Urban Development: A Causal Analysis Using Data for Japan's Shinkansen and Densely Inhabited Districts from 1960 to 2020 (TRBAM-25-01463) - B562
Jingyuan Wang/Tokyo University of Science, Shintaro Terabe/Tokyo University of Science, Hideki Yaginuma/Tokyo University of Science
High-Speed Rail Capacity Allocation and Pricing Strategies considering Passengers' Access Time Uncertainty (TRBAM-25-01488) - B563
Yuzhen Feng/Hong Kong Polytechnic University, Wei Liu/Hong Kong Polytechnic University, Guangming Xu/Hong Kong Polytechnic University
Research on Delay Recovery Method of Train Service Network Based on Resilience Theory (TRBAM-25-02339) - B564
Ziyue Zhu/Tongji University, Yuling Ye/Tongji University, Jin Luo/Tongji University, Yihan Tian/Tongji University, Wentao Zhou/Tongji University, Mingchu Han/Tongji University
Rapid Screening Financial and Economic Evaluation Model for Intercity Rail: Application to the Kingdom of Saudi Arabia (TRBAM-25-04055) - B565
Bader Alhujailan/Odara Mobility LLC, Sultan Alkarbi/Odara Mobility LLC, Ali Alduhami/Odara Mobility LLC, Tolu Oke/Odara Mobility LLC, Robin Carruthers/Odara Mobility LLC, Joanna Moody/Odara Mobility LLC, Muneeza Alam/Odara Mobility LLC
The Linkages between High-Speed Rail Network Structure and Inter-City Human Mobility Patterns (TRBAM-25-04896) - B567
Junmei Cheng/University of California, Los Angeles, Zhenhua Chen/University of California, Los Angeles

2057

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Recent Advances in Rail Rolling Stock and Motive Power
Joshua Coran, Talgo, Inc. , presiding
Sponsored By Standing Committee on Rail Rolling Stock and Motive Power

This poster session will feature research papers presenting the latest research in rail equipment technology and performance.

Investigating the effectiveness of machine vision-based railcar inspection technology (TRBAM-25-04220) - B586
Alireza Roghani/National Research Council, Canada, Solnage de Blois/National Research Council, Canada, Chathula Adikary/National Research Council, Canada, brian Zou/National Research Council, Canada, Yan Liu/National Research Council, Canada, Samy Metari/National Research Council, Canada

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Decarbonizing Freight Rail: Fuel Efficiency and Cost Implications of Drop-in Biofuels (TRBAM-25-04529) - B587
Md Rakibul Alam/Argonne National Laboratory, Nazib Siddique/Argonne National Laboratory, Amgad Elgowainy/Argonne National Laboratory, Yan Zhou/Argonne National Laboratory
Development of Incident Prediction Models Assisting in Prioritizing Locations for Motive Power and Equipment Safety Inspection of U.S. Railroads (TRBAM-25-04601) - B577
Young-Jun Kweon/OST-R/Bureau of Transportation Statistics, Ruby Li/OST-R/Bureau of Transportation Statistics, Ye Jianqiang/OST-R/Bureau of Transportation Statistics, Emily Grenzke/OST-R/Bureau of Transportation Statistics
Simulating and Quantifying the Feasible Operating Range of Gravity Battery Electric Trains on Mine-to-Port Railways (TRBAM-25-05943) - B578
Diwen Shi/University of Texas, Austin, C. Tyler Dick/University of Texas, Austin
A Novel Cooperative Energy-Efficient Train Trajectory Optimization for Minimizing the Substation Power Fluctuation (TRBAM-25-00530) - B579
Xiaoyun Feng/Southwest Jiaotong University, JingHang Li/Southwest Jiaotong University, PengFei Sun/Southwest Jiaotong University, Yu Rao/Southwest Jiaotong University

2058

Monday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Freight Rail Transportation Research Topics
Guang Tian, University of New Orleans, presiding
Sponsored By Standing Committee on Freight Rail Transportation

This poster session will feature the latest research on freight rail transportation topics.

Short-Term Forecast of Railway Freight Volume Based on Convolutional Neural Networks - Long Short-Term Memory (CNN-LSTM) (TRBAM-25-00078) - B572
Juan He/Southwest Jiaotong University, xingyu Liu/Southwest Jiaotong University, Wenying Xie/Southwest Jiaotong University, Long Tang/Southwest Jiaotong University
Research on Dynamic Modeling and Collaborative Optimization Method for Multiple Freight Trains (TRBAM-25-00249) - B573
Tao xinkun/Southwest Jiaotong University, Xiaoyun Feng/Southwest Jiaotong University, Qingyuan Wang/Southwest Jiaotong University, Pengfei Sun/Southwest Jiaotong University
Analyzing the Determinants of Rail Freight Impact on Port Competition in West Africa (TRBAM-25-01268) - B574
Emmanuel Anu Thompson/Upper Great Plains Transportation Institute, Pan Lu/Upper Great Plains Transportation Institute
Analysis of Carbon Emission Reduction Effect of Heavy Railway Reverse Haulage (TRBAM-25-02245) - B575
Xia Lu/Beijing Jiaotong University, Baohua Mao/Beijing Jiaotong University, Ting Xue/Beijing Jiaotong University
Resilience Analysis of Multi-layer Composite Network of China-Europe Railway Express (TRBAM-25-02553) - B580
Jiashan Yuan/Southeast University, Yong Zhang/Southeast University, Yongcun Wei/Southeast University, Cheng Cheng/Southeast University, Yanchun Zhu/Southeast University, Shuaiqi Wang/Southeast University
Data-Driven Advanced Point of Derailment Prediction in Freight Trains Using Machine Learning: A Comparative Study of XGBoost, Random Forest, and SVR (TRBAM-25-03669) - B581
Zahra Saghian/Iran University of Science and Technology, Morteza Bagheri/Iran University of Science and Technology
Estimating the Aerodynamic Implications of Platooning Self-Propelled Autonomous Railcars (SPARCs) to Transport Intermodal Containers (TRBAM-25-05857) - B582
Wang Shi/University of Texas, Austin, C. Tyler Dick/University of Texas, Austin
Industrial Activities and Railway Freight: Revealing Spatiotemporal Characteristics and their Correlation Relationship (TRBAM-25-01613) - B583
Qiaoya Xie/Tongji University, Chengyuan Huang/Tongji University, Rong Zhang/Tongji University

Monday, 09:00 a.m. - 04:00 p.m., Convention Center, Hall D&E

Exhibits

Sponsored By Technical Activities Council

Plan to visit over 200 exhibits, including the TRB booth, showcasing the many transportation-related products and services. View the floor plan and interactively search for exhibiting organizations on the Mobile App. Between sessions, food concessions are available in the Exhibit Hall.Located in the exhibit hall, the Solutions Showcase theaters will feature presentations from exhibiting and patron organizations on the goods, services, and solutions they provide. Presentations begin every half hour during exhibit hours, and are 30 minutes in length. For a list of presentations, see the mobile app (available in early December) or the onsite printed program.

Monday, 09:30 a.m. - 04:00 p.m., Convention Center, Exhibit Hall D Theater

Solutions Showcase Theater

Sponsored By Technical Activities Council

The Solutions Showcase Theater is your opportunity to hear from exhibitors and patrons about the newest trends and products in the transportation industry. Participating companies will give 30-minute presentations on goods, services, and solutions their organizations provide.9:30 AM Cyvl - Transforming Pavement Management with AI and LiDAR: Cyvl's Approach to Data-Driven Infrastructure Solutions10:30 AM xyzt.ai - just ask xyzt.ai™?: Revolutionizing Connected Vehicle Data Analytics with GenAI - A Case Study on a Highway Bridge Closure in Germany11:30 AM Propeller- Advancing Digital Delivery with Propeller Smart Surveys12:30 PM Skydio - Built for Building: How Drones are Transforming Construction sites1:30 PM Dynatest US, Inc. - Get Ready for the Future of Pavement Analysis!2:30 PM Gresham Smith - AI in Action: Shaping Infrastructure Design3:30 PM beep™? - Driving the Future: Deploying and Managing Purpose-Built Autonomous Vehicles

2059

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon A

Bicycle and Micromobility Safety

Calvin Thigpen, Lime, presiding

Sponsored By Standing Committee on Bicycle Transportation

This session covers a range of topics related to bicycle, e-bike, and e-scooter safety. Topics including surrogate safety measures for assessing bike safety on curves, a comparative analysis of injuries by mode, and behavioral analyses of people biking, using scooters, and driving.

Micromobility Safety Challenges: A Study on Drivers Overtaking Bicycles and E-Scooters according to Road Conditions and Cross-Modal Experience (TRBAM-25-00717)

Hyunchul Park/Korea Advanced Institute of Science and Technology, Taeho Oh/Korea Advanced Institute of Science and Technology, Jaehyuck Lim/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology

Analyzing Bicycle Riding Characteristics Based on Naturalistic Urban Drone Observations: Free Riding, Following Behavior, and Overtaking Maneuvers (TRBAM-25-03568)

Alexander Kutsch/Technical University of Munich, Lisa Kessler/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

Comparing Injuries from E-Scooters, E-Bikes, and Bicycles in the United States (TRBAM-25-01376)

Hannah Younes/Rutgers University

Typology of Bike Lane Users Motion on Horizontal Curves: A Surrogate Safety Approach (TRBAM-25-02357)

Morteza Hossein Sabbaghian/Universitat Politècnica de València, David Llopis-Castelló/Universitat Politècnica de València, Alfredo García/Universitat Politècnica de València

2060

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon B

Impact of Individuals, Family, Community, and Technology on Driving Safety and Training: A Lectern-Poster Session

Alycia Bayne, NORC at the University of Chicago, presiding

Sponsored By Standing Committee on Vehicle User Education, Training, and Licensing, Subcommittee on Young Drivers, Subcommittee on Older Drivers

Review of Self-Assessment of Driving Ability for Elderly Drivers (TRBAM-25-01095)

Fengxiong Luo/Kunming University, Fengxiang Guo/Kunming University, Yiwen Zhou/Kunming University

Effects of the WaveDriving Course on Car Following: a before-and-after Study in a Closed Circuit (TRBAM-25-01269)

Konstantinos Mattas/University of Zaragoza, Antonio Lucas-Alba/University of Zaragoza, Tomer Toledo/University of Zaragoza, Óscar Melchor/University of Zaragoza, Shlomo Bekhor/University of Zaragoza, Biagio Ciuffo/University of Zaragoza

Methodological Considerations for Adapting Cognitive Walkthrough Methods for Advanced Driver Assistance Systems (TRBAM-25-01977)

Ethan Butler/Clemson University, Dustin Souders/Clemson University

Future of Road Safety for Teen Drivers: A Qualitative Interview and Survey Study on Driver Education and ADAS Training (TRBAM-25-02383)

Madison Perry/University of Massachusetts, Amherst, Stefanie Reineke/University of Massachusetts, Amherst, Meng Wang/University of Massachusetts, Amherst, Anuj Pradhan/University of Massachusetts, Amherst, Shannon Roberts/University of Massachusetts, Amherst

A.I. Solution for Drowsiness Detection and Attention Monitoring in Driving Simulator (TRBAM-25-02607)

Piyush Pawar/University of Alabama, Tuscaloosa, Aditya Arvind/University of Alabama, Tuscaloosa, Benjamin McManus/University of Alabama, Tuscaloosa, Thomas Anthony/University of Alabama, Tuscaloosa, Despina Stavrinos/University of Alabama, Tuscaloosa

Understanding how Community Disadvantage Indictors are Associated with Crashes: A Novel Data-Driven Approach to Informing Driver Education and Training (TRBAM-25-04157)

Caitlin Northcutt/University of Kentucky, Alaina Murphy/University of Kentucky, Kristen McQuerry/University of Kentucky, Lauren Roach/University of Kentucky, Michael Fields/University of Kentucky, Reg Souleyrette/University of Kentucky, Benjamin Blandford/University of Kentucky

Telematics and Driver Behaviour: The Value and Challenges for Improving Transport Safety (TRBAM-25-04275)

Neale Kinnear/Aon Risk Solutions, Johnathon Ehsani/Aon Risk Solutions

Enhancing Safety and Mobility with Advanced Driver Assistance Systems (ADAS) for Senior Drivers: A Review (TRBAM-25-04314)

Noah Rothermel/University of Connecticut, Oluwaseun Olufowobi/University of Connecticut, Paul (Young Joun) Ha/University of Connecticut, Niloufar Shirani/University of Connecticut, Eric Jackson/University of Connecticut

Role of Gender and other Influencing Factors in Unlicensed Novice Driver Crashes using a Correlated Random Parameters with Heterogeneity in Means Approach (TRBAM-25-05203)

M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Siam Junaed/Louisiana Transportation Research Center (LTRC), Richard Dzinyela/Louisiana Transportation Research Center (LTRC), Ahmed Hossain/Louisiana Transportation Research Center (LTRC), Subasish Das/Louisiana Transportation Research Center (LTRC), Milhan Moomen/Louisiana Transportation Research Center (LTRC)

Changes in Adoption and Use Patterns of an Automated Lane Change Feature Following Over-the-Air Software Updates (TRBAM-25-04302)

Thomas Noonan/Massachusetts Institute of Technology, Pnina Gershon/Massachusetts Institute of Technology, Bryan Reimer/Massachusetts Institute of Technology, Bruce Mehler/Massachusetts Institute of Technology

Addressing the Gap: Examining the Role of Multiple Executive Function Constructs and Associated Factors in Risky Driving Performance in Young Drivers. (TRBAM-25-04386)

Elizabeth Walshe/Children's Hospital of Philadelphia, Keith Baxelbaum/Children's Hospital of Philadelphia, Chelsea Ward McIntosh/Children's Hospital of Philadelphia, Luke Miller/Children's Hospital of Philadelphia, Shukai Cheng/Children's Hospital of Philadelphia, Nicole Wen/Children's Hospital of Philadelphia, Flaura Winston/Children's Hospital of Philadelphia, Dan Romer/Children's Hospital of Philadelphia

2061

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 103A

Active Traffic and Demand Management: From Research to Implementation

Dennis Mitchell, DKS Associates, Inc., presiding

Sponsored By Standing Committee on Freeway Operations

This Lectern Session will highlight recent research on Active Traffic and Demand Management

FHWA ATDM Program Overview (P25-20107)
James Colyar/Federal Highway Administration (FHWA)
Short-Term Prediction for Proactive Transportation Management (P25-20108)
David Hale/Leidos, Inc.
Dynamic Interchange Management (DIM) (P25-20109)
Leslie Jacobson/LNJ Transportation. Consulting
Part-Time Shoulder Use in Ohio (P25-20110)
Brian Toombs/Burgess and Niple, Inc.
Active Traffic Management Deployments in Indiana (P25-20122)
Edward Cox/Indiana Department of Transportation

2062 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 102B

Human Mobility: Estimating Non-Motorized Volumes and Missing Network Links

Krista Nordback, UNC Highway Safety Research Center, presiding
Ioannis Tsapakis, Texas A&M Transportation Institute, presiding

Sponsored By Standing Committee on Highway Traffic Monitoring

Traveling by foot is the oldest form of human transportation, yet in some ways we understand it the least. Join us for an exploration of the latest research on estimating how many people are walking and bicycling along with other questions like: where are they walking, and how might we identify which gaps to fill in our pedestrian networks?

Exploring Distributed Acoustic Sensing (DAS) for Pedestrian Monitoring: Signal Characteristics and Identification Using Fiber Optic Cables Embedded in Roadways (TRBAM-25-05562)
Jaewon Saw/University of California, Berkeley, Dayu Apoji/University of California, Berkeley, Chien-Chih Wang/University of California, Berkeley, Kenichi Soga/University of California, Berkeley
Leveraging Human Mobility Data for Nonmotorized Traffic Monitoring: A Solution for Sparse Data (TRBAM-25-04329)
Manika Rana Bhat/University of Maine, Ruijie Bian/University of Maine, Tara Tolford/University of Maine
Estimating Pedestrian Volume for Intersections Using Nationwide-Based Social-Demographic Data (TRBAM-25-05687)
Boni Kutela/Texas A&M Transportation Institute, Kay Fitzpatrick/Texas A&M Transportation Institute, Sayedeh Maryam Mousavi/Texas A&M Transportation Institute
So Close, Yet So Far: A New Method for Identification of High-Impact Missing Links in Pedestrian Networks (TRBAM-25-03652)
Matthew Bhagat-Conway/University of North Carolina, Audrey Compiano/University of North Carolina, E Irene Ivie/University of North Carolina

2063

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 150B

Advances in Geospatial Data Analytics

Sage Donaldson, Arizona Department of Transportation, presiding
Shawn Blaesing, Iowa Department of Transportation, presiding
Eric Green, Kentucky Transportation Cabinet, presiding
Sponsored By Standing Committee on Geographic Information Science

This session explores innovative methods in spatial analysis, transportation modeling, and accessibility planning. Topics include advancements in spatial weight matrices, innovative clustering methodology for large flow data, and methods for identifying intersections in transportation networks using open-source data. With hazardous weather events taking place across the nation, this session will also address the impact of floods on rural and urban mobility, employing GIS tools, simulations, and satellite data to improve traffic flow, accessibility, and post-disaster recovery planning, along with an algorithm to enhance GPS-based travel behavior analysis.

Spatial Weight Matrices: A Scoping Review of Methods and Applications (TRBAM-25-05618)
Fatemeh Janatabadi/George Mason University, Alireza Ermagun/George Mason University
An Offline Map Matching Algorithm Based on Depth-First Search for Urban Networks: Travel Behavior Study Perspective (TRBAM-25-03792)
Xin Guan/Tongji University, Xin Ye/Tongji University, Ke Wang/Tongji University
Identifying and Locating Roadway Intersections Using Third-Party Data (TRBAM-25-01247)
Mohammad Hashem Askariyeh/Texas A&M Transportation Institute, Michael Martin/Texas A&M Transportation Institute, Benjamin McCulloch/Texas A&M Transportation Institute, Bethany Wyatt/Texas A&M Transportation Institute

2064

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 150A

State of the Art and Future Vision on Artificial Intelligence Research and Applications in Transportation

Yuanchang Xie, University of Massachusetts, Lowell, presiding
Sponsored By Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Artificial Intelligence and Advanced Computing Applications

If you are interested in Artificial Intelligence (AI) or Machine Learning (ML) research and applications in transportation, this is the session you do not want to miss. Leaders from transportation agencies, academia, and the industry will provide updates on AI research and representative state-of-the-practice AI/ML applications in transportation. Furthermore, the AED50 committee will summarize cutting-edge research activities and share its vision for promoting the use of AI in transportation research and applications in the coming years. Please join this highly informative and interactive session to learn from experts in the field and share your thoughts and experiences as well.

Hot Topics in Artificial Intelligence and AED50's Planned Activities (P25-20685)
Yinhai Wang/University of Washington
Advances in AI, Updates on the Intersection Safety Challenge and the Complete Streets AI Challenge (P25-20680)
Brian Cronin/Federal Highway Administration (FHWA)
Leveraging AI to Enhance Transportation Systems Management and Operations (P25-20678)
Jianming Ma/Texas Department of Transportation
Large-Scale Mobility Modeling at Google Research (P25-20683)
Andrew Tomkins/Google

2065 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 151A

Cutting-Edge Insights into Vehicle Ownership Trends and Analysis

Naveen Eluru, University of Central Florida, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session explores the evolving landscape of car ownership, electric vehicle adoption, and emerging mobility trends in urban areas. Presentations will cover various topics, from how micromobility solutions, such as e-scooters and bike-sharing, reshape daily travel patterns and influence long-term car ownership decisions to an in-depth analysis of factors affecting vehicle ownership in Toronto. The session also examines demographic shifts and life events that impact vehicle purchase timing and how traditional automobility habits shape preferences for electric vehicles. A study highlights the drivers of battery electric vehicle adoption, providing insights into the motivations behind switching to more sustainable transport options.

Factors Influencing Car Ownership in Toronto: Insights from an Ordered Model (TRBAM-25-01294)

Mwendwa Kiko/University of Toronto, Eric Miller/University of Toronto

Whether and When to Adopt Battery Electric Vehicles: A Case Study in the Netherlands (TRBAM-25-01799)

Linlin Zhang/Utrecht University, Dea van Lierop/Utrecht University, Dick Ettema/Utrecht University

The Impact of Demographic Lifecycle States on Time to Vehicle Purchase: Insights from the Panel Study of Income Dynamics (TRBAM-25-02633)

Mohammad Mehdi Oshanreh/University of Washington, Seattle, Nazmul Arefin Khan/University of Washington, Seattle, Don MacKenzie/University of Washington, Seattle

The Association between Automobility Engagement and Electric Vehicle Preferences among Car Buyers (TRBAM-25-04085)

Viviane H. Gauer/Simon Fraser University, Jonn Axsen/Simon Fraser University, Zoe Long/Simon Fraser University, Elisabeth Dütschke/Simon Fraser University

EXPLORING THE EFFECT OF MICROMOBILITY USE ON DAILY TRAVEL PATTERNS AND CAR OWNERSHIP (TRBAM-25-00773)

Hossain Mohiuddin/Morgan State University, Tatsuya Fukushige/Morgan State University, Dillon Fitch-Polse/Morgan State University, Susan Handy/Morgan State University

2066 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 151B

Highway Noise Research

Aaron Heustess, Kimley-Horn and Associates, Inc., presiding

Sponsored By Standing Committee on Transportation-Related Noise and Vibration

This session will cover current Topics in highway noise research, and the presentations will examine analysis and design strategies to reduce roadway noise. Attendees will learn about: Noise impacts of off-peak deliveries in the Greater Toronto Area Analysis of heavy-duty truck highway pass-by noise In-vehicle noise and vibration feedback performance of sinusoidal versus conventional rumble strips Acoustic properties and durability of porous low-noise pavement solutions to improve the urban acoustic environment

Noise Impacts of Off-Peak Deliveries in the Greater Toronto Area: Community Noise Survey and Social Justice Analysis (TRBAM-25-01887)

Usman Ahmed/University of Toronto, Kianoush Mousavi/University of Toronto, Shang Zhang/University of Toronto, Matthew Roorda/University of Toronto

Analysis of Heavy-Duty Truck Highway Pass-by Noise (TRBAM-25-05223)

Paul Donavan/Illingworth and Rodkin, Inc., Carrie Janello/Illingworth and Rodkin, Inc.

In-Vehicle Noise And Vibration Feedback Performance Of Sinusoidal Versus Conventional Rumble Strips (TRBAM-25-02936)

Vamsi Krishna Bandaru/Purdue University, Mario Romero/Purdue University, Andrew Tarko/Purdue University

(continued)

Acoustic Properties and Durability of Porous Low Noise Pavement Solutions to Improve Urban Acoustic Environment: A Systematic Literature Review (TRBAM-25-01189)
Lei Wang/Tongji University, Hui Li/Tongji University, Yuzhao Han/Tongji University, Xue Zhang/Tongji University, Luchuan Chen/Tongji University

2067

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 152B
Leading Transportation Agencies to Improve Project Delivery
Melrose Pan, Oak Ridge National Laboratory, presiding
Sponsored By Standing Committee on Strategic Management

This session will build upon the lessons learned from the readiness workshop by focusing on efforts to better equip transportation agencies to be innovative and timely on their delivery of projects. Leadership representatives from the MPO community, departments of transportation, and the private sector will highlight current efforts to improve project delivery through the use of enhanced data and stronger partnerships with critical stakeholders.

Using Data to Inform Better Project Delivery at Transportation Agencies (P25-20115)
Patt Talvanna/Boston Consulting Group
Innovative Project Delivery in Texas (P25-20116)
Michael Morris/North Central Texas Council of Governments
Improving Project Delivery Systems at MassDOT (P25-20117)
Carrie Lavallee/Massachusetts Department of Transportation
Promoting Project Delivery Success at Georgia DOT (P25-20118)
Jannine Miller/Georgia State Road and Tollway Authority
Employing Innovative Project Delivery at the Utah Department of Transportation (P25-20221)
Carlos Braceras/Utah Department of Transportation
Improving Project Delivery in Texas (P25-20838)
Caroline Mays/Texas Department of Transportation
Project Delivery In Connecticut (P25-20901)
Karen Kitsis/Connecticut Department of Transportation

2068

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 152A
Harnessing Emerging Technology for Enhanced Transportation Performance
David Schrank, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Performance Management

This session explores how emerging technologies and analytics are rapidly benefiting transportation performance management. Presentations cover adapted evaluation methods, data innovations, and new techniques to boost both measurement insights and performance outcomes. Join us to hear how emerging technologies are not only improving mobility performance but also how advanced tools and methods are opening better ways to measure and manage transportation systems, ensuring more effective, data-driven decision-making.

Extending Performance Assessments to New and Emerging Technology (P25-20520)
Peter Rafferty/Cambridge Systematics, Inc.
Performance Opportunities and Challenges with Emerging Data Sources (P25-20522)
Shawn Turner/Texas A&M Transportation Institute
Using Crowdsourced Data to Improve Analytics & Reliability Prediction (P25-20521)
Michael Fontaine/Virginia Transportation Research Council
Enhancing Transportation Agency Performance with Distributed Intelligence (P25-20523)
Paul Avery/AECOM

2069

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 201

Artificial Intelligence and Transportation

Jeff Graham, Texas Department of Transportation, presiding

Sponsored By Standing Committee on General Law

AI, in an incredibly fast period, has become a must-have part of DOT's. Whether on vehicles, in infrastructure, or for resiliency, customer experience and marketing, workforce management, engineering, transportation planning, operations, maintenance, predictive planning and decision making, and optimization, AI is becoming essential to the operations of DOT's. We'll hear from speakers representing departments of transportation, private companies, and outside counsel on current AI implementations, challenges, and legal considerations for using AI in many facets of transportation, and how AI is already transforming the ways we will move in the future.

Panel Member (P25-20905)

Benjamin McCulloch/Texas Department of Transportation, Thomas Dover/Nossaman LLP, Chris Gandolfo/Oracle Corporation

2070

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 202B

Innovation and the Changing World of Transportation Policy

Melody Drummond Hansen, U.S. Department of Transportation, presiding

Ellen Partridge, Equiticity, presiding

Sponsored By Standing Committee on Emerging Technology Law

The only constant is change. At the same time, we are living in one of the most transformative times in transportation. From adopting strategies like Vision Zero, to implementing unprecedented infrastructure investment, to deploying new technologies such as autonomous vehicles and Vehicle-to-Everything (V2X), to harnessing previously unavailable transportation data, policymakers and planners are challenged to innovate like never before. How are practitioners embracing innovation and what learnings do we have to share? Topics include: How do communities adapt, adopt, or decline new technologies and proposed changes to transportation infrastructure? How do approaches to and pace of innovation differ at federal, state, and local levels?

Panel Member (P25-20934)

Preeti Choudhary/Ohio Department of Transportation, Chris Armstrong/Cavnue

2071

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 204AB

Soil–Structure Interaction and Load Effects on Culverts and Buried Structures

Michael Pluimer, University of Minnesota, Duluth, presiding

Sponsored By Standing Committee on Culverts, Buried Bridges and Soil Structure Interaction

Live Load Effects on Reinforced Concrete Box Culverts based on Live Load Testing (TRBAM-25-01015)

Abheetha Peiris/Kentucky Transportation Cabinet, Aaron Cole/Kentucky Transportation Cabinet, Ethan Russell/Kentucky Transportation Cabinet, Cody Hutchinson/Kentucky Transportation Cabinet, Issam Harik/Kentucky Transportation Cabinet

Axial Loading Across Joints in Round Concrete Culverts (TRBAM-25-01968)

Mehdi Faeli/University of Minnesota, Duluth, Brock Hedegaard/University of Minnesota, Duluth, Carlos Carranza-Torres/University of Minnesota, Duluth

Comparative experimental study on the mechanical performance of prefabricated square-arch corrugated steel utility tunnel (CSUT) (TRBAM-25-00749)

tao qiu/Southeast University, Hongbo Che/Southeast University, Liyuan Tong/Southeast University, Wenyuan Liu/Southeast University, Jun Hu/Southeast University

Study of the Relative Stiffness Between Circular Shield Tunnel and Soil Layer Based on the Overburden Pressure (TRBAM-25-01134)

Longfei DAI/Tongji University, Qiyu Yao/Tongji University, Zhiyao Tian/Tongji University

2072

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 101

Best Papers on Roller Compacted Concrete Pavements from the International Conference on Concrete Pavements

Gregory Halsted, National Ready Mixed Concrete Association, presiding

Sponsored By Standing Committee on Concrete Pavement Construction and Rehabilitation

This session presents the top papers on Roller Compacted Concrete (RCC) from the International Conference on Concrete Pavements. The topics covered include the latest advancements in RCC, life cycle assessments, mixture volumetrics, and the mechanical properties of plastic RCC.

Recent Advances in RCC Roadway Construction in the USA (P25-20845)

Corey Zollinger/CEMEX

Lifecycle Assessment and Sensitivity Analysis of Roller Compacted Concrete, Plain Jointed Concrete, and Hot Mix Asphalt Pavements (P25-20846)

Haoran Li/Massachusetts Institute of Technology

Roller-Compacted Concrete Pavement Field Study: Connecting Mixture Volumetrics with Constructability (P25-20847)

Jeffery Roesler/University of Illinois, Urbana-Champaign

Mechanical Behavior of Plastic Roller-Compacted Concrete (P25-20848)

Syed Husain/University of Illinois, Urbana-Champaign

2073

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 207A

How to Make Your Road Better: Three Thought-Provoking Studies to Consider

Jeffrey Lormand, Parsons, presiding

Ellen White, State University of New York, ESF, presiding

Sponsored By Standing Committee on Landscape and Environmental Design, Standing Committee on Roadside Maintenance Operations

Pavement Albedo's Impact on Urban Climate: Insights from MIT's Concrete Sustainability Hub and A Case Study of Phoenix (TRBAM-25-00489)

James Mack/CEMEX, Larry Scofield/CEMEX

Research on Urban Road Landscape Optimization based on Hierarchical Needs (TRBAM-25-02843)

WenXin Guo/Southeast University, Yue Qin/Southeast University, Fei Chen/Southeast University

Generative urban design: human-guided automatic urban design via diffusion models (TRBAM-25-03167)

Qingyi Wang/University of Florida, Shenhao Wang/University of Florida, Yuebing Liang/University of Florida, Jinhua Zhao/University of Florida, Shenhao Wang/University of Florida

2074

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 156

Understanding the Impacts of Utility-Related Change Orders on Transportation Construction Projects

Roy Sturgill, Iowa State University, presiding

Sponsored By Standing Committee on Utilities, Standing Committee on Construction Management

In this session, researchers will discuss their respective findings and approaches in their reviews of utility-related change orders. These reviews shed light on the costs and delays that transportation projects incur as a result of utility impacts. These investigations provide insight to transportation agencies regarding investigations of root causes of utility-related change orders, and how these impacts may be analyzed and potentially avoided.

Classification of Utility Related Change Orders Using Artificial Intelligence (TRBAM-25-04551)

Harshit Shukla/Texas A&M Transportation Institute, Cesar Quiroga/Texas A&M Transportation Institute, Jenny Naranjo/Texas A&M Transportation Institute

(continued)

Change Order Analysis as a Strategy for Identifying the Cause of Utility Issues During Highway Construction (TRBAM-25-05113)
Jenny Naranjo/Texas A&M Transportation Institute, Cesar Quiroga/Texas A&M Transportation Institute, Harshit Shukla/Texas A&M Transportation Institute, Jesse Cooper/Texas A&M Transportation Institute
A Review of Utility-Related Change Orders in Kentucky (P25-20730)
Timothy Taylor/University of Kentucky

2075

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 207B
Interagency Interdependence: Highway Vulnerability Case Histories and Assessment Models
Darren Beckstrand, Landslide Technology, presiding
Gavin Gautreau, Louisiana Department of Transportation and Development, presiding
Sponsored By Section - Geology and Geotechnical Engineering

Vulnerability of Highways from Damaged Non-Highway Assets (P25-20549)
Vanessa Bateman/U.S. Army Corps of Engineers (USACE)
Geotechnical Asset Management for Louisiana – Phase II (Culverts) (P25-20550)
Gavin Gautreau/Louisiana Department of Transportation and Development
Development of a Geotechnical Asset Management (GAM) for Slopes (TRBAM-25-04340)
Andrew Zimmerman/University of Kansas, Robert Parsons/University of Kansas, Stacey Kulesza/University of Kansas, Jie Han/University of Kansas
Corps of Engineer's Approach to Risk Assessment and Applicability to Highways (P25-20551)
April Fontaine/U.S. Army Corps of Engineers (USACE)

2076

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 202A
Life Extension Considerations to Achieve Low-Carbon Flexible Pavements
Michael Elwardany, FAMU-FSU College of Engineering, presiding
Lorena Garcia Cucalon, Kraton Polymers, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement, Standing Committee on Asphalt Materials Selection and Mix Design

This session will explore key technologies for extending the life of flexible pavements while aligning with low-carbon objectives. Experts will discuss technologies aimed at enhancing pavement durability, reducing environmental impact, and optimizing resource use. Attendees will learn about Life Cycle Assessment (LCA) of asphalt pavements. By focusing on life extension considerations, this session will demonstrate how to balance performance, sustainability, and cost-effectiveness in modern pavement engineering.

Importance of Considering Life Extension Benefits of Asphalt Mixtures from an Environmental Sustainability Perspective (P25-20049)
Surendra Chowdari Gatiganti/National Center for Asphalt Technology (NCAT)
Boosting Pavement Longevity: Exploring the Potential of Antioxidants (P25-20050)
Behnam Jahangiri/GENEX Systems
Technologies to Mitigate the Impact of Aging on Asphalt Binder (P25-20051)
Raquel Moraes/National Center for Asphalt Technology (NCAT)
Integrating Experiments: Multi-scale & Physical Modeling to Predict Asphalt Durability (P25-20503)
Iliass Tahiri/Total Energies

2077

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 209C

The Use of Various Polymer Materials for the Protection and Increased Durability of Concrete Bridge Substructures and Decks

Michael Stenko, SCS LLC, presiding

Sponsored By Standing Committee on Polymer Concretes, Adhesives, and Sealers

Application of various polymer based concrete surface coatings and their effectiveness in increasing the durability of concrete bridge components and a case study of the application of a very early strength latex modified concrete (LMC-VE) bridge deck overlay.

Protective Coatings for Concrete to Enhance the Durability of Transportation Infrastructure (TRBAM-25-00927)

Jesse Doyle/U.S. Army Corps of Engineers (USACE), Jennifer Jefcoat/U.S. Army Corps of Engineers (USACE), Stephanie Wood/U.S. Army Corps of Engineers (USACE), Charles Weiss/U.S. Army Corps of Engineers (USACE), Craig Rutland/U.S. Army Corps of Engineers (USACE)

Life Cycle Cost Evaluation for Very Early Strength Latex-Modified Concrete (LMC-VE) Bridge Deck Overlay – A Case Study (TRBAM-25-04323)

Yogiraj Sargam/CarbonCure Technologies, Ping Lu/CarbonCure Technologies, Kejin Wang/CarbonCure Technologies

Systematic Evaluation of the Effectiveness of Coating and Sealer Materials for Protecting Bridge Substructure Concrete Against Moisture and Chloride Ingress (TRBAM-25-04575)

Anol Mukhopadhyay/Texas A&M Transportation Institute, Abhijit Mistri/Texas A&M Transportation Institute, Pravin Saraswatula/Texas A&M Transportation Institute

2078

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 209AB

Featured Papers from the 13th International Conference on Concrete Pavements

Manik Barman, University of Minnesota, Duluth, presiding

Sponsored By Standing Committee on Design and Rehabilitation of Concrete Pavements

Life Cycle Assessment of Concrete Overlay Strategies (P25-20144)

DAN KING/Iowa State University, Eric Ferrebee/American Concrete Pavement Association, Peter Taylor/Iowa State University

Developing a Next Generation Concrete Pavement Analysis Tool (P25-20145)

Kathryn Kennebeck/University of Pittsburgh, Lev Khazanovich/University of Pittsburgh, Sushobhan Sen/Indian Institute of Technology, Gandhinagar, Mason Smetana/University of Pittsburgh, Feng Mu/PNA Construction Technologies, Inc.

The Development of Reconfigured Bond Slip Model Coefficients for CRC Pavement based on Pull-Out Testing (P25-20146)

Myungjin Seong/Tolunay-Wong Engineers, Inc., Dan Zollinger/Texas A&M University, College Station

A Deep Learning Model to Estimate Rigid Pavement Stresses for Top-Down Cracking Airfield Pavement Design (P25-20222)

Ali Ashtiani/Applied Research Associates, Inc., adam amos-binks/Applied Research Associates, Inc., aaron williams/Applied Research Associates, Inc., Timothy Parsons/Applied Research Associates, Inc., David Brill/Federal Aviation Administration (FAA)

2079

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 102A

Emerging Road Weather Research Needs

Shawn Truelson, DTN, LLC, presiding

Mike Burton, Campbell Scientific, Inc., presiding

Sponsored By Standing Committee on Road Weather, Standing Committee on Winter Maintenance

This session will highlight recent research results and emerging research needs identified and developed by members of the Road Weather Committee. It captures three years of work to document and define the most critical areas in need of research with respect to Road Weather Management.

Compounding Events and New Operational Norms Resulting from Climate Change (P25-20468)

Mike Burton/Campbell Scientific, Inc.

Road Weather Mega Data (P25-20470)

Jed Falgren/Minnesota Department of Transportation, Branislav Dimitrijevic/New Jersey Institute of Technology

Road Weather Innovations by Multiple Agencies (P25-20473)

Daniel Schacher/Alaska Department of Transportation and Public Facilities, Shawn Lambert/Utah Department of Transportation

Weather-based Congestion (P25-20476)

Brad Freeze/Nashville Department of Transportation, John Garrett/Synesis Partners

Weather and Connected and Autonomous Vehicles (P25-20480)

Michael Chapman/Colorado Department of Transportation

2080

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 206

Federal Highway Administration Long-Term Bridge Performance Program

Shri Bhide, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Bridge and Structures Management

This session will include updates to the long-term bridge performance program including ongoing research projects, what's new in InfoBridge, presentation of the awards to the winners of the FHWA's Annual LTIP Student Data Analysis Contest, and the presentation of the paper by the 1st Place winner of the contest.

FHWA Long Term Bridge Preservation Program Updates (P25-21386)

Jane Jiang/Federal Highway Administration (FHWA)

Accelerated Bridge Performance Testing - Update on Phase II (P25-21388)

Robert Zobel/Federal Highway Administration (FHWA)

Deicing Chemicals Use, Deck Treating Practices, and Steel Coating Practices – Preliminary Findings (P25-21459)

Michael Brown/Wiss, Janney, Elstner Associates, Saeed Nejad/Wiss, Janney, Elstner Associates

InfoBridgeTM – What's New (P25-21460)

Shri Bhide/Federal Highway Administration (FHWA), Mohamed ElBatanouny/Wiss, Janney, Elstner Associates, Inc.

Presentation of the 2024 LTIP Student Data Analysis Contest Awards (P25-21461)

Jean Nehme/Federal Highway Administration (FHWA)

Data-Enabled Joint Condition Assessment of Bridges with Integral Abutments and Tied Approach Slabs - LTIP Award Winner (P25-21462)

Shadi Azad/Iowa State University

2081 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 146B

Uncovering Gender Differences in Travel Behavior and Activity Participation

Maria Carolina Lecompte, University of California, Davis, presiding

Sponsored By Standing Committee on Women and Gender in Transportation

This lectern session features presentations that uncover gender differences in travel behavior and activity participation. More specifically, the papers explore gendered perspectives around travel-related activities, behaviors, and choices, as well as the challenges and tradeoffs undertaken by various members of the household in participating in activities and satisfying mobility needs.

Gendered Differences in First-mile Mode Choice for Transit Oriented Developments (TRBAM-25-00988)

Amaaya Suraweera/University of Auckland, Subeh Chowdhury/University of Auckland, Timothy Welch/University of Auckland

How Gender and Intersectionality Shape Urban Travel Choices for Short Trips in the Greater Toronto Area (TRBAM-25-02550)

Saeed Shakib/University of Toronto, Alireza Dianat/University of Toronto, Khandker Nurul Habib/University of Toronto

Gender, Travel, and Activity Space (TRBAM-25-04595)

Fariba Siddiq/University of California, Los Angeles, Zhiyuan Yao/University of California, Los Angeles, Evelyn Blumenberg/University of California, Los Angeles

Exploring Trip Chaining in Paratransit Services: Gendered & Spatial Patterns in the Denver Region (TRBAM-25-04726)

Aditi Misra/University of Colorado, Denver, Wesley Marshall/University of Colorado, Denver, Garrett Fardon/University of Colorado, Denver, Shubhayan Ukil/University of Colorado, Denver, Sneha Tallavajjula/University of Colorado, Denver, Manish Shirgaokar/University of Colorado, Denver

Uncovering Gender Biases in Transport Planning: How does the Toronto Transit Commission (TTC) Plan for Mobility of Care? (TRBAM-25-04636)

Rebecca Smith/McMaster University, Léa Ravensbergen/McMaster University, Poorva Jain/McMaster University, Emily Grise/McMaster University

2082 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 146C

Public Transit Use and Traveler Needs

Todd Hansen, KFH Group, Inc., presiding

Sponsored By Standing Committee on Accessible Transportation and Mobility

Accessible and convenient public transit service is critical to help older adults and persons with disabilities reach their destinations, particularly for individuals who cannot drive themselves and do not have other mobility options. This session will feature presentations on research concerned with public transit and usability for these rider groups, include fixed-route and demand-responsive transportation services. Topics of discussion will include new bus service and mode switching, trips purposes for riders in rural areas, a fare free transportation and its results, transit travel behavior during an emergency period.

Is this Your First Time Here? Older Adults and Mode-Switching on a New Local Bus Route in Philadelphia (TRBAM-25-00887)

Julene Paul/University of Texas, Arlington, Joshua Davidson/University of Texas, Arlington

Initial Survey Results on Montreal's Fare-Free Public Transit Program for Seniors (TRBAM-25-05496)

João Pedro Figueira Amorim Parga/University of Toronto, Matthew Palm/University of Toronto, Ignacio Tiznado-Aitken/University of Toronto, Christopher Higgins/University of Toronto, Steven Farber/University of Toronto

Dialysis, Doctors, and Other Destinations in Rural Tennessee: A Comparative Analysis of Demand Response Transportation (DRT) Trips by Age, Gender, and Disability Status (TRBAM-25-04985)

Matthew Davis/University of Tennessee, Knoxville, Candace Brakewood/University of Tennessee, Knoxville

Temporal Patterns of Paratransit Usages: A Comparative Analysis Before, During, and after the COVID-19 Pandemic Using Time-Series Clustering (TRBAM-25-06030)

Troyee Saha/University of Texas, Arlington, Kate Hyun/University of Texas, Arlington

2083 CM (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 146A

Risk Management: Is Artificial Intelligence a Threat or Opportunity Within Transportation Cybersecurity?

Lynne Randolph, Southwest Research Institute, presiding

Sponsored By Standing Committee on Systems, Enterprise, and Cyber Resilience, Standing Committee on Information Systems and Technology, Standing Committee on Critical Transportation Infrastructure Protection, Joint Subommittee on Cybersecurity (with AED30 and AMR10)

Understanding the rising threats and opportunities with AI for transportation cybersecurity needs to be understood from multiple sectors. Perspectives from deploying a statewide framework for Intelligent Transportation Systems (ITS), transit agency cybersecurity that include IT and OT systems, and an overarching look at policies provide insights into how cybersecurity is managed today. Looking towards the future sees the potential for a shift to post-quantum cryptography that can potentially enable safer systems.

Cybersecurity in Transportation Systems: Policies and Technology Directions (TRBAM-25-05170)

Ostonya Thomas/Clemson University, M Sabbir Salek/Clemson University, Jean-Michel Tine/Clemson University, Mizan Rahman/Clemson University, Trayce Hockstad/Clemson University, Mashrur Chowdhury/Clemson University

Enhancing Intelligent Transportation System Security: A Shift to Post-Quantum Cryptography (TRBAM-25-05713)

Abdullah Al Mamun/Clemson University, Akid Abrar/Clemson University, Mizan Rahman/Clemson University, M Sabbir Salek/Clemson University, Mashrur Chowdhury/Clemson University, Abdullah Al Mamun/Clemson University

Managing Transit Cybersecurity Risk (P25-20728)

Paul Lennon/Skyline Technology Solutions

Statewide Cybersecurity Framework (P25-20731)

Stephanie Tanner/Florida Department of Transportation

2084

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 140

Research on Economic Development and Land Use, Part 1 (Part 2, Session 2194)

Rimon Rafiah, Economikr, presiding

Sponsored By Standing Committee on Economic Development and Land Use

Quantifying the 15-minute city and assessing its impact on individual motorized travel, active travel, public transit ridership and CO2 emissions (TRBAM-25-00126)

Rui Colaco/IST-ID, João de Abreu e Silva/IST-ID

Land Use Transportation Policy to Stop Tropical Deforestation in Central Peru (TRBAM-25-00470)

Manuel Martinez/Instituto de Avance del Transporte Peruano EIRL

Effects of Urban Rail Transit on the Local Economy and Land Use in the Bangkok Metropolitan Region (TRBAM-25-01645)

Naravit Thongnak/University of Tokyo, Daniel del Barrio Alvarez/University of Tokyo, Hironori Kato/University of Tokyo

2085

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 145A

Dwight David Eisenhower Transportation Fellowship Program Research Showcase

Latoya Jones, Federal Highway Administration (FHWA), presiding

Sponsored By Executive Committee

An opportunity to listen to the transportation research findings of graduate students. Dwight David Eisenhower Transportation Fellowship Program research presentations are selected by FHWA and are not reviewed by TRB standing committees.

Designing Systems for Equitable Outcomes: Examining Identity Attitude, and Behavior to Inform Roadway Interactions and Promote Transportation Equity and Public Health (P25-21328)

Christian Douglas/Georgia Institute of Technology

(continued)

The Chicago Beltline, Using Active Transportation to Connect Neighborhoods to Greater Economic Opportunities (P25-21295)
Vincent Parisi/Georgia Institute of Technology
Quantifying the Relationship between Extreme Weather Risks and Network Performance for Highway Assets (P25-21431)
Lauren Gardner/Vanderbilt University
Vehicle-to-Grid Assessment to Support Thailand's Energy Transition (P25-21432)
Halle Evans/University of North Carolina, Chapel Hill

2086 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 145B
Designing Equitable and Multimodal Transit Systems for Future Urban Mobility
Young-Jae Lee, Morgan State University, presiding
Sponsored By Standing Committee on Public Transportation Planning and Development, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Pedestrians, Standing Committee on Equity in Transportation

This session addresses the design of equitable and efficient transit systems. Topics include forecasting transit deserts, evaluating the equity of new transit lines, analyzing barriers to multimodal mobility such as transfer penalties, and assessing transit-oriented development performance, with a focus on promoting sustainable urban transportation. Attendees will learn insights from recent research to advance the design of equitable and multimodal urban transit systems.

Developing a Transit Desert Dashboard: Supervised Modeling for Forecasting Transit Deserts (TRBAM-25-00186)
Seung Jun Choi/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin
Welfare, Sustainability, and Equity Evaluation of the New York City Interborough Express Using Spatially Heterogeneous Mode Choice Models (TRBAM-25-00753)
Hai Yang/New York University, Hongying Wu/New York University, Lauren Whang/New York University, Xiyuan Ren/New York University, Joseph Chow/New York University
Analysis of potential hurdles in achieving multimodal mobility: focusing on transfer penalties, first-mile modes, and heterogeneity (TRBAM-25-04870)
Ki Hyun KIM/Hanyang University, Ui Hyeon Jeong/Hanyang University, Sung Hoo Kim/Hanyang University
Research on Typology of Metro Station Area Based on Transit-oriented Development Performance: With Beijing as A Case Study (TRBAM-25-02146)
Dandan Xu/Beijing University of Technology, Yang Bian/Beijing University of Technology, Xiaodong Zhang/Beijing University of Technology, Zhongyin Liu/Beijing University of Technology, Ling Li/Beijing University of Technology

2087 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 147A
Reducing Barriers to Transit Fare Payments
Julie Fernandez, Metropolitan Transit Authority of Harris County, presiding
Sponsored By Standing Committee on Public Transportation Marketing and Fare Policy

This session will present research about reducing barriers transit riders face in paying fares. The first presentation will summarize approaches to low-income fare programs with case studies from the US. Next, we will hear a detailed evaluation of Los Angeles Metro's GoPass program, which provides free transit to K-14 students. The third presentation will review payment technologies that can be used for employee commuter benefit programs. Next, an evaluation of German's nationwide flatrate ticket will be presented, including a cost-benefit analysis and discussion of future financing options. Last, we will learn about an agent-based modeling framework to evaluate different fare structures for integrated microtransit and fixed route service.

FTA EMI Grant: Approaches to Streamline Income Verification and Eligibility List Maintenance for Public Transit Low-Income Fare Programs (TRBAM-25-03773)
Christina Winberry/Four Nines Technologies, Maeve Clements/Four Nines Technologies, Lydia Rainville/Four Nines Technologies, Christian Mahood/Four Nines Technologies

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Free Transit for Students: Users and Boarding Characteristics of LA Metro's GoPass Program (TRBAM-25-03235)
Farzana Khatun/University of California, Irvine, Jean-Daniel Saphores/University of California, Irvine
Landscape Review: Payment Technologies and Employee Commuter Benefits (TRBAM-25-02351)
Ruth Miller/Jawnt, Amy Martin/Jawnt
The Future of the German-wide Public Transit flatrate ticket: Welfare Economics Consideration, Transport Transition and Financing Options (TRBAM-25-03189)
Oliver Mietzsch/WestfalenTarif, Andreas Krämer/WestfalenTarif
Identifying Winners and Losers under Different Fare Structures for Integrated Fixed-route Transit and Microtransit Systems (TRBAM-25-06027)
Siwei Hu/University of California, Irvine, Michael Hyland/University of California, Irvine, Jacob J. Berkel/University of California, Irvine, Ritun Saha/University of California, Irvine, Geoffrey Vander Veen/University of California, Irvine

2088

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 144C
Passenger Rail Services: Key Elements Affecting Stations, Service Introductions, Labor Markets, and Privatization
Marco Innao, WSP, presiding
Sponsored By Standing Committee on Passenger Rail Transportation

How Has High-Speed Rail Influenced Local Labor Markets? Evidence from Japan (TRBAM-25-01747)
Bing-yu Chiu/Japan Transport and Tourism Research Institute, Shotaro Muro/Japan Transport and Tourism Research Institute, Daisuke Fukuda/Japan Transport and Tourism Research Institute
Understanding the Impact of Privatisation on Operating Efficiency: A Deep Dive into British Railway Franchises (TRBAM-25-02370)
Jiaming Li/Imperial College London
Impact of Introducing Scenic Trains on Local Railway Ridership: Evidence from Japan (TRBAM-25-03966)
Yiping Le/Shibaura Institute of Technology, Yuki Takasaki/Shibaura Institute of Technology, Hironori Kato/Shibaura Institute of Technology
Carrying capacity optimization in large multidirectional terminal railway passenger station considering suburban train introduction (TRBAM-25-01180)
Jinke Gao/Tongji University, Jing Teng/Tongji University, Yiwen Lan/Tongji University, Chuyu Duan/Tongji University

2089

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 149
Workforce Development in the Freight Railroad Industry
Kevin Keller, HDR, presiding
Sponsored By Standing Committee on Freight Rail Transportation

Current issues on workforce development in the freight rail industry include training, emerging technologies, an aging workforce, and diversity. This session will examine the steps being taken within the industry to address these and other challenges.

Freight Rail Workforce Discussion Panel (P25-21186)
Amy Krouse/American Short Line and Regional Railroad Assn, Kayden Howard/OmniTRAX, Inc., Christopher Barkan/University of Illinois, Urbana-Champaign, Kritika Jetley/BNSF Railway, Joe Arbona/Genesee & Wyoming, Inc.

2090

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 103B

Integrated Data Analysis: Accessing Sources of Track Deterioration

Arthur Bilheri, BNSF Railway, presiding

Sponsored By Standing Committee on Railroad Infrastructure Design and Maintenance

The session will cover a variety of techniques for assessing track deterioration using inspection methods a heavy focus on data analytics such as AI and ML.

Enhancing Fastener Defect Detection Using YOLOv8-FAM and Style Transfer Data Synthesis (TRBAM-25-01929)

Benxin Cai/Central South University, Shi Qiu/Central South University, Jin Wang/Central South University, Weidong Wang/Central South University, Jun Peng/Central South University

Condition Evaluation of Mud Spots in Railroad Ballast Using Deep Learning (TRBAM-25-02920)

Kelin Ding/University of Illinois, Urbana-Champaign, Issam Qamhia/University of Illinois, Urbana-Champaign, John Hart/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign

Efficient Lightweight Railway Track Segmentation Network for Resource-Constrained Platforms with TensorRT (TRBAM-25-02221)

Chenglin CHEN/New Jersey Institute of Technology, Fei Wang/New Jersey Institute of Technology, Min Yang/New Jersey Institute of Technology, Yun Bai/New Jersey Institute of Technology, Yong Qin/New Jersey Institute of Technology

A Bidirectional Long Short Term Memory Approach for Infrastructure Health Monitoring Using On-board Vibration Response (TRBAM-25-04560)

Reza Riahi Samani/Delft University of Technology, Alfredo Nunez Vicencio/Delft University of Technology, Bart De Schutter/Delft University of Technology

2091

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 144AB

Joint Session on Truck Parking

Dan Andersen, Cambridge Systematics, Inc., presiding

Sponsored By Standing Committee on Trucking Industry Research, Standing Committee on Freight Transportation Planning and Logistics, Standing Committee on Urban Freight Transportation, Standing Committee on Agriculture and Food Transportation, Standing Committee on Intermodal Freight Transport

Truck Parking Panel Discussion (P25-21142)

Tiffany Wlazlowski Neuman/NATSO, Desiree Wood/Nevada Department of Transportation, Becky Bradley/Lehigh Valley Planning Commission

2092 **CM** (1.75)

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 143AB

Aviation Supply Chain Constraints and Their Effect on Industry Capacity and Prices

Heather Halliwell, U.S. Government Accountability Office (GAO), presiding

Sponsored By Standing Committee on Aviation Economics and Forecasting, Standing Committee on Aviation System Planning

The post pandemic recovery in travel demand has outstripped the ability of original equipment manufacturers (OEMs) and their suppliers to meet airline demand for new aircraft. OEMs are missing delivery orders and falling short of promised production rates. The explanations for the production problems are myriad and complicated, ranging from poor management and inadequate oversight to strained supply lines and labor shortages. As a result, airlines are having to delay or cancel new routes or even cut capacity impacting airfares and service options. This session will explore the factors contributing to aircraft production problems and identify what manufacturers and governments are doing to address the problems and the impact on consumers.

Commercial Aviation Manufacturing: Supply Chain Challenges and Actions (P25-20097)

Katherine Hamer/Government Accountability Office

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DOT Aviation Supply Chain Resiliency Task Force Perspective (P25-20095)
Elliott Black/Federal Aviation Administration (FAA), Di Reimold/Aerospace Industries Association of America
Airline Perspective (P25-20829)
Peter Requa/Southwest Airlines

2093

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 143C
Airfield Pavements: Subgrade Evaluation, Mixture Characterization, Analysis of Thermal Reflective Cracking, and Moisture Sensitivity Evaluation
Claudia Pereira, Instituto Tecnologico de Aeronautica, presiding
Sponsored By Standing Committee on Aircraft/Airport Compatibility

Evaluation of the Mechanical Responses in Clay Subgrade under Aircraft Loading (TRBAM-25-02464)
Daniel Offenbacker/Federal Aviation Administration (FAA), David Brill/Federal Aviation Administration (FAA), Navneet Garg/Federal Aviation Administration (FAA)
Characterization of Interface Failure Envelope and Shear Fatigue Life of Airfield Asphalt Mixtures (TRBAM-25-02966)
Biswajit Kumar Bairgi/Rutgers University, Kairen Shen/Rutgers University, Hao Wang/Rutgers University, Nam Tran/Rutgers University, Fan Yin/Rutgers University
Development of a Rainfall Simulator to Evaluate Moisture Sensitivity of Static Loading in Airfield Pavements (TRBAM-25-04265)
William Robinson/U.S. Army Corps of Engineers (USACE), Margarita Ordaz/U.S. Army Corps of Engineers (USACE), Jeb Tingle/U.S. Army Corps of Engineers (USACE)
A Viscoelastic Computational Fracture Mechanics Approach for the Analysis of Thermal Reflective Cracking in Asphalt Overlaid Jointed Concrete Airfield Pavements (TRBAM-25-04717)
Masih Beheshti/Arizona State University, Tempe, Hasan Ozer/Arizona State University, Tempe
Investigating Fuel Resistance Characterization Methods of Airfield Asphalt Mixtures: Mass Loss and Mechanical Properties (TRBAM-25-06180)
Ben Cox/U.S. Army Corps of Engineers (USACE), Olivia Guthrie/U.S. Army Corps of Engineers (USACE), Sadie Casillas/U.S. Army Corps of Engineers (USACE)

2094

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, 147B
Optimizing Port Operations and Combating Congestion: Current Research in Ports and Channels
Matthew Antonelli, Saul Ewing, LLP, presiding
Sponsored By Standing Committee on Ports and Channels

A Customized Hyperheuristic Algorithm for the Berth Allocation and Scheduling Problem at Marine Container Terminals (TRBAM-25-00237)
Bokang Li/Florida A&M University-Florida State University, Payam Afkhami/Florida A&M University-Florida State University, Razieh Khayamim/Florida A&M University-Florida State University, Maxim Dulebenets/Florida A&M University-Florida State University
Use of AIS Data to Characterize Vessel Mix in Houston Port Operations for Simulation (TRBAM-25-04469)
Kyle Bathgate/University of Texas, Austin, Debojjal Bagchi/University of Texas, Austin, Stephen Boyles/University of Texas, Austin
A Queuing Theory-based Operating Capacity Model for Multimodal Port Operations (TRBAM-25-04518)
Debojjal Bagchi/University of Texas, Austin, Kyle Bathgate/University of Texas, Austin, Stephen Boyles/University of Texas, Austin
Temporal-IRL: Modeling Port Congestion and Berth Scheduling with Inverse Reinforcement Learning (TRBAM-25-05064)
Yikuan Hu/Massachusetts Institute of Technology, Wei Zhang/Massachusetts Institute of Technology, Xinyu Yang/Massachusetts Institute of Technology, Zixiang Xu/Massachusetts Institute of Technology, Guo Li/Massachusetts Institute of Technology, Nikolay Aristov/Massachusetts Institute of Technology, Mingjie Tang/Massachusetts Institute of Technology, Elenna Dugundji/Massachusetts Institute of Technology

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Assessment of Automated Guided Vehicle (AGV) Deployment on Container Dwell Times at Seaports and Landside Traffic Congestion (TRBAM-25-05518)
Shailesh Chandra/California State University, Long Beach, Vamsi Oruganti/California State University, Long Beach, Benny Herrera/California State University, Long Beach

2242

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Ballroom A
U.S. Department of Transportation - The Future of Transportation
Alasdair Cain, Office of the Assistant Secretary for Research and Technology (OST-R), presiding
Sponsored By Executive Committee

This session will consist of a moderated panel discussion by senior transportation leaders. The discussion will address how new technologies and innovations will enable the integration of transportation modes into a fully seamless, safe and efficient system of systems. The panel will provide their perspectives on the challenges and opportunities for accelerating this integration to advance the nation's economic and societal goals.

Panel Presentation (P25-21419)
Victoria Sheehan/Transportation Research Board, Firas Ibrahim/OST-R/Office of Research, Development & Technology, Laura Chace/ITS America, Jim Tymon/American Association of State Highway and Transportation Officials, Angelos Amditis/ERTICO-ITS Europe

2096

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Pedestrian Technology and Data-Driven Safety Measures
Srinivas Pulugurtha, University of Mississippi, presiding
Sponsored By Standing Committee on Pedestrians

A Trustworthy Data-driven Indoor Crowd Flow Prediction Model (TRBAM-25-01230) - B572
Weiming Mai/No Organization, Dorine Duives/No Organization, Serge Hoogendoorn/No Organization
Day and Night Performance Differences in Detection and Deceleration by Pedestrian Automatic Emergency Braking Systems (TRBAM-25-03794) - B573
Zeinab Bayati/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville, Nastaran Moradloo/University of Tennessee, Knoxville
Assessing the Efficacy of Pedestrian Automated Emergency Braking Systems in Daytime and Nighttime Conditions Using Insurance Institute for Highway Safety Data (TRBAM-25-04183) - B574
Anshu Bamney/Indian Institute of Technology, Bhubaneswar, Yasir Ali/Indian Institute of Technology, Bhubaneswar, Anshuman Sharma/Indian Institute of Technology, Bhubaneswar, Kartik Kurup/Indian Institute of Technology, Bhubaneswar
TRFNet: A Transformer-based Multimodal Trajectory Prediction Refinement Framework for Pedestrian Crossing (TRBAM-25-05974) - B575
Changji Yuan/NanJing University of Science and Technology, Zhuping Zhou/NanJing University of Science and Technology, Hanbing Fu/NanJing University of Science and Technology
Developing a Skid Resistance Prediction GEP Model for Pedestrian Environments using FFT and HHT: A Novel Approach to Enhancing Pedestrian Safety (TRBAM-25-02001) - B577
Cheng-Kai Huang/National Central University, Shih-Huang Chen/National Central University, Ching-Tsung Hung/National Central University, Yi-Yang Cheng/National Central University, Chi-Hsuan Chen/National Central University
Leveraging Explainable Machine Learning Techniques to Estimate Crash Severity for Different Pedestrian Actions (TRBAM-25-03940) - B578
Ahmed Hossain/Texas State University, Subasish Das/Texas State University, Nazmus Sakib/Texas State University, Shriyank Somvanshi/Texas State University
Factors Influencing Pedestrian-Vehicle Interactions During the Pre-Crossing Phase: An Interpretable Machine Learning Approach (TRBAM-25-06033) - B579
Jingwen Wang/Southeast University, Xiaomeng Shi/Southeast University, Wei Ye/Southeast University, Yichang Shao/Southeast University, Yuhan Zhang/Southeast University, Zhirui Ye/Southeast University

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Investigating Pedestrians' Crossing Behavior and Trust towards Human-Driven and Autonomous Vehicles on High-Speed Arterials: Insights from a Virtual Reality Study (TRBAM-25-05314) - B580
Anish KC/Louisiana State University, Abduallah Bayomi/Louisiana State University, Hany Hassan/Louisiana State University, Jeanne M. Donaldson/Louisiana State University
A Pathfinding Approach to Predicting Pedestrian Behaviour and Violations (TRBAM-25-00951) - B581
Christopher Lehmann skelton/University of Waterloo, Chris Bachmann/University of Waterloo, Bruce Hellinga/University of Waterloo
Assessing Pedestrian Stress with Biometric Sensing and Survey Responses (TRBAM-25-03845) - B582
Shiyu Ma/Rutgers University, Wenwen Zhang/Rutgers University, Robert Noland/Rutgers University, Clinton Andrews/Rutgers University, Hannah Younes/Rutgers University, Leigh Ann Von Hagen/Rutgers University
Are the Reported Dark-Lighted Pedestrian Crashes Truly Lighted? (TRBAM-25-05585) - B583
Sia Mwende/Western Michigan University, Ron Van Houten/Western Michigan University, Valerian Kwigizile/Western Michigan University, Jacob M Engle/Western Michigan University, Jun-Seok Oh/Western Michigan University
Evaluating Pedestrians' Trust in Autonomous and Human-Driven Vehicles using Physiological Stress Indicators (TRBAM-25-05635) - B584
Vladimir Maksimenko/National University of Singapore, Liting Yuan/National University of Singapore, Prateek Bansal/National University of Singapore
An Observational Evaluation of Pedestrian Behavior at Signalized Intersections (TRBAM-25-02202) - B585
Amy Wyman/California State University, Sacramento, Hisham Jashami/California State University, Sacramento, David Hurwitz/California State University, Sacramento, Claudio Fuentes/California State University, Sacramento
What Affects Pedestrian Street Crossing Decisions in Day and Night Scenarios? A Case Study in Charlottesville, Virginia (TRBAM-25-04110) - B586
Afrida Raida/University of Virginia, Arman Hosseini/University of Virginia, Carreen de Cárdenas/University of Virginia, Andrew Mondschein/University of Virginia, Arsalan Heydarian/University of Virginia, T. Donna Chen/University of Virginia
Demographic and Perceptual Influences on Pedestrian Interactions with Driverless Vehicles: A Psychophysiological Approach (TRBAM-25-05121) - B587
Saki Rezwana/University of Connecticut, Nicholas Lownes/University of Connecticut, Mohammad Shaon/University of Connecticut, Eric Jackson/University of Connecticut

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Pedestrian Perceptions, Health, and Environment
Patrick Singleton, Utah State University, presiding
Sponsored By Standing Committee on Pedestrians

How Does the Effect of Walkability on Walking Behavior Vary with the Time of Day? Evidence from Shenzhen, China (TRBAM-25-01214) - B590
Xuan He/Chinese University of Hong Kong, Sylvia He/Chinese University of Hong Kong
A New Perspective on Arterial Facilities Rating: Promoting Pedestrian Health through Design and Functionality (TRBAM-25-02327) - B591
Ghassan Abu-Lebdeh/No Organization, Mohammad Ghanim/No Organization
Pedestrian Safety: Speed limit versus Vehicles (TRBAM-25-04527) - B592
Saurav Parajuli/University of Tennessee, Knoxville, Christopher Cherry/University of Tennessee, Knoxville, Kepler Barnhat/University of Tennessee, Knoxville
Learning about the Opponents of Car-free Streets: A Case Study in Montreal, Canada (TRBAM-25-05333) - B593
Hamed Naseri/Polytechnique Montréal, Francesco Ciari/Polytechnique Montréal, Marie-Soleil Cloutier/Polytechnique Montréal, Ashraf Uz Zaman Patwary/Polytechnique Montréal
Pedestrian Safety and Vehicle Design: Longitudinally Examining Changes in Height and Weight of SUVs and Pickup Trucks (TRBAM-25-05811) - B594
Nicholas Ferenchak/University of New Mexico, Olivia Tafoya/University of New Mexico
Sidewalk ADA Design and Condition Defect Identification Using GoPro Accelerometer Data (TRBAM-25-02739) - B595
Pengyu Mo/Georgia Institute of Technology, Geyu Lyu/Georgia Institute of Technology, Huiying Fan/Georgia Institute of Technology, Ziming Liu/Georgia Institute of Technology, Angshuman Guin/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology

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Pedestrian Exposure Measures for Different Scales of Analysis (TRBAM-25-05244) - B596
Grace Douglas/New York University, Linda Boyle/New York University, Steve Mooney/New York University, Beth Ebel/New York University, Brian Saelens/New York University, Anne Moudon/New York University
Analyzing Urban Mid-Block Crossing Behaviors and Future Intentions of Pedestrians in Low- and Middle-Income Countries: A Multivariate Ordered Probit Approach (TRBAM-25-04506) - B597
Mursheda Rahman/University of Asia Pacific, Imrul Kayes Shafie/University of Asia Pacific, Md. Rashiduzzaman Mim/University of Asia Pacific
Improving Pedestrian Exposure Estimates Through Contextualization and Stratification: A Comparison of Two Novel Approaches (TRBAM-25-01366) - B598
Jakob Wiegand/The Pennsylvania State University College of Engineering, Vikash Gayah/The Pennsylvania State University College of Engineering
Modeling Cyclist-Pedestrian Interactions at a Zebra Crossing in Germany (TRBAM-25-02053) - B599
Hiba Nassereddine/No Organization
Pedestrian Crossing Behaviors at Signalized Intersections in Utah: Factors Affecting Spatial and Temporal Violations (TRBAM-25-03589) - B600
Amir Rafe/Utah State University, Patrick Singleton/Utah State University, Sadie Boyer/Utah State University, Michelle Mekker/Utah State University
How do Leading Pedestrian Intervals (LPIs) Impact Turning Vehicle-Pedestrian Conflict Frequencies and Severities? An Observational Study Before and After LPI Implementation (TRBAM-25-05509) - B601
Faria Raha/Northern Arizona University, Brendan Russo/Northern Arizona University, Anthony Eschen/Northern Arizona University, Ava Elia/Northern Arizona University, Steven Gehrke/Northern Arizona University, Edward Smaglik/Northern Arizona University
Assessing the Implications of Distraction on Waiting Time of Pedestrians: An Accelerated Failure Time Modelling (TRBAM-25-05736) - B602
Kudurupaka Krishna/Indian Institute of Technology, Roorkee, Pushpa Choudhary/Indian Institute of Technology, Roorkee
Mining Patterns of Pedestrian Crashes at Signalized and Stop-Controlled Intersections (TRBAM-25-05816) - B603
M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Nurul-Haq Mohammed/Louisiana Transportation Research Center (LTRC), Mahmuda Mimi/Louisiana Transportation Research Center (LTRC), Subasish Das/Louisiana Transportation Research Center (LTRC), Milhan Moomen/Louisiana Transportation Research Center (LTRC), Julius Codjoe/Louisiana Transportation Research Center (LTRC)
Does Shorter Takeover Time Guarantee Safer Performance? Exploring Optimal Takeover Performance in Vehicle-Pedestrian Interaction Scenarios (TRBAM-25-05743) - B604
Song Wang/University of Cincinnati, Zhixia Li/University of Cincinnati, Wenjing Zhao/University of Cincinnati, Wanqiong Wang/University of Cincinnati
Exploring Pedestrian Crossings: Behavioral and Perceptual Responses in Traffic Environments Using Immersive Virtual Reality Approach (TRBAM-25-06200) - B605
Hyunjoo Eom/Incheon National University, Jinho Won/Incheon National University, Gi-hyoug Cho/Incheon National University
A hybrid recursive calibration method of behavioral parameters in modified social force models considering moving crowd density (TRBAM-25-06228) - B606
Yerin Lee/University of Seoul, Dohyeon Kim/University of Seoul, Jihye Byun/University of Seoul, Haoyang Liang/University of Seoul, Dongmin Lee/University of Seoul, Seunghyeon Lee/University of Seoul
Predicting Pedestrian-Vehicle Interaction Severity in Mixed Traffic Conditions: A Feature-Based Long Short-Term Memory Neural Network Approach (TRBAM-25-06266) - B607
Kaliprasana Muduli/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Human Factors of Infrastructure Design and Operations
Sanaz Motamedi, The Pennsylvania State University College of Engineering, presiding
Sponsored By Standing Committee on Human Factors of Infrastructure Design and Operations

Examining the Interplay of Pedestrian and Right-Turning Driver Behaviors in Traffic Conflict Severity (TRBAM-25-01355) - B546
Atul Subedi/Utah State University, Mahyar Vahedi Saheli/Utah State University, Patrick Singleton/Utah State University, Alyssa Gaither/Utah State University, Michelle Mekker/Utah State University

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Modeling Dilemma Zone and Analyzing Driver Behavior at Urban Signalized Intersections using Crowdsourced Trajectory Data (TRBAM-25-01369) - B547
Pramesh Pudasaini/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona
Human-Vehicle Visual Perception Fusion for Safer Autonomous Driving: An Experimental Study of Unsignalized T-Intersection Conflicts (TRBAM-25-01655) - B548
Xinyun Lao/Tongji University, Jincheng Gao/Tongji University, Yu Shen/Tongji University, Chenhang Ding/Tongji University, Yuxiong Ji/Tongji University
Influencing Factor Analysis and Prediction Model for Overtaking Duration on Mountainous Two-lane Roads (TRBAM-25-01731) - B549
Wenwen Qin/Kunming University of Science&Technology, Yungui Liu/Kunming University of Science&Technology, Jinyan Zang/Kunming University of Science&Technology, Xiaofeng Ji/Kunming University of Science&Technology, Chunyang Han/Kunming University of Science&Technology
Understanding Bicyclist Behavior and Perception of B2X Advanced Warning Messages within Virtual Reality (TRBAM-25-02564) - B550
Ye Wang/University at Buffalo, SUNY, Gongda Yu/University at Buffalo, SUNY, Irina Benedyk/University at Buffalo, SUNY, Austin Angulo/University at Buffalo, SUNY
The Examination of the Non-Linear Relationship Between the Built Environment and Older People's Cycling Behaviour in Seoul, South Korea: Considering Spatial Autocorrelation (TRBAM-25-02716) - B551
Hyeonjeong Lee/University of Seoul, Jinhyun Hong/University of Seoul
The Impact of Curve Alignment Parameters on Vehicle Acceleration in Urban Underground Spiral Ramps (TRBAM-25-02963) - B552
Liwei Zheng/Chongqing Jiaotong University, Libo Yang/Chongqing Jiaotong University, Zhanji Zheng/Chongqing Jiaotong University, Yanpeng Wang/Chongqing Jiaotong University, Peng Qiyuan/Chongqing Jiaotong University
Automated Audible TMA Alerts: Vision System Development and Evaluation (TRBAM-25-03097) - B553
Neema Jakisa Owor/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia, Carlos Sun/University of Missouri, Columbia, Linlin Zhang/University of Missouri, Columbia
The Impact of Functional Area Layout in Highway Work Zones on Driving Behavior: A Driving Simulation Study (TRBAM-25-03201) - B554
Jingxin Wang/Beijing University of Technology, Zhiqing Zhang/Beijing University of Technology, Sen Luan/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Longkai Gao/Beijing University of Technology, Tao Wen/Beijing University of Technology
Effect of Delineator Height on Driver Behavior and Safety at Curved Sections of Managed Lanes (TRBAM-25-03648) - B556
Sharfuddin Ahmed/University of Central Florida, Hatem Abou-Senna/University of Central Florida, Rupender Dahiya/University of Central Florida, Gail Holley/University of Central Florida
Machine Learning-Based Prediction of Driver Speed Perception Bias in Underground Roads: A Real-World Driving Study on Visual Perception (TRBAM-25-03743) - B555
Yating Wu/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Lanfang Zhang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zimu Peng/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
Measuring Pedestrian Perception and Behavior along an Urban Street during the Daytime and Nighttime Through the Use of Eye-Tracking Technology (TRBAM-25-03821) - B558
Carreen de Cárdenas/University of Virginia, Afrida Raida/University of Virginia, Arman Hosseini/University of Virginia, Eilise O'Connor/University of Virginia, Arsalan Heydarian/University of Virginia, Andrew Mondschein/University of Virginia, T. Donna Chen/University of Virginia
An Examination of Roadway Characteristics Affecting Driver Speed Selection in Speed Reduction Zones (TRBAM-25-04013) - B559
Sunday Imosemi/Michigan State University, Gagan Gupta/Michigan State University, Nischal Gupta/Michigan State University, Megat-Usamah Megat-Johari/Michigan State University, Peter Savolainen/Michigan State University, Timothy Gates/Michigan State University
Real-world and VR Evaluations of Multimodal Augmented Reality Safety Warnings in Roadway Work Zones: A Study on Worker Reaction Time Efficiency (TRBAM-25-04067) - B562
Sepehr Sabeti/University of North Carolina, Charlotte, Fatemeh Banani Ardecani/University of North Carolina, Charlotte, Omidreza Shoghli/University of North Carolina, Charlotte
Individual Differences Between Urban Streets: Attentiveness and Context (TRBAM-25-04584) - B563
Patricia Tice/ProFound Insights, Inc, Peter Hancock/ProFound Insights, Inc, Sudipta dey Tirtha/ProFound Insights, Inc

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Evaluating the Impact of Managed Lane Separation Width on Driver Behavior and Safety: A Human Factors Study (TRBAM-25-04799) - B557
Sharfuddin Ahmed/University of Central Florida, Hatem Abou-Senna/University of Central Florida, Rupender Dahiya/University of Central Florida, Gail Holley/University of Central Florida
Field-Based Identification of Cooperative Perception Necessity in Road Traffic Scenarios (TRBAM-25-05627) - B564
Chengyuan Ma/University of Wisconsin,Madison, Hangyu Li/University of Wisconsin,Madison, Keke Long/University of Wisconsin,Madison, Zhaohui Liang/University of Wisconsin,Madison, Pei Li/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison
Understanding Sun Glare Crashes from Driver's Perspective: A Matched Case-Control Exploratory Study (TRBAM-25-05777) - B565
Boni Kutela/Texas A&M Transportation Institute, Mark Ngotonie/Texas A&M Transportation Institute, Frank Ngeni/Texas A&M Transportation Institute, Subasish Das/Texas A&M Transportation Institute, Sia Lyimo/Texas A&M Transportation Institute
Why is Headlight Glare Such a Persistent Problem for the Driving Public? A Review (TRBAM-25-05827) - B567
John Bullough/Icahn School of Medicine at Mount Sinai
Enhancing Right-turn Safety at Intersections: AI-based Intelligent System Development and Driving Simulator Testing (TRBAM-25-06444) - B568
Yeji Sung/Hanyang University, Seunghwan Kim/Hanyang University, Nuri Park/Hanyang University, Geunhwi Park/Hanyang University, Juneyoung Park/Hanyang University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Traffic Signal Control: Toward Safer and More Efficient Operations for Multimodal Users
Burak Cesme, Kittelson & Associates, Inc., presiding
Sponsored By Standing Committee on Traffic Signal Systems

A Field Study of Driver Behavior by Interval at Pedestrian Hybrid Beacons (TRBAM-25-04827) - B400
Angelina Caggiano/University of Massachusetts, Amherst, Eleni Christofa/University of Massachusetts, Amherst, Francis Tainter/University of Massachusetts, Amherst, Michael Knodler/University of Massachusetts, Amherst
Traffic-Responsive Systems Through a Multi-Dimensional State-Driven Approach (TRBAM-25-02953) - B401
Nikola Mitrovic/BlueHalo, Ziyi Ma/BlueHalo, Fatemeh Alimardani/BlueHalo, Xiaoliang Zhao/BlueHalo, Mohammad Hoque/BlueHalo
Multi-Agent Reinforcement Learning with Graph Attention Networks Based Traffic Signal Control in a Road Network Aiming at Low-Carbon (TRBAM-25-06014) - B402
Yuhe Chen/Tongji University, Zhenyu Yang/Tongji University, Hengrong Que/Tongji University, Wenwen Jiang/Tongji University, Ping Wang/Tongji University
Strategies for Reducing Severe Vehicle Crashes: The Effects of Speed Management via Traffic Signal Progression (TRBAM-25-04603) - B403
Pei-Sung Lin/University of South Florida, Yaye Keita/University of South Florida, Zhengyu Wang/University of South Florida
Identification, Prevention, and Adjustment of Implausbile Outputs of Machine Learning Models for Enhancing the Reliability of Switching Time Predictions for Traffic-actuated Signals (TRBAM-25-06209) - B404
Kevin Heckmann/University of Kassel, Jannik Budde/University of Kassel, Robert Hoyer/University of Kassel
Arterial Signal Coordination Optimization Model: Variable Bandwidth and Balanced Path Coordination (TRBAM-25-01725) - B414
Changjian Wu/Southeast University, China, Gang Ren/Southeast University, China, Qi Cao/Southeast University, China, Zhe Zhang/Southeast University, China, Jianhua Song/Southeast University, China, Du Jianwei/Southeast University, China
Optimizing Signal Coordination at Quadrant Roadway Intersections (TRBAM-25-00430) - B413
Jonathan Reid/Arcadis
Examining Left-Turn Speeds for Intersection Signal Timing Design Using Crowdsourced Trajectory Data (TRBAM-25-04443) - B412
Pouya Jalali Khalilabadi/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona

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Assessing Conflict Likelihood and its Severity at Interconnected Intersections: Insights from Drone Trajectory Data (TRBAM-25-03478) - B411
Qianqian Jin/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Siyuan Tang/University of Central Florida
Testing and Mapping the Sensitivity of No-Touch Pedestrian Push Buttons in a Laboratory Setting (TRBAM-25-02575) - B410
Anthony Eschen/Northern Arizona University, Edward Smaglik/Northern Arizona University, Brendan Russo/Northern Arizona University, Steven Gehrke/Northern Arizona University
Assessment of Saturation Condition of Signalized Midblock Crosswalks under Mixed Traffic Conditions (TRBAM-25-06344) - B420
Sandeep Manthirikul/Visvesvaraya National Institute of Technology, Udit Jain/Visvesvaraya National Institute of Technology
A Signal Progression Model for Long Arterials Considering Inter-group Connection (TRBAM-25-01216) - B421
Changjian Wu/Southeast University, China, Gang Ren/Southeast University, China, Qi Cao/Southeast University, China, Jingfeng Ma/Southeast University, China, Yue Deng/Southeast University, China, Ruiyu Wang/Southeast University, China
Robust Traffic Signal Retiming Based on Queue Service Time Estimation Using Vehicle Trajectory Data (TRBAM-25-04514) - B422
Chengchuan An/Southeast University, Weihua Zhang/Southeast University, Qinghui Nie/Southeast University, Jishun Ou/Southeast University, Jingxin Xia/Southeast University
Advanced Traffic Signal Optimization Using the Cell Transmission Model with Distributed Phase-Time Networks Incorporating Offset and Coordinated Green Band Optimization (TRBAM-25-03875) - B423
Peirong (Slade) Wang/University of Texas, Arlington, Pengfei (Taylor) Li/University of Texas, Arlington
An Automated System for Traffic Signal Optimization: An Experimental Analysis (TRBAM-25-04248) - B424
Jack Haddad/Technion - Israel Institute of Technology, Eliav Buchnik/Technion - Israel Institute of Technology, Danny Veikherman/Technion - Israel Institute of Technology, Shai Ferster/Technion - Israel Institute of Technology, Tom Kalvari/Technion - Israel Institute of Technology, Nitzan Tur/Technion - Israel Institute of Technology, Dan Karliner/Technion - Israel Institute of Technology, Avishai Zagoury/Technion - Israel Institute of Technology, Ori Rottenstreich/Technion - Israel Institute of Technology, Dotan Emanuel/Technion - Israel Institute of Technology, Ayelet Benjamini/Technion - Israel Institute of Technology, Avinatan Hassidim/Technion - Israel Institute of Technology
Vehicle and Pedestrian Traffic Signal Performance Measures Using LiDAR-derived Trajectory Data (TRBAM-25-02041) - B434
Enrique Saldivar-Carranza/Iteris Inc., Jairaj Desai/Iteris Inc., Andrew Thompson/Iteris Inc., Mark Taylor/Iteris Inc., James Sturdevant/Iteris Inc., Darcy Bullock/Iteris Inc.
Pedestrian Volumes from Push-Button Traffic Signal Data in Oregon: Estimating Models and Assessing Model Transferability (TRBAM-25-04112) - B433
Mahyar Vahedi Saheli/Utah State University, Elizabeth Yates/Utah State University, Patrick Singleton/Utah State University, Sirisha Kothuri/Utah State University, Joseph Broach/Utah State University
Multi-Scale Model-Free Perimeter Control and Local Signal Control in Urban Networks (TRBAM-25-00228) - B432
Dongqin Zhou/Northeastern University, Vikash Gayah/Northeastern University
Assessing Impacts of Traffic Signal Countdown Timers on Safety and Efficiency of Car-Truck Mixed Traffic (TRBAM-25-05755) - B431
Vadhul Veerakumar/University of Windsor, Chris Lee/University of Windsor
Traffic Signal Coordination and Optimization for Urban Intersections Under Carbon Emission Constraints (TRBAM-25-05826) - B430
Junteng Zhao/Chang'an University, Daniel Jian Sun/Chang'an University, Liangqi Gao/Chang'an University
Reducing Speeding by Removing Speeding Opportunities: Field Test of Safe Waves Traffic Signal Timing (TRBAM-25-00989) - B440
Milad Tahmasebi/Kittelson & Associates, Inc., Peter Furth/Kittelson & Associates, Inc.
The Influence of School Zone Speed Control on Arterial Traffic Signal Coordination: A Perspective of Probe Vehicle Trajectories (TRBAM-25-06133) - B441
Marufa Khan/University of Nevada, Reno, Aobo Wang/University of Nevada, Reno, Seri Park/University of Nevada, Reno, Zong Tian/University of Nevada, Reno
Safe Waves Analysis Tool for Evaluating Signal Timing Plans in Terms of Speeding Opportunities vs. Delay (TRBAM-25-05151) - B442
Milad Tahmasebi/Kittelson & Associates, Inc., Peter Furth/Kittelson & Associates, Inc., Yusuf Ozbek/Kittelson & Associates, Inc.

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Are Flashing Yellow Arrow Signals Effective in Eliminating Yellow Traps for Lead Lag Left Turns? (TRBAM-25-01779) - B443
Li Zhao/University of Nebraska, Lincoln, Frank Selase Dzawu/University of Nebraska, Lincoln, Aemal Khattak/University of Nebraska, Lincoln, Bryan Guy/University of Nebraska, Lincoln, Nicholas Gordon/University of Nebraska, Lincoln, Garret Schram/University of Nebraska, Lincoln
Evaluation of Safety Effectiveness of Leading Pedestrian Intervals (LPI) for Signalized Intersections in Proximity to Schools (TRBAM-25-00783) - B444
Mavjot Kaur/GHD Limited, Liping Fu/GHD Limited, Qiangqiang Shangguan/GHD Limited
Evaluation of Kinematic Equations for Traffic Signal Change and Clearance Interval Configuration Using Sub-Second Driving Behavioral Data Collected via LiDAR Sensors (TRBAM-25-03745) - B454
Pengfei (Taylor) Li/University of Texas, Arlington, Swastik Khadka/University of Texas, Arlington, Sijan Shrestha/University of Texas, Arlington, Mark Taylor/University of Texas, Arlington
Impact Of Countdown Timer on Rear-End Collisions During The Signal Transition Phase (TRBAM-25-05929) - B453
Bijul Raveendran/Indian Institute of Technology, Bombay, Tom Mathew/Indian Institute of Technology, Bombay, Nagendra Velaga/Indian Institute of Technology, Bombay
On-Demand All-Red Interval (ODAR): Evaluation and Implementation in Software-in-the-Loop Simulation (TRBAM-25-04532) - B452
Ismet Erdagi/University of Pittsburgh, Slavica Gavric/University of Pittsburgh, Aleksandar Stevanović/University of Pittsburgh
Traffic Operations Analysis of Seven New Alternative Intersections with Three-Phase Traffic Signals (TRBAM-25-00969) - B451
Amirarsalan Mehrara Molan/University of Mississippi, William Rasdorf/University of Mississippi, Ali Hajbabaie/University of Mississippi, Hayden Edwards/University of Mississippi, Stephen Osafo-Gyamfi/University of Mississippi
An Experimental study on Max-Pressure traffic controller based on delays (TRBAM-25-00666) - B450
Razi Zoabi/Technion - Israel Institute of Technology, Jack Haddad/Technion - Israel Institute of Technology
Infrastructure-Free Optimization of Traffic Signal Offsets: Identifying Traffic Flow Patterns and Reverse Engineering Signal Timing with Connected Vehicle Data (TRBAM-25-06092) - B462
Shoaib Mahmud/Iowa State University, Christopher Day/Iowa State University
The Impact of Detection Zone Length on Continuous-Wide-Area (CWA) Detector-Based Dilemma Zone Protection at Signalized Intersections (TRBAM-25-04676) - B463
Md Rezwan Hossain/University of South Alabama, Min-Wook Kang/University of South Alabama
Objective-Driven Traffic Signal Actuation using Vehicle Trajectory Data: Dilemma Zone Protection, Split Failure Mitigation, and Dynamic Coordination (TRBAM-25-05445) - B464
Andalib Shams/Iowa State University, Nemanja Dobrota/Iowa State University, Burak Cesme/Iowa State University, Christopher Day/Iowa State University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
New Technologies and Performance Measures for Traffic Signals
Jamie Mackey, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Traffic Signal Systems

A Hierarchical Fuzzy Logic based Corridor Synchronization Performance Evaluation Model for Signal Coordination (TRBAM-25-06268) - B519
Yetis Murat/University of Nevada, Reno, Aobo Wang/University of Nevada, Reno, Zong Tian/University of Nevada, Reno
High Fidelity Simulation Framework for Deep Reinforcement Learning Control: Impact of Connected Pedestrian and Vehicle Penetration Rates on Intersection Signalization Performance (TRBAM-25-04809) - B518
Wissam Sleiman/George Washington University, Pedram Beigi/George Washington University, Tibor Petrov/George Washington University, Lubos Buzna/George Washington University, Peter Pocta/George Washington University, Samer H. Hamdar/George Washington University
A Real-Time Sequential Network Signal Coordination Strategy for Connected Vehicles and Buses (TRBAM-25-03691) - B517
Nachuan Li/Northwestern University, Ying Chen/Northwestern University
Improved Pressure Functions for Iterative Traffic Signal Timing Optimization in a Static Route Choice Environment (TRBAM-25-05108) - B516
William Alexander/RSG, Stephen Boyles/RSG

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A Single-Frame Machine Learning Approach to Predict Vehicular Yielding Intention While Approaching a Pedestrian Crosswalk (TRBAM-25-03449) - B515
Kaliprasana Muduli/Indian Institute of Technology, Roorkee, Anshul Maurya/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee
Optimizing Traffic Signal Control Through Direction-Aware and Spatiotemporal Graph-based Multi-agent Reinforcement Learning (TRBAM-25-05221) - B514
Vijayalakshmi K Kumarasamy/University of Tennessee, Chattanooga, Abhilasha Saroj/University of Tennessee, Chattanooga, Dalei Wu/University of Tennessee, Chattanooga, Yu Liang/University of Tennessee, Chattanooga, Michael Hunter/University of Tennessee, Chattanooga, Mina Sartipi/University of Tennessee, Chattanooga
Traffic-aware Time of Day Breakpoints for AI-based Traffic Light Optimization (TRBAM-25-06393) - B513
Ori Rottenstreich/Google Research, Eliav Buchnik/Google Research, Shai Ferster/Google Research, Tom Kalvari/Google Research, Dan Karliner/Google Research, Nitzan Tur/Google Research, Danny Veikherman/Google Research, Avishai Zagoury/Google Research, Jack Haddad/Google Research, Dotan Emanuel/Google Research, Avinatan Hassidim/Google Research
KI-GAN: Knowledge-Informed Generative Adversarial Networks for Enhanced Multi-Vehicle Trajectory Forecasting at Signalized Intersections (TRBAM-25-01293) - B512
Chuheng Wei/University of California, Riverside, Ziye Qin/University of California, Riverside, Guoyuan Wu/University of California, Riverside, Matthew Barth/University of California, Riverside, Amr Abdelraouf/University of California, Riverside, Rohit Gupta/University of California, Riverside, Kyungtae Han/University of California, Riverside
Interpretable Reinforcement Learning for Traffic Signal Control (TRBAM-25-01493) - B511
Yuan Hu/Toronto Metropolitan University, Said Easa/Toronto Metropolitan University, Feng Zhou/Toronto Metropolitan University
Arterial Traffic State Estimation based on Sparse Connected Automated Vehicle Data (TRBAM-25-00477) - B510
Hao Liu/University of California, Berkeley, Alex Kurzhanskiy/University of California, Berkeley, Wanshi Hong/University of California, Berkeley, Xiao-Yun Lu/University of California, Berkeley
Collaborative Urban Traffic Flow Management in Connected Vehicles Environment Coupling Route Guidance and Traffic Signal Control (TRBAM-25-03711) - B500
Chongqi He/Southeast University, Dawei Li/Southeast University, Yuchen Song/Southeast University, Dongjie Liu/Southeast University, Tong Zhang/Southeast University, Zhihong Yao/Southeast University
A Development and Evaluation Framework for Integrating Energy-Efficient Signal Control and Connected and Automated Vehicles in Real-World (TRBAM-25-05554) - B501
Jinghui Yuan/Oak Ridge National Laboratory, Wan Li/Oak Ridge National Laboratory, Chieh Ross Wang/Oak Ridge National Laboratory, Bo Chen/Oak Ridge National Laboratory, Tim LaClair/Oak Ridge National Laboratory, Haowen Xu/Oak Ridge National Laboratory, Andy Berres/Oak Ridge National Laboratory, Parth Kadav/Oak Ridge National Laboratory, Hong Wang/Oak Ridge National Laboratory, Ben Groelke/Oak Ridge National Laboratory, Yunli Shao/Oak Ridge National Laboratory, Ali Riza Ekti/Oak Ridge National Laboratory, Qichao Wang/Oak Ridge National Laboratory, Jibonananda (Jibo) Sanyal/Oak Ridge National Laboratory
Exploring the Pre-signal Traffic Performance on Intersection Using Multi-index Evaluation: A Simulation Approach of in Hohhot (TRBAM-25-04239) - B502
Ruiwen Xu/Inner Mongolia University, Yuan Zhu/Inner Mongolia University, Shaojia Yuan/Inner Mongolia University
Traffic Signal Condition Assessment: Cabinet and Control Components (TRBAM-25-04309) - B503
Ryan Fries/Southern Illinois University, Edwardsville, Grishma Basnet/Southern Illinois University, Edwardsville, Jacob Kaltenbronn/Southern Illinois University, Edwardsville
Improving Coordination Performance by Measuring "Early Return to Green" Using Vehicle Trajectory Data (TRBAM-25-05062) - B504
Zihao Wang/University of Michigan, Xingmin Wang/University of Michigan, Zachary Jerome/University of Michigan, Henry Liu/University of Michigan
A Signal Control Diagnosis Method Leveraging BiasSVD-based Recommendation System for Isolated Intersections (TRBAM-25-05371) - B505
Shang Ding/Tongji University, Hao Wu/Tongji University, Hong Zhu/Tongji University, Keshuang Tang/Tongji University
Quantifying The Impacts of Data Integrity Attacks on RL-Based Traffic Signal Control (TRBAM-25-04030) - B506
Amirhossein Kiani/University of Minnesota, Navid Aftabi/University of Minnesota, Raphael Stern/University of Minnesota, Dan Li/University of Minnesota
Security Analysis of Deep Reinforcement Learning Based Traffic Signal Control System Under Cooperative Perception (TRBAM-25-00751) - B507
Wangzhi Li/Purdue University, Yiheng Feng/Purdue University

(continued)

Inference of Signal Phase and Timing with Low Penetration Rate Vehicle Trajectories (TRBAM-25-04420) - B508
Xingmin Wang/University of Michigan, Zihao Wang/University of Michigan, Zachary Jerome/University of Michigan, Henry Liu/University of Michigan
A Signalized Intersection Performance Code Using Vehicle Trajectory Data (TRBAM-25-04250) - B509
Zachary Jerome/University of Michigan, Xingmin Wang/University of Michigan, Zihao Wang/University of Michigan, Henry Liu/University of Michigan
Integrating Dynamic Bus Lane and Traffic Signal Control using Reinforcement Learning (TRBAM-25-03356) - B494
Konstantinos Katzilieris/National Technical University of Athens (NTUA), Emmanouil Kampitakis/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)
Modeling Influence Area for Urban Signalized Intersections using Crowdsourced Trajectory Data (TRBAM-25-04769) - B493
Pramesh Pudasaini/University of Arizona, Bharat Pathivada/University of Arizona, Yao-Jan Wu/University of Arizona
C-MP: A decentralized adaptive-coordinated traffic signal control using the Max Pressure framework (TRBAM-25-00233) - B492
Tanveer Ahmed/Pennsylvania State University, Hao Liu/Pennsylvania State University, Vikash Gayah/Pennsylvania State University
Optimizing Corridor-Level Transit Efficiency: Multi-Agent Reinforcement Learning with Multi-Discrete Actions for Signal Priority in Connected Vehicle Environments (TRBAM-25-00270) - B482
Tianjia Yang/University of North Carolina, Charlotte, Wei Fan/University of North Carolina, Charlotte
Policy-oriented Multimodal Auction-based Traffic Signal Control through Connected Vehicles (TRBAM-25-02049) - B483
Alexander Roocroft/Delft University of Technology, Marco Rinaldi/Delft University of Technology
Two-Step Deep Reinforcement Learning for Traffic Signal Control to Improve Pedestrian Safety Using Connected Vehicle Data (TRBAM-25-02846) - B484
Gongquan Zhang/Central South University, Dian Ren/Central South University, Fangrong Chang/Central South University, Helai Huang/Central South University
Probe-vehicle-based approach for traffic signal performance monitoring: An operator's perspective (TRBAM-25-03609) - B474
Burak Cesme/Kittelson & Associates, Inc., Andrew Nichols/Kittelson & Associates, Inc., Nemanja Dobrota/Kittelson & Associates, Inc.
Intersection Design for Lane Assignment and Signal Timing with Mixed Traffic of Self-driving and Human-driven Vehicles (TRBAM-25-03665) - B473
Zhiyue Liu/No Organization, Mengru Liu/No Organization, Xiaomeng Qin/No Organization, Zhihong Xu/No Organization, Sida Luo/No Organization, Chunfu Shao/No Organization
Integrating Transit Signal Priority into Multi-Agent Reinforcement Learning based Traffic Signal Control (TRBAM-25-05169) - B472
Dickens Kwesiga/Georgia Institute of Technology, Suyash Vishnoi/Georgia Institute of Technology, Angshuman Guin/Georgia Institute of Technology, Michael Hunter/Georgia Institute of Technology

2101

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
The Effects of Race, Age, and Enforcement on Crash Outcomes
Grady Carrick, Enforcement Engineering, Inc., presiding
Nicole Oneyear, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Traffic Law Enforcement

Analysis of Traffic Stops and Race in Maryland (TRBAM-25-02436) - B520
Roumen Vesselinov/University of Maryland, Kartik Kaushik/University of Maryland, Joseph Kufera/University of Maryland, Alicia Chavez/University of Maryland, Komal Bhagat/University of Maryland, Ian Turner/University of Maryland, Elena Vesselinov/University of Maryland
The Racial Composition and Volume of Tickets at Red Light Cameras (TRBAM-25-04374) - B521
Nebiyou Tilahun/University of Illinois, Chicago, Sajad Askari/University of Illinois, Chicago, David Levinson/University of Illinois, Chicago

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Young Novice Driver and Police Officer Interactions: A Study of Socio-demographic Disparities in Traffic Stop Outcomes (TRBAM-25-06455) - B522
Panick Kalambay/University of Washington, Tacoma, Francisca Kasubi/University of Washington, Tacoma, Clement Lippu/University of Washington, Tacoma, Boni Kutela/University of Washington, Tacoma, Angela Kitali/University of Washington, Tacoma, Emmanuel Kidando/University of Washington, Tacoma
Evaluating Red-Light Cameras: A Comprehensive Study on Effectiveness and Professional Perspectives (TRBAM-25-04259) - B523
Sushmita Bhandari/University of Arizona, Alyssa Ryan/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona
Aggressive Driving Crashes in Pennsylvania: Analysis of Factors and Insights (TRBAM-25-05386) - B524
Agnimitra Sengupta/HNTB, Asif Mahmud/HNTB
Smartphone-Based Method for Speed Limit Enforcement (TRBAM-25-04497) - B525
Keya Li/University of Texas, Austin, Jahnavi Mallagavalli/University of Texas, Austin, Lamha Goel/University of Texas, Austin, Tong Wang/University of Texas, Austin, Kara Kockelman/University of Texas, Austin

2102

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Impairment in Transportation
Tara Casanova Powell, Association of Transportation Safety Information Professionals, presiding
Ryan Smith, National Transportation Safety Board (NTSB), presiding
Sponsored By Standing Committee on Impairment in Transportation

Cannabis Legalization, Crash Incidence, and Injury Severity in Illinois: Evidence from Seven Years of Linked Crash and Hospital Data (TRBAM-25-04815) - B526
Mickey Edwards/University of Illinois, Springfield, Alan Simmons/University of Illinois, Springfield, Seung-Hoon Oh/University of Illinois, Springfield
Real-time Driver Drowsiness Intervention through Driver Monitoring Systems (DMS) (TRBAM-25-06226) - B527
Suzan Ayas/University of Toronto, Birsen Donmez/University of Toronto, Yichen Mao/University of Toronto, Jinzhen Dou/University of Toronto, Mattea Powell/University of Toronto
Detecting Impaired Driving: Vehicle Inputs with the Greatest Influence on Accurate Identification (TRBAM-25-05166) - B528
Ryan Miller/Grinnell College, Bradley Carlton/Grinnell College, Timothy Brown/Grinnell College
Classification of Driver Fatigue for Prolonged Automated Driving (TRBAM-25-04377) - B529
Jaivardhan Sood/University of Texas, Arlington, Vibhav Nirmal/University of Texas, Arlington, S M Tazim Ahmed/University of Texas, Arlington, Anurag Pande/University of Texas, Arlington, David Noyce/University of Texas, Arlington, Shuchisnigdha Deb/University of Texas, Arlington
Identification of Drunk Driving using Deep Learning Networks on Virtual Reality Simulation (TRBAM-25-03502) - B536
Sida Jiang/Chalmers University of Technology, Jiaming Wu/Chalmers University of Technology, Bogdan Diaconu/Chalmers University of Technology
Cannabis Use and Driving: State Variation by Cannabis Legalization Status (TRBAM-25-02678) - B537
Linda Hill/University of California, San Diego, Daniel Ageze/University of California, San Diego, Sarah Hacker/University of California, San Diego, Alice Gold/University of California, San Diego, Ilene Lanin-Kettering/University of California, San Diego, Thomas Shaughnessy/University of California, San Diego, Lindsay Arnold/University of California, San Diego, Thomas Marcotte/University of California, San Diego
Feature Fusion of Heart Rate and Eye State for Driver Fatigue Detection (TRBAM-25-01174) - B538
Yubo Jiao/McGill University, Yubo Wang/McGill University, Kun Liu/McGill University, Jiangbo Yu/McGill University
Rescheduling Cannabis: State of Knowledge and Impact on Traffic Safety (TRBAM-25-04382) - B539
Eduardo Romano/Pacific Institute for Research and Evaluation, Ann Romosz/Pacific Institute for Research and Evaluation, Eileen Taylor/Pacific Institute for Research and Evaluation, Lindsay Arnold/Pacific Institute for Research and Evaluation

2103

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Toward Better Driving: Innovations for Improved Driving Performance and Enhanced Safety

Mouyid Islam, Michigan Department of Transportation, presiding

Sponsored By Standing Committee on Truck and Bus Safety

Exploring the Occupational Fatigue Risk in Short-haul Truck Drivers: A Case Study in China (TRBAM-25-00784) - B533

Chenxiao zhang/Southeast University, Yongfeng Ma/Southeast University, Shuyan Chen/Southeast University, Guanyang Xing/Southeast University

Impact of In-cab Alerts on Connected Truck Speed Reductions in Indiana (TRBAM-25-02784) - B530

Jairaj Desai/Purdue University, Enrique Saldivar-Carranza/Purdue University, Rahul Suryakant Sakhare/Purdue University, Jijo Mathew/Purdue University, Darcy Bullock/Purdue University

A Data Driven Approach to Quantify Truck Rest Area Safety Performance based on the Associated Fatigue-related Crashes (TRBAM-25-05425) - B531

Mehmet Burak Kaya/Florida A&M University-Florida State University, Mohammadreza Koloushani/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University

Large Truck Involved Rollover Crash Severity Analysis based on Bayesian Network (TRBAM-25-05164) - B532

Salwa Anam/Florida International University, Xia Jin/Florida International University

Assessing the Impact of Oil and Gas Extraction Activities on Commercial Truck Traffic Safety on Rural Highways: North Dakota and Wyoming Case Study (TRBAM-25-06185) - B535

Sherif Gaweesh/University of North Dakota, Mohamed Ahmed/University of North Dakota

Analysis of Continuous Driving Fatigue Characteristics of Heavy Truck Drivers on Highway (TRBAM-25-00795) - B540

Chen Li/Tongji University, Feng Chen/Tongji University, Wenlong Ding/Tongji University, Xiaodong Pan/Tongji University

Investigating the Impact of Fatigue Level on Visual Attention of Heavy-duty Truck Driver: An Eye Tracking Study (TRBAM-25-01638) - B534

Tianyang Cui/Southeast University, Shuyan Chen/Southeast University, Yongfeng Ma/Southeast University, Xiaobo Dong/Southeast University

Developing a Long-Short Term Memory Model for Predicting Truck Driver Fatigue Using Naturalistic Data (TRBAM-25-03822) - B541

Xiaowei Tang/Tongji University, Xuesong Wang/Tongji University, Mengjiao Wu/Tongji University, Ashleigh Filtness/Tongji University, Yuchen Sun/Tongji University

Revision and Validation of Driving Behavior Questionnaire for Chinese Truck Drivers based on Multi-source Data (TRBAM-25-04812) - B542

Huixin Zhang/Tongji University, Xuesong Wang/Tongji University, Andrew Morris/Tongji University, Xiaomeng Li/Tongji University, Xiaowei Tang/Tongji University

XGBoost Model for Predicting Truck Crash Probability from Operational and Insurance Data (TRBAM-25-01568) - B544

Hongpeng Zhang/Beijing University of Technology, Yiping Wu/Beijing University of Technology, Peng Song/Beijing University of Technology, Xiaoheng Sun/Beijing University of Technology, Ji Meng/Beijing University of Technology, Jun Ma/Beijing University of Technology

Impact of Freight Task Characteristics on Driving Style: An Analysis Based on the DSS Method (TRBAM-25-00375) - B545

Jun Ma/Beijing University of Technology, Yiping Wu/Beijing University of Technology, Jian Rong/Beijing University of Technology

Evaluating the Effects of Mandatory Pre-Right-Turn Stops for Large Vehicles at Signalized Intersections: A Doubly Robust Estimation Approach Utilizing WGAN-GP Generated Data (TRBAM-25-05508) - B543

Ziyuan Huang/Tongji University, Xuesong Wang/Tongji University, Qiming Guo/Tongji University, Mengjiao Wu/Tongji University, Siyi Zheng/Tongji University, Yu Jiang/Tongji University, Bangyu Wang/Tongji University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Statewide and National Transportation Data Research

Penelope Weinberger, Weinberger & Associates, presiding

Peggi Knight, Iowa Department of Transportation, presiding

Sponsored By Standing Committee on Statewide/National Transportation Data and Information Management

A collection of excellent papers from the Standing Committee on Statewide/National Transportation Data and Information Management (AED10)

Current State of Practices of Utility As-Built Data Collection for State Departments of Transportation (TRBAM-25-00975) - A121

Bassam Ramadan/University of Kentucky, Hala Nassereddine/University of Kentucky, Roy Sturgill/University of Kentucky, Ying Li/University of Kentucky, Parshva Mukeshkumar Patel/University of Kentucky

Assessing the Coverage of Commercial Truck On-Vehicle Camera Imagery on Interstate Roads (TRBAM-25-03615) - A120

Rahul Suryakant Sakhare/Purdue University, Jairaj Desai/Purdue University, Jijo Mathew/Purdue University, Darcy Bullock/Purdue University

Domestic and International Long-Distance Travel Patterns and Sociodemographic Associations: A Multi-Cross-Sectional Analysis of the National Travel Survey of Canada from 2018 to 2022 (TRBAM-25-04310) - A122

Lancelot Rodrigue/Public Health Agency of Canada, Valerie Hongoh/Public Health Agency of Canada, Vanessa Gabriele-Rivet/Public Health Agency of Canada, Lisa Kanary/Public Health Agency of Canada, Rania Wasfi/Public Health Agency of Canada

The Requirements for Using National Level NextGen NHTS Person Trip Data for Planning and Policy Analysis: An Exploratory Study (TRBAM-25-04737) - A123

Md Rauful Islam/Maks Inc., Mohammed Alam/Maks Inc., Jenna Sinclair/Maks Inc.

A Graph-Based Approach to Conflating Third-Party Traffic Message Channel (TMC) and Link-Based Networks with State DOT Linear Referencing System Networks (TRBAM-25-05858) - A124

Xu Zhang/Kentucky Transportation Center, Mei Chen/Kentucky Transportation Center

2105

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Methods for Exploring Activity Patterns for Freight Vehicles and Operations

Ali Kothawala, University of Texas, Austin, presiding

Sponsored By Standing Committee on Freight Transportation Data

Poster session for papers submitted to AED70, Standing Committee on Freight Data

Traffic Flow Data Reconstruction of Port Yard Road Network Based on Incomplete Container Truck Trajectory Data (TRBAM-25-01782) - A133

Xueqi Ding/Southeast University, China, Yanjie JI/Southeast University, China, Ziang Chen/Southeast University, China

Mining of Heavy-Duty Truck Activity Patterns Using Natural Language Processing Techniques (TRBAM-25-02063) - A130

Xu Ma/Tongji University, Quan Yuan/Tongji University

A Novel Approach for Reconstructing Freight Trips of Heavy-Duty Trucks Using Operational Logic (TRBAM-25-02064) - A134

Ruixu Pan/Tongji University, Quan Yuan/Tongji University, Xu Ma/Tongji University

Container Trailer Stop Identification of Freight Enterprises Based On the TMS of the Entire Logistics Process (TRBAM-25-02065) - A135

Hang Chen/Tongji University, Quan Yuan/Tongji University

Analyzing Temporal and Spatial Freight Activity Considering Truck Types and Restriction Policy in Xi'an, China (TRBAM-25-02562) - A136

Zhipeng Peng/University of Central Florida, Said Easa/University of Central Florida, Chenzhu Wang/University of Central Florida, Chenzhu Wang/University of Central Florida

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Exploring Customer Preferences for Alternative Last-Mile Delivery in E-commerce: A Stated Preference Approach with Payment Considerations (TRBAM-25-02642) - A131
Robert Seiffert/DLR - German Aerospace Center, Saskia Seidel/DLR - German Aerospace Center, Ilka Dubernet/DLR - German Aerospace Center
Elucidating US Import Supply Chain Dynamics: A Spatial-Temporal Graph Neural Network Approach (TRBAM-25-03134) - A125
Nikolay Aristov/Massachusetts Institute of Technology, Ziyan Li/Massachusetts Institute of Technology, Thomas Koch/Massachusetts Institute of Technology, Elenna Dugundji/Massachusetts Institute of Technology
Analyzing Freight Flow Patterns of Heavy-Duty Trucks Using Trajectory Data Mining (TRBAM-25-04131) - A132
Xinghua Li/Tongji University, Mingyue Li/Tongji University, Yuntao Guo/Tongji University, Lu Teng/Tongji University

2106

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Innovative Transportation Planning Modeling and Analysis Methods and Tools
Berrien Barks, North Central Texas Council of Governments, presiding
Sponsored By Standing Committee on Transportation Planning Analysis and Application

This event focuses on posters addressing transportation planning models, analysis methods and tools, and policy issues.

Adaptive Graph Convolutional Recurrent Network with Online Learning for Short-Term Network Traffic Prediction after Unexpected Disruptions (TRBAM-25-00025) - A100
lianbo Huang/Southeast University, Jian Wang/Southeast University, qichao Liu/Southeast University, Yuhao LI/Southeast University
Development and application of a method for quantifying mobility options (TRBAM-25-00193) - A101
Franziska Henkel/University of Kassel, Carsten Sommer/University of Kassel
Vulnerability Study of Urban River-Crossing Passages (TRBAM-25-00218) - A102
Keyuan Ding/Wuhan Institute of Technology, Ran Peng/Wuhan Institute of Technology, Yan Zhang/Wuhan Institute of Technology, Xu Zhou/Wuhan Institute of Technology, Feiyang Liu/Wuhan Institute of Technology, Yanru Zhu/Wuhan Institute of Technology, Yehao Liu/Wuhan Institute of Technology
Modeling Neo-Traditionalism for Urban Neighborhoods Using VISSUM Software (TRBAM-25-00353) - A103
Mohammad Mahdi Tahoorinia/No Organization, Maysam Ziaee/No Organization
Evaluating Exposures to Social Environments during Everyday Travel Using Smartphone-based Travel Dairies and Spatio-Temporal Computing (TRBAM-25-01295) - A104
Xiaohuan Zeng/University of Minnesota, Twin Cities, Ying Song/University of Minnesota, Twin Cities, Yingling Fan/University of Minnesota, Twin Cities
Dealing with The Implications of High Transportation Costs in Los Angeles: Estimation in the Economic Externalities of Public Transit Facilities (TRBAM-25-01391) - A105
Yefu Chen/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Justin Yu/University of Texas, Austin
Exploring Population Dynamics in China: An Analysis of Transport Mode-Specific Flows with Tencent Location Data (TRBAM-25-01436) - A106
Di Lu/Southeast University, Xuedong Hua/Southeast University, Wei Wang/Southeast University
Location and Capacity Optimization of Public Charging Stations for Electric Vehicles Based on Ga2SFCA and Genetic Algorithm: A Case Study in Hohhot City (TRBAM-25-01621) - A107
Shaojia Yuan/Inner Mongolia University, Yuan Zhu/Inner Mongolia University, Yanan Hu/Inner Mongolia University, Man Li/Inner Mongolia University, Chengbing Li/Inner Mongolia University
Equitable Multi-objective Optimal Spatial Transit Services Allocation over a Tessellated Urban Area (TRBAM-25-01832) - A108
Filippos Alogdianakis/University of Cyprus, Loukas Dimitriou/University of Cyprus, Dimitrios Papadakis/University of Cyprus
Investigating the spatial-temporal impacts of built environment factors on metro ridership using MGWR and GeoDetector: A case study in Shanghai, China (TRBAM-25-02761) - A110
Lingzhi Cheng/Tongji University, Qingwen Xue/Tongji University, Yingying Xing/Tongji University, Hongwei Wang/Tongji University, Hongwei Li/Tongji University

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Identification of Traffic Congestion and Analysis of Influencing Factors Around Subway Stations Based on Multi-Source Data (TRBAM-25-03116) - A111
Yao Yang/Shenzhen Urban Transport Planning Center, Miao Guo/Shenzhen Urban Transport Planning Center, Yaqin Qin/Shenzhen Urban Transport Planning Center, Xiang Zhang/Shenzhen Urban Transport Planning Center, Juanjuan Wu/Shenzhen Urban Transport Planning Center
A Bi-level Multi-objective Optimization Approach for Healthcare Facilities Location: Integrating Transportation Operation (TRBAM-25-03130) - A112
Yongqi Zhang/Southeast University, Xiao Fu/Southeast University, Ngoduy Dong/Southeast University
A COMPARATIVE ANALYSIS OF U.S. MICROMOBILITY USAGE WITH SOCIOECONOMIC AND BUILT ENVIRONMENT FACTORS (TRBAM-25-04753) - A113
Priyanka Verma/McGill University, Grant McKenzie/McGill University
An Overview of Accessibility and Mobility Impacts of The Vegas Loop (TRBAM-25-05014) - A114
Shashi Nambisan/University of Nevada, Las Vegas, Shrikar Nellutla/University of Nevada, Las Vegas, Sushma Koneti/University of Nevada, Las Vegas
Modal Accessibility Differences Using Cross-Modal Floating Catchment Area (TRBAM-25-05069) - A115
Rajat Verma/Purdue University, Shagun Mittal/Purdue University, Mithun Debnath/Purdue University, Satish Ukkusuri/Purdue University
Does Compact Development Increase Car Use Among Car Users? (TRBAM-25-05437) - A116
Fajle Rabbi Ashik/Bangladesh University, Kevin Manaugh/Bangladesh University
Will Automated Vehicles Drive You to Move? Exploring and Predicting the Impact of AV Technology on Residential Relocation (TRBAM-25-05637) - A117
Song Wang/University of Cincinnati, Xin Tian/University of Cincinnati, Zhixia Li/University of Cincinnati, Wenjing Zhao/University of Cincinnati, Tangzhi Liu/University of Cincinnati
Optimizing Battery-Swapping Station for Electric Micro-Mobility Vehicles: A Three-Stage Approach Considering User Preferences and Demand Uncertainty (TRBAM-25-05670) - A118
Chenchen Kuai/Southeast University, Fan Zhang/Southeast University
Travel problems and barriers to sustainable commuting in America's sprawling southeast (TRBAM-25-05846) - A126
Matthew Palm/UNC Chapel Hill, Jake Juliano/UNC Chapel Hill, Jenna Kolling/UNC Chapel Hill, Molly DeMarco/UNC Chapel Hill, Allie Thomas/UNC Chapel Hill
External Truck Trip Synthesis and Calibration for Regional Freight Simulations (TRBAM-25-06237) - A127
Yantao Huang/Argonne National Laboratory, Abdelrahman Ismael/Argonne National Laboratory, Hui Shen/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Pedro de Camargo/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory
When Girls Just Want To Have Fun, How Do They Go? Gendered Differences in Nighttime Leisure Travel (TRBAM-25-06459) - A128
Bianchi Dy/Massachusetts Institute of Technology, Gregory Newmark/Massachusetts Institute of Technology

2107

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Innovation in Action: Advances in Information and Knowledge Management Practice
Kendra Levine, University of California, Berkeley, presiding
Frances Harrison, Spy Pond Partners, LLC, presiding
Sponsored By Standing Committee on Information and Knowledge Management

Transportation research relies on data and information, but most organizations struggle with managing it. This hinders innovation and operations. Join researchers and practitioners in sharing their recent projects that have helped make transportation information easier to find and knowledge more easily shared across many modes and focus areas of transportation.

Functional Requirements of Data Spaces in Transport and Logistics: The Greek Transport & Logistics Observatory Case (TRBAM-25-00345) - A140
Sofoklis Dais/Centre for Research and Technology (CERTH) - Hellenic Institute of Transport (HIT), Georgia Ayfantopoulou/Centre for Research and Technology (CERTH) - Hellenic Institute of Transport (HIT)
Constructing and Applying a Knowledge Graph in Urban Transportation Based on Empirical Literature for Decision-Making Support (TRBAM-25-03710) - A142
Pengju Ren/Tongji University, Ma Rui/Tongji University, Sanghuiyu Yan/Tongji University, Weifeng Li/Tongji University

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Building a Competency Model for Diverse Work Environments (P25-20524) - A146
Garrett Wheat/Louisiana Department of Transportation and Development
The Intersection of Quality and Data Management: A Rapid Lean Assessment Tool (P25-20525) - A144
Matt Versdahl/Washington State Department of Transportation
Introducing the National Transportation Library Archives (P25-20526) - A143
Eden Orelove/OST-R/Bureau of Transportation Statistics
Enhancing Organizational Strategy through Knowledge Management (P25-20529) - A145
Mary Waters/Virginia Department of Transportation
Accessibility and Section 508 Training Webinars (P25-20533) - A141
Brian Hirt/CTC and Associates LLC

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Young Professional Research in Transportation Sustainability and Resilience
Stephen Wong, University of Alberta, presiding
Tia Boyd, USF Center for Urban Transportation Research, presiding
Sponsored By Transportation Sustainability and Resilience Group, Subcommittee on Young Members-Sustainability and Resilience

Transit Bus Fleet Electrification (P25-20063) - A166
Charvi Gupta/WSP
Shifting Dynamics: A Multi-Factor Analysis of the Impacts of SAEV Expansion on Urban Mobility (P25-20064) - A167
Jessica Lazarus/Lawrence Berkeley National Laboratory
Reviving American Rail: Examining the Managed Decline of the Rail Industry and How It Might Be Reversed (P25-20065) - A176
Maddock Thomas/Brown University
Delivery Deserts: Mapping, Understanding, and Overcoming Service Challenges (P25-20066) - A177
Seth Abbott/University of Tennessee, Knoxville

2109

Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Navigating the Intersection of Health, Equity, and Mobility
David Berrigan, National Cancer Institute, presiding
Sponsored By Standing Committee on Transportation and Public Health

This session explores the critical connections between transportation systems, public health, and social equity. The session will offer insights into the transportation-based pathways to health through diverse methodologies and case studies, as well as how transportation policies and infrastructure can shape healthier, more equitable communities.

Mitigating Airborne Infection Risks in Public Transportation: A Systematic Review (TRBAM-25-00318) - A155
Saeed Jaydarifard/Queensland University of Technology, Lidia Morawska/Queensland University of Technology, Brendan O'Keeffe/Queensland University of Technology, Alexander Paz/Queensland University of Technology
Multivariate Analysis of Walking Habits After COVID-19 (TRBAM-25-01540) - A154
Hyunjun Hwang/University of Texas, Austin, Angela Haddad/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
Transportation's Influences on Wellbeing: A Literature Review and Scoping Framework (TRBAM-25-02025) - A170
William Bouck/Utah State University, Patrick Singleton/Utah State University, Louis Alloro/Utah State University, Kim Clark/Utah State University, Julie Estes/Utah State University
Temporal Analysis of Commuters' Public Transit Travel Choice During COVID-19 Pandemic Considering Health Risk Perception and Mode Shift Heterogeneity (TRBAM-25-02487) - A153
Sumaiya Afrose Suma/Bangladesh University of Engineering and Technology, Md. Amirul Islam/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, Md. Hadiuzzaman/Bangladesh University of Engineering and Technology

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Spatial Heterogeneities in Healthcare Visits and Soco-Economic Influences: A Comprehensive Analysis Using Traffic Flow Data (TRBAM-25-02546) - A162
Armita Kar/George Mason University, Yasuyuki Motoyama/George Mason University
Addressing Imbalanced Data for Health-related Travel Mode Choice (TRBAM-25-02635) - A161
Kadir Berkhan Akalin/Eskisehir Osmangazi University, S. Ilgin Guler/Eskisehir Osmangazi University
Assessing Transportation Barriers to Maternal Care for Black Birthing People in Los Angeles County (TRBAM-25-03127) - A172
Rebecca Usigbe/University of California, Los Angeles, Zanobia Ibrahim-Watkins/University of California, Los Angeles, Astrid Williams/University of California, Los Angeles, Sylvie Wilson/University of California, Los Angeles, Zoe Cunliffe/University of California, Los Angeles, Gabrielle Brown/University of California, Los Angeles, Tianna Wakeman/University of California, Los Angeles, Regan Patterson/University of California, Los Angeles
Assessing Usability of Connected Vehicle Data to Study Accessibility to Healthcare Facilities: A Demonstration Study (TRBAM-25-03261) - A171
Vamshi Chaitanya Annimalla/University of Alabama, Praveena Penmetsa/University of Alabama, Abhay Lidbe/University of Alabama, Anthony Abshire/University of Alabama, Alex Hainen/University of Alabama, Hee Y. Lee/University of Alabama, Steven Jones/University of Alabama
Electrifying Health: Leveraging Social Media Sentiment to Unravel EV Adoption, Air Quality, and Lung Cancer Nexus (TRBAM-25-03775) - A152
ChiKai Yan/Sun Yat-Sen University, Mingyang Pei/Sun Yat-Sen University, Songran Liu/Sun Yat-Sen University, Lingshu Zhong/Sun Yat-Sen University
Assessment of Arterial Facilities Performance from Pedestrian Health Perspective: A Case Study in Dubai, UAE (TRBAM-25-04471) - A160
Ghassan Abu-Lebdeh/No Organization, Mohammad Ghanim/No Organization
Breathing in the Burden: Health Inequity Due to Traffic-Related Air Pollution (TRBAM-25-05617) - A150
Rishika Tumula/Purdue University, Rajat Verma/Purdue University, David Holguin-Mejia/Purdue University, Konstantina (Nadia) Gkritza/Purdue University, Satish V Ukkusuri/Purdue University
Influence of Housing Affordability on Physical Activity Engagement through the Mediating Role of Leisure Time Satisfaction and Work-Related Behavior (TRBAM-25-06059) - A151
Qin Zhang/University of Cambridge, Wei-Chieh Huang/University of Cambridge, Kelly Clifton/University of Cambridge, Rolf Moeckel/University of Cambridge

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Current Issues in Resource Conservation and Recovery
Samer Dessouky, University of Texas, San Antonio, presiding
Sponsored By Standing Committee on Resource Conservation and Recovery

Evaluation of Environmental Impacts Monetization Methods for Green Asphalt Procurement (TRBAM-25-00640) - A156
Michele Lanotte/Michigan State University
Expanding Residential Solar Applications: Thin-Film Technology on Walls and Fences (TRBAM-25-03103) - A157
Hamidreza Allahdadi/University of Texas, San Antonio, Mohammad Allahdadi/University of Texas, San Antonio, Lubinda F Walubita/University of Texas, San Antonio, Samer Dessouky/University of Texas, San Antonio
Development of Rechargeable Cement-based Batteries with Hemp Fibers (TRBAM-25-03445) - A158
Ziyu Liu/Tennessee State University, Shihui Liu/Tennessee State University, Catherine K. Armwood-Gordon/Tennessee State University, Lin Li/Tennessee State University
Feasibility Study on Recycled Continuous Carbon Fibers and their Potential Applications in the Transportation Sector (TRBAM-25-06317) - A168
Niclas Richter/BMW AG, Jan Teltschik/BMW AG, Hendrik Neuhaus/BMW AG, Claudius Heide/BMW AG, Klaus Drechsler/BMW AG

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Transit Capacity and Quality of Service

Alan Danaher, WSP, presiding

Sponsored By Standing Committee on Transit Capacity and Quality of Service

This session includes papers on a wide variety of topics related to transit capacity and quality of service.

Evaluation of the Service Quality of Feeder Bus Combining Comment Texts and Questionnaires (TRBAM-25-01128) - A210

Jing Cai/Kunming University, Zhuoqi Li/Kunming University, Ran Zhang/Kunming University, Fengxiang Guo/Kunming University

Analysis of Public Transport Quality Indicators Considering the Spatial Configuration of Routes (TRBAM-25-03280) - A211

Andres Rodriguez Gutierrez/Universidad de Cantabria, Maira Delgado-Lindeman/Universidad de Cantabria, Luigi dell'Olio/Universidad de Cantabria

Study on the Optimization of Bus Routes Based on Refined Site Placement (TRBAM-25-05591) - A212

Bowen Xue/North China University of Technology, Qi Zhao/North China University of Technology, Weijie Xiu/North China University of Technology, Peng Yin/North China University of Technology

Determinants of Bus Stop Spacings in the United States (TRBAM-25-06343) - A213

Shirin Qiam/University of Illinois, Urbana-Champaign, Ayush Pandey/University of Illinois, Urbana-Champaign, Lewis Lehe/University of Illinois, Urbana-Champaign

Pedestrian Safety and Traffic Operations Around Near-Side Versus Far-Side Transit Stops: Emerging Observational Evidence from Utah (TRBAM-25-04115) - A214

Fariba Soltani/Utah State University, Atul Subedi/Utah State University, Patrick Singleton/Utah State University, Michelle Mekker/Utah State University

Evaluation of Spatiotemporal Transit Accessibility: Weighted Indexing using CRITIC- MCDM Approach, and Performance Gap Analysis (TRBAM-25-01048) - A215

Rohit Rathod/Sardar Vallabhbhai National Institute of Technology, Gaurang Joshi/Sardar Vallabhbhai National Institute of Technology, Shriniwas Arkatkar/Sardar Vallabhbhai National Institute of Technology

Transit Rider Heat Stress in Atlanta, GA under Current and Future Climate Scenarios (TRBAM-25-05207) - A216

Huiying Fan/Georgia Institute of Technology, Geyu Lyu/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Angshuman Guin/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology

Effect of Public Transportation Space Design on User's Experience. (TRBAM-25-01312) - A217

Yasaman Hakiminejad Hedeshi/Villanova University, Elizabeth Pantesco/Villanova University, Arash Tavakoli/Villanova University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Transit Operation Management: Passenger Flow and Post Disruption Analysis

Shi Xie, Sound Transit, presiding

Sponsored By Standing Committee on Urban Rail Transit Systems

The posters in this session explore various methods to enhance line capacity, such as selective door operation and virtual coupling. They also address strategies for effectively managing passenger flow such as by analyzing passenger behavior in high-density passageways and using video footage from station platforms to assess crowd conditions. In addition, some posters present models used to forecast passenger flow following service disruptions.

Development of a PID Controller for Passenger Inflow Control in Congested Metro Stations Using Elliptic Bivariate Relationship (TRBAM-25-05491) - A200

Geongyu Min/Seoul National University, Dongju Ka/Seoul National University, Chungwon Lee/Seoul National University

Personality-Based Classification of Passenger Behavior in High-Density Metro Passageway (TRBAM-25-02182) - A201

Zhonghua Wei/Beijing University of Technology, Xueying Tong/Beijing University of Technology, Yunxuan Li/Beijing University of Technology, Jingxuan Peng/Beijing University of Technology

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Onboard Metro Train Localization Based on the Train Motion and Track Geometry Features Fusion (TRBAM-25-03108) - A202
Ruohui Zhang/Hong Kong University, Guangzhou, Chenglin CHEN/Hong Kong University, Guangzhou, Huiyue Tang/Hong Kong University, Guangzhou, Yong Qin/Hong Kong University, Guangzhou, Zhilu Lai/Hong Kong University, Guangzhou, Yun Bai/Hong Kong University, Guangzhou
Evaluation of Station Attention Based on Network Topological Heterogeneity Under Delay Conditions (TRBAM-25-06049) - A198
Xiaoling Liu/Shenzhen Technology University, Qi Zhang/Shenzhen Technology University, Yi Peng/Shenzhen Technology University, Xinyun Liang/Shenzhen Technology University, Qing Wang/Shenzhen Technology University, Jingjing Chen/Shenzhen Technology University
Adaptability Analysis of Virtual Coupling in Urban Rail Transit Dual-line Convergence Section (TRBAM-25-06215) - A203
Shaogang Dai/Tongji University, Dongxiu Ou/Tongji University
Selective Door Operation in Urban Railway Systems to Increase Line Capacity at Peak-hour (TRBAM-25-06321) - A204
Zhihua Jin/Technical University of Munich, Gregory Erhardt/Technical University of Munich, Rolf Moeckel/Technical University of Munich
Analysis of Factors Affecting Urban Rail Transit Passenger Flow Fluctuations: A Case Study of 30 Cities in China (TRBAM-25-04094) - A205
Haojie Chen/Wuhan Institute of Technology, Ran Peng/Wuhan Institute of Technology, Keyuan Ding/Wuhan Institute of Technology, Pengyu Chen/Wuhan Institute of Technology, Yehao Liu/Wuhan Institute of Technology, Haining Tang/Wuhan Institute of Technology, Huaiyang Weng/Wuhan Institute of Technology
A Prompt Refinement-based Large Language Model for Metro Passenger Flow Forecasting under Delay Conditions (TRBAM-25-05168) - A197
Ping Huang/Shenzhen Technology University, Yuxin He/Shenzhen Technology University, Hao Wang/Shenzhen Technology University, Jingjing Chen/Shenzhen Technology University, Qin Luo/Shenzhen Technology University
Risk Assessment of Passenger Flow on Metro Platform Based on Video Images (TRBAM-25-00674) - A206
Yanhui Wang/Beijing Jiaotong University, Chong Li/Beijing Jiaotong University, Fei Dou/Beijing Jiaotong University, Jiayi Dong/Beijing Jiaotong University, Yifei Wang/Beijing Jiaotong University
Intelligent Imaging Interconnector Alarm System for Trains (TRBAM-25-01042) - A207
Fuh Shyong Yang/National Cheng Kung University, Yung Cheng/National Cheng Kung University
An Effective Prediction-Based Timetable Rescheduling Framework for Mitigating Metro Line Capacity Loss Post-Disruption (TRBAM-25-00876) - A208
Shuang Zhang/Chang'an University, Yaoxin Wu/Chang'an University, Laurens Bliek/Chang'an University, Yanqiu Cheng/Chang'an University, Yingqian Zhang/Chang'an University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Transit Operations Research: Optimization on Service Plan, Schedule, and Capacity
Jason Mumford, STV, Inc., presiding
Sponsored By Standing Committee on Urban Rail Transit Systems

This session features a diverse collection of posters that present research findings on a range of optimization strategies aimed at improving transit operation. These strategies focus on enhancing scheduling efficiency, optimizing service delivery, and exploring smooth integration with other modes and shared mobility services. The research highlights innovative approaches to addressing operational challenges, creating more efficient and reliable service delivery.

Mixed Passenger and Freight Transport of Urban Railway Systems: An Empirical Study (TRBAM-25-01921) - A182
Yueying Chai/Beijing Jiaotong University, Jiateng Yin/Beijing Jiaotong University, Simin Chai/Beijing Jiaotong University, Tao Tang/Beijing Jiaotong University
Combination Strategy Based Train Rescheduling Model under Unidirectional Interruption for Urban Rail Transit (TRBAM-25-02009) - A180
Zhuoyi Li/Beijing Jiaotong University, Weiteng Zhou/Beijing Jiaotong University, Jiangliang Ran/Beijing Jiaotong University, Baoming Han/Beijing Jiaotong University

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Coordinated Optimization of the Train Timetable and the Passenger Control Strategy: Considering a Novel Empty Train Return Strategy (TRBAM-25-02129) - A186
Ruixin Liu/Southeast University, Dawei Li/Southeast University, Tong Zhang/Southeast University, Ke Xu/Southeast University
A Differentiable Simulation-Based Optimization (SBO) Approach with Iterative Backpropagation for Estimating Metro Passenger Route Choices (TRBAM-25-02333) - A187
Kejun Du/Hong Kong University of Science and Technology, Enoch Lee/Hong Kong University of Science and Technology, Qiru Ma/Hong Kong University of Science and Technology, Zhiya Su/Hong Kong University of Science and Technology, Shuyang Zhang/Hong Kong University of Science and Technology, Hong Lo/Hong Kong University of Science and Technology
Abnormal Metro Passenger Demand is Predictable from Alighting and Boarding Correlation (TRBAM-25-02501) - A188
Zhanhong Cheng/McGill University, Jiawei Wang/McGill University, Martin Trépanier/McGill University, Lijun Sun/McGill University
First Train Schedule Optimization for Metro Systems Considering Minimum Adjustment Cost for Special Event Scenarios (TRBAM-25-03358) - A196
Ruicai Peng/Shenzhen Technology University, Wei Li/Shenzhen Technology University, Qin Luo/Shenzhen Technology University, Mo Yihong/Shenzhen Technology University
Innovative Method for Train Service Replanning in Urban Rail Transit System Considering Multiple Operational Modes (TRBAM-25-00545) - A190
Renjie Zhang/Southeast University, Min Yang/Southeast University, Hongwei Li/Southeast University, Rui Peng/Southeast University, Mingye Zhang/Southeast University
A Data-Driven Multi-modal Fusion Estimation Method for Urban Rail Fare Reconciliation (TRBAM-25-00790) - A191
Jiajun Liu/Southeast University, Ning Zhang/Southeast University, Zhenliang Ma/Southeast University, Zhendong Qian/Southeast University
Integrated Optimization of Urban Rail Transit Train Operation Plan (TRBAM-25-01188) - A181
Jiangfeng Hu/Beijing Jiaotong University, Fang Lu/Beijing Jiaotong University, Weiteng Zhou/Beijing Jiaotong University, Xuan Liu/Beijing Jiaotong University, Zhongming Jiang/Beijing Jiaotong University
Multi-Sided Fairness in the Multi-Objective Reduced Capacity Railway Problem (TRBAM-25-06471) - A192
Stefano Gioia/Swiss Federal Institute of Technology (ETH Zurich), Francesco Corman/Swiss Federal Institute of Technology (ETH Zurich), Valerio De Martinis/Swiss Federal Institute of Technology (ETH Zurich)
What Determines the Sustainable Development of Urban Rail Transit? Measuring and Releasing the Potential of Ridership (TRBAM-25-01712)
Zhuangbin Shi/Kunming University, Xiaoqing Liu/Kunming University, Qian Qian/Kunming University, Mingwei He/Kunming University, Yang Liu/Kunming University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Innovations and Challenges in Freight Transportation and Logistics: Global Perspectives and Emerging Technologies
Evangelos Kaisar, Florida Atlantic University, presiding
Prasanta Sahu, Birla Institute of Technology and Science, Pilani, presiding
Sushant Sharma, Texas A&M Transportation Institute, presiding
Kaveh Shabani, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Freight Transportation Planning and Logistics, Subcommittee on Freight Modeling

This session will delve into a diverse range of topics focused on freight transporation planning, evolution and optimization of freight transportation systems, integrating real-world case studies, innovative modeling approaches, and the application of cutting-edge technology. Each presentation will address key areas within freight transportation, logistics, and warehouse management, offering insights into policy impacts, economic assessments, and advancements in autonomous systems.

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A Two-Stage Order Batching Strategy for Pharmaceutical Logistics Warehouses with Goods-to-Person Systems (TRBAM-25-02153) - A221
Shan Lu/Beijing University of Posts and Telecommunications, Lumeng Xing/Beijing University of Posts and Telecommunications, Xun Weng/Beijing University of Posts and Telecommunications, Hongqiang Fan/Beijing University of Posts and Telecommunications, Jingtian Zhang/Beijing University of Posts and Telecommunications
Event-Based Mixed Integer Linear Programming Model for a Multi-Size Inland Container Transportation Problem (TRBAM-25-02036) - A222
Meiyan Chi/Beijing Jiaotong University, Xiaoning Zhu/Beijing Jiaotong University, Kris Braekers/Beijing Jiaotong University
Resilience Truck-Drone Collaborative Transportation under Hurricane Scenario (TRBAM-25-01598) - A223
Keyu Li/Shenzhen University, Xuxin Zhang/Shenzhen University, Haipeng Cui/Shenzhen University
What Drives Warehouse Prices? Estimating a Spatial Hedonic Warehouse Pricing Model in Belo Horizonte, Brazil (TRBAM-25-00389) - A224
Leise Kelli de Oliveira/Universidade Federal de Minas Gerais, Gracielle Gonçalves Ferreira Araújo/Universidade Federal de Minas Gerais, Rui Colaço/Universidade Federal de Minas Gerais, João de Abreu e Silva/Universidade Federal de Minas Gerais
An Innovative Intelligent Delivery Vehicles Routing Optimization Problem in Three-Dimensional Space (TRBAM-25-03252) - A225
Qi Hong/Southeast University, Shiyu Chen/Southeast University, Hongyi Zhao/Southeast University, Kai Huang/Southeast University, Zhiyuan Liu/Southeast University
How Much Will the Detour Cost? Impacts on Road Freight Transportation by the Francis Scott Key Bridge Collapse (TRBAM-25-03904) - A226
Yaobang Gong/University of Maryland, College Park, Kaitai Yang/University of Maryland, College Park, Yi Zhang/University of Maryland, College Park, Xianfeng Yang/University of Maryland, College Park, Di Yang/University of Maryland, College Park
Modeling Freight Trip Generation for Large Hospitals in Medellin, Colombia (TRBAM-25-04848) - A227
Basilio Restrepo Betancur/Universidad Nacional de Colombia, Andrea Álvarez-Montoya,/Universidad Nacional de Colombia, Carlos A. Gonzalez-Calderon/Universidad Nacional de Colombia, John Posada-Henao/Universidad Nacional de Colombia, Claudia Muñoz-Hoyos/Universidad Nacional de Colombia, Claudia Aldana-Ramirez/Universidad Nacional de Colombia
Integration and Application of a Freight Agent-Based Simulation Framework (TRBAM-25-05316) - A228
Abdelrahman Ismael/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Hyunseop Uhm/Argonne National Laboratory, Hui Shen/Argonne National Laboratory, Natalia Zuniga-Garcia/Argonne National Laboratory, Yantao Huang/Argonne National Laboratory, Taner Cokyasar/Argonne National Laboratory, Krishna Murthy Gurumurthy/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory, Monique Stinson/Argonne National Laboratory
Systemic Decarbonization of Road Freight Transport: A Comprehensive Total Cost of Ownership Model (TRBAM-25-00932) - A238
Ruixiao Sun/Oak Ridge National Laboratory, Vivek Sujan/Oak Ridge National Laboratory, Gurneesh Jatana/Oak Ridge National Laboratory
Bi-Level Priority Sorting for Automated Guided Vehicles Operations in Intelligent Warehouse System (TRBAM-25-00597) - A237
Xiaozhu Sun/Toronto Metropolitan University, Bilal Farooq/Toronto Metropolitan University
Relay Point-Enhanced Collaborative Truck Drone Routing and Scheduling Problem: Formulation and a Heuristic Approach (TRBAM-25-01241) - A236
Jianzhang WU/Southwest Jiaotong University, Zhaolin Zhang/Southwest Jiaotong University, Hongtai Yang/Southwest Jiaotong University, Guocong Zhai/Southwest Jiaotong University
A Storage Allocation Model for Pharmaceutical Logistics Warehouses with Kiva Robot Picking System (TRBAM-25-02152) - A220
Hongqiang Fan/Beijing University of Posts and Telecommunications, Yixin Xu/Beijing University of Posts and Telecommunications, Xun Weng/Beijing University of Posts and Telecommunications, Jingtian Zhang/Beijing University of Posts and Telecommunications
A Method for Forecasting Inland Waterway Freight Demand based on an Integrated Planning Model (TRBAM-25-05127) - A235
Muhammad Safdar/Wuhan University of Technology, Yujiatou, Ming Zhong/Wuhan University of Technology, Yujiatou, John Douglas Hunt/Wuhan University of Technology, Yujiatou
Balanced Truck Scheduling Strategy for Inter-Terminal Container Transportation Considering Request Rejection (TRBAM-25-05881) - A234
Yucheng Zhao/Tongji University, Yujing Zheng/Tongji University, Yuxiong Ji/Tongji University, Yu Shen/Tongji University, Yuchuan Du/Tongji University

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A Branch-and-Price Algorithm for the Location-Routing Problem with District-Delimited Demand (TRBAM-25-05871) - A233
Junyi Zhou/Tongji University, Chi Xie/Tongji University, Zhenzhen Zhang/Tongji University, Bo Zou/Tongji University
Establishment-Level Determinants of Freight Vehicle Ownership in Bangladesh: A Generalized Linear Modeling Approach (TRBAM-25-00865) - A232
Md. Amin Al Noor/Bangladesh University of Engineering and Technology, Nadia Mohammad/Bangladesh University of Engineering and Technology, Md. Shamsul Hoque/Bangladesh University of Engineering and Technology
Texas Connected Freight Corridors (TCFC) – From Design to Operation (TRBAM-25-00571) - A254
Eric Thorn/Southwest Research Institute
How Non-Urban Areas Impact the Last-Mile Delivery of Parcels: An Agent-Based Simulation Study (TRBAM-25-00416) - A231
Lasse Bienzeisler/Technische Universität Braunschweig, Oskar Wage/Technische Universität Braunschweig, Felix Petre/Technische Universität Braunschweig, Bernhard Friedrich/Technische Universität Braunschweig
Global Trends in Integrating ESG Principles within the Logistics Sector: A Keywords Trend Analysis Based on News Media Crawling (TRBAM-25-02394) - A230
Ji-Han Shin/Inha University, Gwanyong Oh/Inha University, Sungmin Kim/Inha University, Daejin Kim/Inha University
Modular Vehicle Scheduling of Rural Demand-Responsive Passenger and Freight Intermodal Transport with Mixed Pickup and Delivery Demand and Incompatibility (TRBAM-25-03816) - A240
Baojun He/Inner Mongolia University, Yueying Huo/Inner Mongolia University, Zhenying Yan/Inner Mongolia University, Ruoyu Wu/Inner Mongolia University
Federated Learning for Supply Chain Optimization in Logistics Operations without Sharing Source Data (TRBAM-25-00273) - A241
Klara Paardenkooper/Rotterdam University of Applied Sciences, Raymond Hoogendoorn/Rotterdam University of Applied Sciences
Freight Trip Generation Modeling: A Review (TRBAM-25-00617) - A255
Ali Asgari/University of Calgary, Pedram Akbari/University of Calgary, Merkebe Getachew Demissie/University of Calgary
Optimizing Vehicle Routing for Multi-Commodity Distribution with Route Redundancy (TRBAM-25-01883) - A242
Jie Liu/Kunming Institute of Technology, Ying Zhao/Kunming Institute of Technology, Paul Schonfeld/Kunming Institute of Technology, Mingwei He/Kunming Institute of Technology, Bo Du/Kunming Institute of Technology, Yue Xie/Kunming Institute of Technology
Exploring the Potential for Combining People and Goods Movements as a Rural Mobility as a Service Solution: A Visitor Use Case Study (TRBAM-25-02028) - A243
Carol Schweiger/University of Aberdeen, Jenny Milne/University of Aberdeen, Mark Beecroft/University of Aberdeen, Philip Greening/University of Aberdeen, Jyoti Mandhani/University of Aberdeen
Reducing The Transport Footprint of Pathology Logistics Through Shared-fleet Passenger and Freight Services: A Case Study on the Isle of Wight, UK (TRBAM-25-02315) - A244
Ismail Aydemir/University of Southampton, Tom Cherrett/University of Southampton, Antonio Martinez-Sykora/University of Southampton, Fraser McLeod/University of Southampton
An Optimization Framework for Scaled-up High-Speed Railway Express Special Train Operation Plan (TRBAM-25-02335) - A245
Dongsheng Zhao/Beijing Jiaotong University, Peng Zhao/Beijing Jiaotong University, Pengcheng Wen/Beijing Jiaotong University
MASS-GT: An Empirical Model for the Simulation of Freight Policies (P25-21102) - A246
Michiel De Bok/Delft University of Technology, Lorant Tavasszy/Delft University of Technology, Sebastiaan Thoen/Significance, Larissa Eggers/Significance, Ioanna Kourouniotti/Delft University of Technology
A Novel Compensation Scheme Considering the Acceptance Probability of Occasional Couriers in Stochastic Crowdsourced Last-Mile Delivery (P25-21103) - A247
Shangming Lu/Southeast University, Lin Cheng/Southeast University, Jinyu Zhang/Southeast University, Minlei Qian/Southeast University
A Synthesis of Agent-Based Urban Freight Simulation Models: State of the Art, Challenges and Future Directions (P25-21104) - A248
Aaron Michael Salang/Tokyo University of Marine Science and Technology (TUMST), Takanori Sakai/Tokyo University of Marine Science and Technology (TUMST), Tetsuro Hyodo/Tokyo University of Marine Science and Technology (TUMST), Joseph Chow/New York University
Strengthening Freight Policy Through Analysis of Global Economic Impacts: Focusing on South Korea Case (P25-21105) - A250
Woowon Kim/Hanyang University, Ansan, Donghyeok Park/Hanyang University, Juneyoung Park/Hanyang University, Ansan, Seung-oh Son/Hanyang University, Gunwoo Lee/Hanyang University

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Autonomous Delivery Vehicles Acceptance: The Moderating Role of Perceived Risk of Theft (P25-21106) - A251
Arsalan Esmaili/University of Washington, Seattle, Kayvan Aghabayk/University of Tehran, Sina Rejali/QUT: Queensland University of Technology, Amin Mohammadi/University of Tabriz, Amelia Regan/University of Washington, Seattle
An Integrated Timetable Optimization and Automatic Guided Vehicle Dispatching Method in Dynamic Smart Manufacturing Environment (P25-21107) - A252
Jiarong Yao/Nanyang Technological University, Chaopeng Tan/Delft University of Technology, Yiming Xu/University of Texas, Austin
Conflict-Free Automated Guided Vehicle Path Planning Design Considering Goods Types (P25-21110) - A253
Xiaolin Tan/Southwest Jiaotong University, Shixiang Wan/Southwest Jiaotong University, Feiyu Song/Sichuan Railway College, Hhongyu He/Southwest Jiaotong University

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Current Issues in International Trade and Transportation
Olivia (Ruiyue) Guo, Atlas Technical Consultants Inc, presiding
Sponsored By Standing Committee on International Trade and Transportation

This session is focused on showcasing ongoing research related to international trade and transportation.

Resilience of Supply Chains during the COVID-19 Pandemic: An Empirical Analysis for the Road Infrastructure (P25-20964) - A256
Claudia Paloma Salas Esparza/FOA Consultores
A Multi-Objective Optimization Model for Ship Schedule Recovery under Emission Control and Voluntary Ship Speed Reduction Policies (P25-20965) - A257
Maxim A Dulebenets/FAMU-FSU College of Engineering
Export-Oriented Industry Clusters, Trade, and Transportation in Appalachia (P25-20966) - A258
Daniel Hodge/Cambridge Econometrics
By Rail for Freight from China to Europe, 2024 Edition (P25-20967) - A267
Gabor Debreczeni/Steer
Who Favors "Green" Shipping? (P25-20970) - A266
Amy Moore/Oak Ridge National Laboratory
Decomposing U.S. Value Chain to Understand Country Risks of Imports (P25-20971) - A262
Prachanda Tiwari/EBP
Evaluating the Impact of Large-Scale Trade Port Disruptions (P25-20972) - A261
Sharada Vadali/The MITRE Corporation
Brief Description of the Caspian Region (TRBAM-25-03987) - A260
Ariel Savarese/Empyria STM

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Research in Hazardous Materials Transportation
Monica Blaney, Transport Canada, presiding
Ziqi Song, University at Buffalo, SUNY, presiding
Sponsored By Standing Committee on Transportation of Hazardous Materials

Environmental Risk Analysis of Hazardous Materials Transportation by Class I Railroad: A Case Study in Great Northern Railroad Corridor (TRBAM-25-00490) - A280
Heshani Manaweera Wickramage/North Dakota State University, Pan Lu/North Dakota State University, Peter Oduor/North Dakota State University
Inspecting Concealed Hazardous Materials in Container Bookings: A Machine-learning Approach (TRBAM-25-00630) - A281
Xiuyu Shen/Southeast University, Jingxu Chen/Southeast University

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Enhanced Forward Collision Warning System for Hazmat Trucks: Adapting to Driver Behavior and Risk Levels (TRBAM-25-01576) - A282
Yichang Shao/Southeast University, Hui Bi/Southeast University, Hao Wu/Southeast University, Zhirui Ye/Southeast University
Layout planning of emergency rescue sites for road transport of dangerous goods (TRBAM-25-02181) - A283
Shasha Wang/Chang'an University, Xiaoyan Shen/Chang'an University, Danlei Xiao/Chang'an University, Pin Wang/Chang'an University, Jiazhen Hu/Chang'an University
A Real-Time Hazardous Material Truck Management System with Extended V2X Cooperative Messages (TRBAM-25-03660) - A284
Lorenzo Italiano/Politecnico di Milano, Mattia Brambilla/Politecnico di Milano, Marco Ponti/Politecnico di Milano, Fabio Borghetti/Politecnico di Milano, Giovanni Megna/Politecnico di Milano, Diego Franceschini/Politecnico di Milano, Francesco Custode/Politecnico di Milano, Valerio Liga/Politecnico di Milano, Benedetto Carambia/Politecnico di Milano, Luca Studer/Politecnico di Milano, Monica Nicoli/Politecnico di Milano
Mitigation Strategies for High Severity Derailments with Hazardous Materials (TRBAM-25-04004) - A285
Kirkpatrick Steven/Applied Research Associates, Inc.

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Monday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Recent Advances in Intermodal Transportation Research
Nathan Huynh, University of Nebraska, Lincoln, presiding
Sponsored By Standing Committee on Intermodal Freight Transport

A Two-Stage Stochastic Model for Road-Rail Intermodal Freight Transport with Carbon Emission Reduction (TRBAM-25-04558)
Jeremiah Gbadegoye/University of Tennessee, Xueping Li/University of Tennessee, Mustafa Camur/University of Tennessee, Maedeh Rahimitouranposhti/University of Tennessee
A REINFORCEMENT LEARNING APPROACH FOR OPTIMAL COALITION FORMATION AND PRICING IN PORT MARKETS (TRBAM-25-04625)
Dimitrios Papadakis/University of Cyprus, Loukas Dimitriou/University of Cyprus, Filippos Alogdianakis/University of Cyprus

2118 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 151B
Data Analytics for Optimizing Rural Transportation Performance
David Orr, Cornell Local Roads Program, presiding
Sponsored By Rural Transportation Issues Coordinating Council, Standing Committee on Statewide/National Transportation Data and Information Management, Joint Subcommittee on Travel Time Speed and Reliability (with ACP70), Standing Committee on Low-Volume Roads, Standing Committee on Rural, Intercity Bus, and Specialized Transportation, Standing Committee on Agriculture and Food Transportation

In a world of data-driven transportation decisions, how do rural transportation agencies and organizations stay with the state of the practice? There is often less data in rural areas, reliability issues, and sometimes fewer suitable resources to leverage the data into action. This session will explore four complementary perspectives: safety data, regional systems, freight, and transit.

The Rural Continuum: An Exploration of Safety Data through an Safe System Lens (P25-20570)
Hillary Isebrands/Federal Highway Administration (FHWA), Derek Troyer/Federal Highway Administration (FHWA)
Using Big Data for Rural Transportation through the Regional Integrated Transportation Information System (RITIS) (P25-20573)
Rick Ayers/University of Maryland
How Vermont is Using Big Transportation Data (P25-20574)
Zoe Neaderland/Vermont Agency of Transportation
Using Big Data to Optimize Rural Freight Transportation Networks (P25-20575)
Mark Berndt/SRF Consulting Group, Inc.

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Translating Freight Data and Modeling into Results (P25-20576)
Jarrod Walker/Nebraska Department of Transportation
N-CATT Data Initiatives (P25-20577)
Andrew Carpenter/Community Transportation Association of America

2119

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 102B
Addressing Socioeconomic and Racial Disparities in Urban Pedestrian Environments
Kevin Manaugh, McGill University, presiding
Sponsored By Standing Committee on Pedestrians

This session will examine a variety of issues related to equity in pedestrian research.

Socioeconomic Variations in Walking Rates in the United States: Recent Evidence from the 2022 National Household Travel Survey (TRBAM-25-00852)
Ralph Buehler/Virginia Polytechnic Institute and State University, John Pucher/Virginia Polytechnic Institute and State University
Examining Racial Disparities in Fatal and Severe Pedestrian Crashes at Midblock Locations (TRBAM-25-00399)
Rohit Chakraborty/Texas State University, Ahmed Hossain/Texas State University, Subasish Das/Texas State University, Syed Javed/Texas State University, Panick Kalambay/Texas State University
Accessibility vs Walkability: Exploring 'Complete' Access to Care Destinations (TRBAM-25-03952)
Angel Emmanuel Hernandez Cruz/McMaster University, Isla Leadbetter/McMaster University, Léa Ravensbergen/McMaster University, Anastasia Soukhov/McMaster University
Urban Intersections and the Analysis of Pedestrian Injuries with Built-Environment and Equity Considerations (TRBAM-25-05383)
Jason Anderson/Portland State University, Josh Roll/Portland State University, Nathan McNeil/Portland State University
The Role of Pedestrian Safety Attitudes in the Relationship between Crash Risk Factors and Walking (TRBAM-25-03170)
Kyu Ri Kim/Portland State University, Jennifer Dill/Portland State University

2120

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon C
State of Intelligent Transportation Systems: Strategic Directions and Industry Priorities
Matthew Junak, HNTB, presiding
Sponsored By Standing Committee on Intelligent Transportation Systems

This session convenes influential ITS government and industry leaders from around the globe to share their perspective on the strategic directions and priorities of their agencies, organizations and companies. The session provides the opportunity for executives to highlight the strategic direction, priorities, and unique initiatives to enable ITS to improve safety, mobility, and experience of travelers on the surface transportation system. We have five amazing speakers to provide these perspectives and insights: -Brian Cronin Director, U.S. DOT ITS Joint Program Office -Russell McMurry, Commissioner, Georgia DOT -Laura Chace, President and CEO, ITS America -Dr. Angelos Amditis, Chair, ERTICO

Moderator of Session (P25-20752)
Matthew Junak/HNTB
U.S. DOT ITS Joint Program Office (P25-20124)
Brian Cronin/Federal Highway Administration (FHWA)
Georgia DOT (P25-21217)
Russell McMurry/Georgia Department of Transportation
ITS America (P25-20125)
Laura Chace/ITS America
ERTICO (P25-20126)
Angelos Amditis/ERTICO-ITS Europe

2121

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 146A

Emerging Technology for Signing and Marking Detection and Assessment

Chengbo Ai, University of Massachusetts, Amherst, presiding

Sponsored By Standing Committee on Traffic Control Devices

This session focuses on innovative methodologies for assessing and enhancing the visibility of traffic signs and pavement markings using advanced technologies. Presentations will showcase deep learning applications in automatic traffic sign assessment, geometric-aware 3D object detection, and LiDAR-based approaches for estimating retroreflectivity, paving the way for improved road safety and efficient traffic management.

An Automatic Traffic Sign Assessment System Using Deep Learning on Road Log Videos (TRBAM-25-04585)

Shucheng Zhang/University of Washington, Chenxi Liu/University of Washington, Nutvara Jantarathaneewat/University of Washington, Yinhai Wang/University of Washington

Geometric-Aware 3D Object Detection for Traffic Signs (TRBAM-25-05979)

Ardavan Sherafat/California State Polytechnic University, Pomona, Hao Ji/California State Polytechnic University, Pomona, Yongping Zhang/California State Polytechnic University, Pomona, Wen Cheng/California State Polytechnic University, Pomona, Omar Mora/California State Polytechnic University, Pomona, Chloe Cheng/California State Polytechnic University, Pomona, Jayden Chen/California State Polytechnic University, Pomona

Developing a Methodology to Estimate the Retroreflectivity of Longitudinal Pavement Markings using LiDAR (TRBAM-25-04659)

Abbas Mohammadi/University of Utah, Juan Medina/University of Utah, Abbas Rashidi/University of Utah

A Novel Methodological Framework for Assessing Traffic Sign Retroreflectivity Using Lidar Data (TRBAM-25-05349)

Joshua Kofi Asamoah/North Dakota State University, Blessing Agyei Kyem/North Dakota State University, Armstrong Aboah/North Dakota State University, Kian Ansarinejad/North Dakota State University

2122

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon A

Emerging Data, Approaches, or Practices for Effective Model Calibration and Validation

Brian Park, University of Virginia, presiding

Sponsored By Standing Committee on Traffic Simulation

Simulation model calibration and validation are a crucial part of effective simulation.

Traffic Analysis Toolbox (P25-20865)

David Hale/Leidos, Inc., James Colyar/Federal Highway Administration (FHWA)

A One-stop Automatic Calibration of Simulation Platform for Automated Vehicle Evaluation (TRBAM-25-03386)

Junqi Li/Tongji University, Lianhua An/Tongji University, Jia Hu/Tongji University

Automatic Calibration of Mesoscopic Traffic Simulation Using Vehicle Trajectory Data (TRBAM-25-03936)

Ran Sun/University of Michigan, Zihao Wang/University of Michigan, Xingmin Wang/University of Michigan, Henry Liu/University of Michigan

Graph Neural Network Based Clustering for Enhancing Traffic Pattern Identification in Traffic Simulation Calibration and Validation (TRBAM-25-05836)

Di Sha/New York University, Zilin Bian/New York University, Fan Zuo/New York University, Kaan Ozbay/New York University, Jingqin Gao/New York University, Yu Tang/New York University

2123

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon B

Creating a Safer System: A Lectern-Poster Session

Frank Gross, VHB, presiding

Sponsored By Standing Committee on Transportation Safety Management Systems

This "hybrid" session will showcase several papers addressing components of safer system. Each author will present an overview of their research in a rapid-fire, 5-minute pitch followed by one-on-one discussions with the authors in front of their poster. See the online program at MyTRB.com for details.

Supporting the Safe System Approach Decision-Making Through Crash Sequence Analysis (TRBAM-25-04148)
Cesar Andriola/University of Wisconsin, Madison, Madhav Chitturi/University of Wisconsin, Madison, Andrea Bill/University of Wisconsin, Madison, David Noyce/University of Wisconsin, Madison

Evaluation of Traffic Safety Improvement Effect Based on "Shanghai Traffic Safety Improvement Program" (TRBAM-25-05833)
Xuesong Wang/Tongji University, Yixiao Lei/Tongji University, Xueyu Zhang/Tongji University, Lulu Zhou/Tongji University

A Surrogate Safety Measure at Non-signalized Intersections Based on Probability Trajectory Prediction (TRBAM-25-04801)
Tengfeng Lin/Korea Advanced Institute of Science and Technology, Zhixiong Jin/Korea Advanced Institute of Science and Technology, Hwasoo Yeo/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology

Safety-Oriented Route Guidance System Considering the Impact of Driving Behaviors (TRBAM-25-01709)
Tianren Zhang/Tongji University, Yajie Zou/Tongji University, Yubin Chen/Tongji University, Yuanchang Xie/Tongji University

The Benefits of High-speed Rail on Reducing Traffic Accidents: Evidence from China (TRBAM-25-00232)
Feng Liu/Southeast University, Meina Zheng/Southeast University, Meichang Wang/Southeast University, Chen Fang/Southeast University

Impact of the 20mph Speed Limit in the UK: What Does the Evidence Show? (TRBAM-25-03724)
Mohammed Quddus/Imperial College London, Athanasios Theofilatos/Imperial College London, Mingjie Feng/Imperial College London, Rune Elvik/Imperial College London

A Comparison of Road Crash Reporting in High-, Middle-, and Low-Income Countries: Global Perspectives (TRBAM-25-03857)
Jeffrey Bullard/Danmarks Tekniske Universitet, Steven Jones/Danmarks Tekniske Universitet, Kofi Adanu/Danmarks Tekniske Universitet

2124

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 103A

Leveraging Emerging Technologies for Road User Safety

Kwaku Boakye, CDM Smith, presiding

Sponsored By Standing Committee on Occupant Protection

This session features presentations that address approaches to use emerging technologies and tools such as artificial, intelligence machine learning, and neural networks to examine / evaluate factors related to road user safety. Specifically, the session focuses on the application of such approaches in the context of helmet usage by E-bike riders and seat belt usage by occupants of motor vehicles.

Analyzing Predictive Factors Influencing Helmet-Wearing Policies Among E-Bike Riders (TRBAM-25-03433)
Shishay Gebru/Tongji University, Xuesong Wang/Tongji University, Huixin Zhang/Tongji University, Andrew Morris/Tongji University

UAV-based Automatic System for Seatbelt Compliance Detection at Stop Controlled Intersections (TRBAM-25-05461)
Gideon Owusu/Iowa State University, Ashutosh Dumka/Iowa State University, Kojo Adugyamfi/Iowa State University, Enoch Asante/Iowa State University, Skylar Knickerbocker/Iowa State University, Neal Hawkins/Iowa State University, Anuj Sharma/Iowa State University

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Impact of Safety Awareness Initiatives on Helmet Adoption Among E-bike Riders in Guangdong Province: An XGBoost and Explainable Machine Learning Approach. (TRBAM-25-03435)
Shishay Gebru/Tongji University, Xuesong Wang/Tongji University, Chunting Nie/Tongji University, Bangyu Wang/Tongji University

2125

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 150B
Harnessing Artificial Intelligence and Data Analytics for Smarter Transportation Solutions
Aly Tawfik, California State University, Fresno, presiding
Peggi Knight, Iowa Department of Transportation, presiding
Sponsored By Standing Committee on Statewide/National Transportation Data and Information Management

An insightful session where industry experts and researchers discuss innovative approaches to leveraging AI, data analytics, and automation in transportation. This session will delve into the transformative power of AI and data-driven solutions in the transportation sector, with cases from both the public and private sectors. This session highlights the cutting-edge tools and methods revolutionizing transportation data management and decision-making. Discover the future of transportation data through these forward-thinking projects.

ITD's Journey Toward Local Road AADT Estimation (P25-20711)
Vicky Calderon/Idaho Transportation Department
"ChatSUMO" Large Language Models (LLMs) for Automating SUMO Traffic Simulation (P25-20713)
Ruimin Ke/Rensselaer Polytechnic Institute (RPI)
AI and Network Analysis for Arizona DOT (P25-20714)
Sage Donaldson/Arizona Department of Transportation, Sara Thompson/Arizona Department of Transportation
Integrating AI and Computer Vision: A Hybrid Approach to Pavement Condition Assessment (P25-20710)
Omar Elbagalati/Michelin Mobility Intelligence

2126

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 150A
Visualization of Complex Transportation Challenges
Charles Lattimer, University of Maryland, presiding
Sponsored By Standing Committee on Visualization in Transportation

In this lectern session, presenters will discuss three very different ways that transportation visualization techniques have been used to improve the understanding of complex transportation challenges. First, we will explore visualization techniques to improve the understanding of travel patterns across 486 urbanized areas in the United States. Then, we will examine a dashboard that visualizes greenhouse gas emissions from vehicles at the state and county level. Finally, we will examine the adoption of BIM for Infrastructure across the United States.

Spatial Order of Regional Travel Demand: A Study of 486 Urbanized Areas in the United States (TRBAM-25-04569)
Javier Pena-Bastidas/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
Driving Climate Action with the VISUALIZER: Development and Applications of a Dashboard for Transportation Emissions Data and Visualization (TRBAM-25-01250)
Timothy Fraser/Cornell University, H. Oliver Gao/Cornell University
Toward BIM for Infrastructure (BIM4I) Implementation in State Departments of Transportation: Mapping of Practices and Lessons Learned (TRBAM-25-04243)
Maria Calahorra-Jimenez/California State University, Fresno, Tariq Shehab/California State University, Fresno, Nigel Blampied/California State University, Fresno, Elhami Nasr/California State University, Fresno

2127 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 151A

Network Modeling Problems for Commercial Fleets

Xiaozheng (Sean) He, Rensselaer Polytechnic Institute (RPI), presiding

Sponsored By Standing Committee on Transportation Network Modeling

This session explores innovative solutions for commercial fleets in urban transportation and logistics. Presentations will cover advanced optimization models and machine learning algorithms aimed at improving scalability and efficiency in urban grocery delivery, sidewalk delivery robot systems, and the dial-a-ride problem. The session also delves into the friction effect on transit dwell times and hypercongestion, sensitivity analysis of feature importance in vehicle routing, and the use of unmanned aerial vehicles to enhance resilience in urban emergency transport.

Optimizing Heterogeneous Capacitated Vehicle Routing with Linformer and Multi-Relationship Decoding: A Deep Reinforcement Learning Approach (TRBAM-25-02160)

Dan Liu/Kean University, Evangelos Kaisar/Kean University

Two-Stage Stochastic Fleet and Battery Sizing with Routing Optimization for Sidewalk Delivery Robots (TRBAM-25-04576)

Yuchen Du/Purdue University, Hai Yang/Purdue University, Joseph Chow/Purdue University, Tho Le/Purdue University

Neural BPC: Enhancing Branch-and-Price Algorithm with Graph Neural Cuts for the Human-Centered Dial-a-Ride Problems (TRBAM-25-02054)

Shuocheng Guo/Rice University, Iman Dayarian/Rice University, Vaneet Aggarwal/Rice University, Xinwu Qian/Rice University

A Bathtub Model of Transit Congestion (TRBAM-25-04699)

Lewis Lehe/University of Illinois, Urbana-Champaign, Ayush Pandey/University of Illinois, Urbana-Champaign

Toward a Robust Guidance for Metaheuristics: Do Certain Features Significantly Influence the Vehicle Routing Problem? (TRBAM-25-02261)

Bachtiar Herdianto/IMT Atlantique, Romain Billot/IMT Atlantique, Flavien Lucas/IMT Atlantique, Marc Sevaux/IMT Atlantique

Dynamic Resilience of UAV-Supported Urban Emergency Delivery Networks: Disruption and Reconstruction (TRBAM-25-02149)

Jinhan Peng/South China University of Technology, Peiqun Lin/South China University of Technology, Jingyi Mao/South China University of Technology, Qiantong Li/South China University of Technology

2128

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 152B

Workforce Retention Actions to Take Now

Masoud Ghodrat Abadi, California State University, Sacramento, presiding

Sponsored By Standing Committee on Workforce Development and Organizational Excellence, Standing Committee on Research Innovation Implementation Management, Subcommittee on Coordination and Collaboration, Standing Committee on Information and Knowledge Management

"If one more person retires or walks out the door, I don't know how we are going to get all of this work completed!" Feeling the frustration of losing team members to retirement or other employers? This session is for you. Hear from three different perspectives on how to shore up your workforce retention at your agency. Learn from the various transportation modes on how they are actively working to keep their team members for hopefully years to come.

Strategies to Improve Morale and Retention in Transportation Management Centers (TRBAM-25-00200)

Noah Goodall/Virginia Department of Transportation

Exploring the Bus Operators' Retention (TRBAM-25-02191)

Roya Etminani-Ghasrodashti/Texas A&M Transportation Institute, Michael Walk/Texas A&M Transportation Institute, Paul Anderson/Texas A&M Transportation Institute, Ipek Sener/Texas A&M Transportation Institute

Exploring Workforce Recruitment and Retention in Ohio's Department of Transportation (TRBAM-25-02873)

Philip Balyagati/Cleveland State University, Abdul Ngereza/Cleveland State University, Ibrahim Ibrahim/Cleveland State University, Josiah Owusu-Danquah/Cleveland State University, Emmanuel Kidando/Cleveland State University, Lutful Khan/Cleveland State University

2129 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 152A

AI-nnovating Engagement: Shaping Public Involvement Strategies

Stephen De Witte, Kentucky Transportation Cabinet, presiding

Sponsored By Standing Committee on Public Engagement and Communications

Advancements in Artificial Intelligence (AI) applications have the potential to change the way transportation agencies engage the public and create communications. This panel features experts who are exploring the current trends in AI use among transportation agencies. Speakers will delve into the development and refinement of responsible use frameworks to ensure ethical application of AI, and address challenges and legal considerations in its current usage. The session will also feature a case study from the Georgia Department of Transportation (GDOT), highlighting the practical implications of AI in public involvement processes. Participants will gain insights into the future of AI-driven communication strategies in transportation.

Development and Refinement of Responsible Use Frameworks (P25-20241)

Jamille Robbins/North Carolina Department of Transportation

Challenges and Legal Considerations (P25-20336)

Kelly West/Accenture

Current Trends in AI Use Among Transportation Agencies (P25-20337)

Nicole Moon/HDR

Artificial Intelligence (AI) Engage: A Case Study in Revolutionizing Public Involvement with Intelligent Interaction (TRBAM-25-01363)

Lauren Schramm/Pond and Company, Eric Duff/Pond and Company, DAVID BORCHARDT/Pond and Company, Amber Phillips/Pond and Company, Glenn Martin/Pond and Company, Alexa Banke/Pond and Company

Future of AI-Driven Communication Strategies (P25-20339)

Jamille Robbins/North Carolina Department of Transportation, Kelly West/Accenture, Nicole Moon/HDR, Lauren Schramm/Pond and Company

2130

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 202B

The Evolving Legal Landscape of Minority Business Programs

Scheryl Portee, Federal Transit Administration (FTA), presiding

Sponsored By Standing Committee on Contracting Equity

This session will review recent court rulings and lawsuits involving challenges to minority business programs and race-conscious policies aimed at promoting diversity and inclusion in contracting and entrepreneurship. Current legal challenges aim to eliminate rebuttable presumptions in determining eligibility for these programs, as violations of equal protection principles and discrimination against non-minority individuals and businesses. Discussion will also focus on the USDOT DBE Program recent changes and guidance as well as the significant impact these legal challenges pose on eligibility criteria, application processes and overall implementation of minority business programs.

Panel Member (P25-20906)

Marc Pentino/Office of the Secretary of Transportation (OST), Colette Holt/Colette Holt & Associates , Lakwame Anyane-Yeboa/Office of the Secretary of Transportation (OST), Keith Wiener/Holland and Knight, LLP

2131

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 101

Research Advancements in Alternative Project Delivery

Ghada Gad, California State Polytechnic University, Pomona, presiding

Sponsored By Standing Committee on Project Delivery Methods, Standing Committee on Contract Law

Alternative Contract Delivery such as Design-Build, Construction Manager / General Contractor (CMGC), and P3 offer opportunities to deliver projects faster and with more innovations. This lectern will highlight recent research in alternative delivery. This includes the impact of low bid on transportation infrastructure post COVID-19, enabling legislation for California transportation agencies, programmatic approaches, quality management, and post construction evaluations.

Alternative Project Delivery Methods' Enabling Legislation Trends for California Transportation Agencies (TRBAM-25-05510)

Alexus Leothacue-Liauburindr/California State Polytechnic University, Pomona, Chaimae Nacir/California State Polytechnic University, Pomona, Ronald Shrestha/California State Polytechnic University, Pomona, Ghada Gad/California State Polytechnic University, Pomona, Maria Calahorra-Jimenez/California State Polytechnic University, Pomona

Systematic Analysis of Quality Management for Highway Projects Delivered Using Alternative Contracting Methods (TRBAM-25-05441)

Nhien Le/University of Kansas, Dan Tran/University of Kansas

Exploring Programmatic Approaches to Alternative Contracting Methods for Highway Design and Construction Projects (TRBAM-25-04365)

Nhien Le/University of Kansas, Dan Tran/University of Kansas, Christofer Harper/University of Kansas, Roy Sturgill/University of Kansas

Examining Post-Construction Evaluation for Highway Projects Delivered Using Alternative Contracting Methods (TRBAM-25-02568)

Phuong Nguyen/South Dakota State University, Christofer Harper/South Dakota State University, Roy Sturgill/South Dakota State University, Dan Tran/South Dakota State University

Analyzing Process of Low Bid Deviations in Transportation Infrastructure Projects Post COVID-19 (TRBAM-25-02260)

Minsoo Baek/Roger Williams University, Jung Hyun Lee/Roger Williams University

2132

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 102A

Pavement Management on Low-Volume Roads

Lance Malburg, NACE / Dickinson County Road Commission, presiding

Rosemarie Spano, U.S. Department of the Interior (DOI), presiding

Sponsored By Standing Committee on Low-Volume Roads, Rural Transportation Issues Coordinating Council, Standing Committee on Design and Rehabilitation of Asphalt Pavements, International Coordinating Council

This session will present research on international pavement management methods and materials used on low volume roads.

Material Characterisation and Design of Alternative Pavement Surfacing for Steep Hilly Sections of Low-Volume Roads in Ghana (TRBAM-25-05072)

Joseph Anochie-Boateng/University of Pretoria, Edmund Debrah/University of Pretoria, Gculisile Mvelase/University of Pretoria, Paulina Agyekum/University of Pretoria, Daniel Asenso-Gyambibi/University of Pretoria

In Search of an Optimal Index for the Evaluation and Management of Unpaved Roads in Southern Ecuador: A Case Study in Loja. (TRBAM-25-03925)

Javier Vasquez-Monteros/Universidad Técnica Particular de Loja, Paúl Fernando Cordova Faggioni/Universidad Técnica Particular de Loja, Tatiana Sidlik/Universidad Técnica Particular de Loja

Viability of Full Depth Reclamation Approach Considering Cost and Environmental Impacts Compared to Conventional Reconstruction Approach for Low Volume Bituminous Roads (TRBAM-25-03349)

Abhishek Thakur/Indian Institute of Technology, Kanpur, Prabin Ashish/Indian Institute of Technology, Kanpur, Sudhir Misra/Indian Institute of Technology, Kanpur

2133

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 207A

Roundabouts and Innovative Intersections: Safe Movement Within Planned Conflict Points

Amanda Austin, Texas Department of Transportation, presiding

Sponsored By Standing Committee on Roundabouts and other Intersection Design and Control Strategies

Intersections are planned conflict points, however, with well thought out planning, analysis, and design those planned conflict points can produce safe and efficient movements of all users. Join us for an invigorating dive into alternative analysis, capacity performance, and safety of intersections.

Planning-Level Screening of Intersection Alternatives for Intersection Control Evaluation (TRBAM-25-02934)

Jonathan Reid/Arcadis, Nagui Rouphail/Arcadis, Bastian Schroeder/Arcadis

Impact of Exit Capacity on Traffic Flow at a Single-Lane Roundabout (TRBAM-25-01143)

Werner Brilon/Ruhr-Universitat, Bochum, Ning Wu/Ruhr-Universitat, Bochum, Julian Schmitz/Ruhr-Universitat, Bochum

Large Scale Evaluation of Normalized Hard-braking Events Derived from Connected Vehicle Trajectory Data at Signalized Intersections, Roundabouts, and All-way Stops (TRBAM-25-02310)

Vihaan Vajpayee/Iteris Inc., Enrique Saldivar-Carranza/Iteris Inc., Rahul Suryakant Sakhare/Iteris Inc., Darcy Bullock/Iteris Inc.

Queue Length Before and After Conversion of a Traditional Intersection into an Alternative Intersection (TRBAM-25-02745)

Kay Fitzpatrick/Texas A&M Transportation Institute, Karen Dixon/Texas A&M Transportation Institute, Sayedeh Maryam Mousavi/Texas A&M Transportation Institute

2134

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 204AB

Pile Axial Capacity, Pile Lateral Capacity, and Scour

Sharid Amiri, California Department of Transportation, presiding

Sponsored By Standing Committee on Foundations of Bridges and Other Structures

This lectern session covers the latest on the axial capacity of piles and development of load transfer curves, the lateral capacity of pile groups, effect of scour on pile capacity and innovative technologies to determine scour

Effect of General Scour on the Axial Capacity of Piles Driven in Mixed Soil Layers Considering Pile Installation (TRBAM-25-02708)

Murad Abu-Farsakh/Louisiana Department of Transportation and Development, Isam Khasib/Louisiana Department of Transportation and Development, George Voyiadjis/Louisiana Department of Transportation and Development

Efficacy of Marine Electrical Resistivity Surveys to Determine Maximum Scour Depth and Scour Infill (TRBAM-25-04534)

Andrew Gombac/Texas State University, Stacey Kulesza/Texas State University, Abdurrahman Almikati/Texas State University

DEVELOPMENT OF AXIAL LOAD TRANSFER CURVES OF PRESTRESSED CONCRETE PILES IN CLAYEY SOIL (TRBAM-25-00090)

Md Nafiul Haque/Louisiana Department of Transportation and Development, Murad Abu-Farsakh/Louisiana Department of Transportation and Development

Effect of Pile-Soil Modulus Ratio on Lateral Capacity of Model Pile Group (TRBAM-25-02558)

Sercan Akbaşak/Bogazici Universitesi, Gökhan Baykal/Bogazici Universitesi

2135

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 209AB

Innovative Approaches to Sustainable Asphalt Mixtures

David Wang, North Carolina A&T State University, presiding

Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design

This session delves into the latest research efforts aimed at enhancing the sustainability and performance of asphalt mixtures. The focus will be on utilizing high reclaimed asphalt pavement (RAP) content, recycling agents, and warm mix asphalt (WMA) technologies within the framework of Balanced Mix Design (BMD).

Balanced Mix Design as an Equalizer to Assess the Environmental Performance of Asphalt Mixtures (TRBAM-25-04824)

Rohith Reddy Vangala/National Center for Asphalt Technology (NCAT), Surendra Chowdari Gatiganti/National Center for Asphalt Technology (NCAT), Benjamin Bowers/National Center for Asphalt Technology (NCAT), Tiana Wright/National Center for Asphalt Technology (NCAT)

Performance and Aging Characteristics of Asphalt Binders and Asphalt Mixtures Incorporating High RAP and a Recycling Agent (TRBAM-25-00332)

Osama Altarawneh/Texas A&M University, Eyad Masad/Texas A&M University, Amy Epps Martin/Texas A&M University, Edith Arambula-Mercado/Texas A&M University, Aaron Leavitt/Texas A&M University

Cross-Scale Aging Dynamics of Recycled Asphalt Binder Blends and Mixtures Containing Recycling Agents (TRBAM-25-04075)

Saqib Gulzar/Colorado State University, Pueblo, Jaime Preciado/Colorado State University, Pueblo, Andrew Fried/Colorado State University, Pueblo, Cassie Castorena/Colorado State University, Pueblo, Benjamin Underwood/Colorado State University, Pueblo, Jhony Habbouche/Colorado State University, Pueblo, Ilker Boz/Colorado State University, Pueblo

Enhancing Thermal Cracking Resistance in Asphalt: Evaluating RAP and WMA for Balanced Mix Design Implementation at Local Agency Level (TRBAM-25-04782)

Julissa Larios Rodriguez/University of Nevada, Reno, Dario Batioja-Alvarez/University of Nevada, Reno, Elie Hajj/University of Nevada, Reno, Adam Hand/University of Nevada, Reno, Peter Sebaaly/University of Nevada, Reno, Scott Gibson/University of Nevada, Reno

2136

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 201

Research and Novel Technologies Related to Concrete Materials

Anton Schindler, Auburn University, presiding

Gabriel Arce, Virginia Department of Transportation, presiding

Sponsored By Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete

Presenters will cover current research and novel technologies related to concrete materials

Effects of Time and Temperature on the Flow Properties of Cold-Weather Self-Consolidating Concrete (TRBAM-25-01403)

Aljhon Morana/Rowan University, Shahriar Abubakri/Rowan University, Gilson Lomboy/Rowan University, Danielle Kennedy/Rowan University, Benjamin Watts/Rowan University, Seth Wagner/Rowan University

Utilizing a Particle-packing Approach for Sustainable and Low-shrinkage Ultra High-Performance Concrete (UHPC). (TRBAM-25-04421)

Bayezid Baten/University of Illinois, Urbana-Champaign, Muhammad Ayyan Iqbal/University of Illinois, Urbana-Champaign, Nishant Garg/University of Illinois, Urbana-Champaign

Crack Tracking and Fatigue Resistance in Fiber Reinforced Cement Treated Aggregates by Parallel Bond Damage Modeling (TRBAM-25-00651)

Zhangyi Gu/Southeast University, Li'an Shen/Southeast University, Hui Li/Southeast University, Yuqing Zhang/Southeast University

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Embedded Sensor System to Measure Concrete Formation Factor in Cylindrical Samples (TRBAM-25-03907)
Amir Alarab/Callentis Consulting Group, Kostiantyn Vasylevskyi/Callentis Consulting Group, Farshad Rajabipour/Callentis Consulting Group, Chiranjeevi Reddy Kamasani/Callentis Consulting Group, Robert Spragg/Callentis Consulting Group, Nima Kargah-Ostadi/Callentis Consulting Group
Workability Tests for UHPC Overlay Mixture Development and Evaluation (TRBAM-25-05191)
Akbota Aitbayeva/University of Nebraska, Lincoln, Mina Gerges/University of Nebraska, Lincoln, George Morcous/University of Nebraska, Lincoln, Jiong Hu/University of Nebraska, Lincoln

2137

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 202A
From Top to Bottom: The Impact of Heavy Truck Loads and Flexible Pavement Foundations
Leslie Myers, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Design and Rehabilitation of Asphalt Pavements

This session explores flexible pavement inputs from the top (changes in heavy load applications) and the bottom (foundation properties) and describes these impacts on predicted asphalt pavement performance.

State-of-Knowledge in Modulus of Subgrade Reaction Testing with Associated Pavement Design Implications (TRBAM-25-00405)
Jami Rushing/U.S. Army Engineer Research and Development Center, Isaac Howard/U.S. Army Engineer Research and Development Center, William Robinson/U.S. Army Engineer Research and Development Center, Jeremiah Stache/U.S. Army Engineer Research and Development Center
Flexible Pavement Damage Quantification due to Heavy-Duty Electric Trucks (TRBAM-25-00738)
Angeli Jayme/Arizona State University, Johann Cardenas Huaman/Arizona State University, Jaime Hernandez/Arizona State University, Imad Al-Qadi/Arizona State University
Developing the Traffic Input for Mechanistic-Empirical Pavement Design: A Case Study in Tennessee (TRBAM-25-04456)
Jingtao Zhong/University of Tennessee, Knoxville, Yangsong Gu/University of Tennessee, Knoxville, Kai Huang/University of Tennessee, Knoxville, Yuetan Ma/University of Tennessee, Knoxville, Lee Han/University of Tennessee, Knoxville, Baoshan Huang/University of Tennessee, Knoxville
Using Statistical Analysis to Assess the Default Structural Properties of ALDOT Base and Subgrade Materials Used for Flexible Pavement Design (TRBAM-25-04438)
Don Guy Biessan/Auburn University, Benjamin Bowers/Auburn University, David Timm/Auburn University, Scott George/Auburn University, Frank Bell/Auburn University, John Jennings/Auburn University

2138

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 103B
Over and Above: Utilizing Drones for Roadside Vegetation Management Activities
Ken Murray, California Department of Transportation, presiding
Sponsored By Standing Committee on Roadside Maintenance Operations, Standing Committee on Environmental Analysis and Ecology, Standing Committee on Landscape and Environmental Design

How to develop a drone program for your agency, application of drones in your vegetation management program, and how drones can access areas that used to be off limits

Unmanned Aircraft Systems (UAS) Regulatory Requirements (P25-21456)
Thomas Moorhouse/Clean Lakes, Inc.
Unmanned Aircraft Systems (UAS) Planning and Coordination (P25-21457)
Bruce Swanger/Davey Resource Group
The Drones at Night are Big and Bright (clap x4), Deep in the Heart of Texas (P25-21458)
Sergio Roman/Texas Department of Transportation, William Graffis/Texas Department of Transportation

2139

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 206

Performance of Pavement Preservation Treatments

DingXin Cheng, California State University, Chico, presiding

Sponsored By Standing Committee on Pavement Preservation

The session will address the following topics: Mix Design Performance Evaluation of Micro-surfacing with Reclaimed Asphalt Pavement (RAP) Development of Specification for Chip Seal Construction Quality Assurance based on Laser Texture Scanner Aggregate Retention Performance and Bleeding Susceptibility of RAP Modified Chip Seal: A Laboratory Investigation Performance of Stone Interlayers for Reflective Cracking Mitigation: The Louisiana Experience

Mix Design Performance Evaluation of Micro-surfacing with Reclaimed Asphalt Pavement (RAP) (TRBAM-25-02010)

Deepesh Gupta/Central Road Research Institute New Delhi, Rajiv Kumar/Central Road Research Institute New Delhi, Ankit Sharma/Central Road Research Institute New Delhi

Aggregate Retention Performance and Bleeding Susceptibility of RAP Modified Chip Seal: A Laboratory Investigation (TRBAM-25-01276)

Servan Baran/Oregon State University, Mayank Sukhija/Oregon State University, Erdem Coleri/Oregon State University

Development of Specification for Chip Seal Construction Quality Assurance based on Laser Texture Scanner (TRBAM-25-04935)

Juan Pinto/Washington State University, Haifang Wen/Washington State University, Kevin Littleton/Washington State University

Performance of Stone Interlayers for Reflective Cracking Mitigation: The Louisiana Experience (TRBAM-25-05676)

Qiming Chen/Louisiana Department of Transportation and Development, Jun Liu/Louisiana Department of Transportation and Development, Zhongjie Zhang/Louisiana Department of Transportation and Development

2140 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 146C

Transportation Equity from Theory to Practice

Tracee Strum-Gilliam, PRR, Inc., presiding

Sponsored By Standing Committee on Equity in Transportation

How can we use insights from transportation theory and from non-traditional methods to inform equitable decisions about transportation planning, engineering, and investment? This session brings together papers that establish frameworks, test different definitions of measures, and draw on unconventional disciplinary approaches to inform approaches to advancing transportation equity in marginalized communities.

A Distributive Fairness Framework For The Roads (TRBAM-25-00299)

Kevin Riehl/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Anastasios Kouvelas/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Michail Makridis/ETH Zurich: Eidgenossische Technische Hochschule Zurich

Where to Draw The Line: Impacts of Threshold Choice on Transport Disadvantage Measures (TRBAM-25-02361)

Willem Klumpenhouwer/Klumpentown Consulting, Alex Karner/Klumpentown Consulting

Whose Access is Enhanced? An Equity Prioritization Framework for Evaluating Proposed Transit Route Alignments in Edmonton, Canada (TRBAM-25-02584)

Poorva Jain/University of Iowa, Bogdan Kapatsila/University of Iowa, Emily Grise/University of Iowa

Using History and Anthropology to Diagnose and Remedy Transportation Inequities (TRBAM-25-04623)

Alden Copley/Metro Analytics, A. Gabrielle Westcott/Metro Analytics, William Jones/Metro Analytics, Phil Iweda/Metro Analytics, Benjamin Blanchard/Metro Analytics

2141

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 146B

6-Minute Showcase: Exploring Young Professional Projects in Sustainability, Resilience, and Society

Stephen Wong, University of Alberta, presiding

Tia Boyd, USF Center for Urban Transportation Research, presiding

Sponsored By Section - Transportation Systems Resilience, Subcommittee on Young Members-Sustainability and Resilience, Young Members Coordinating Council

In this rapid format session, young professions will share their latest research, work, and project on topics related to sustainability, resilience, and society. After each six minute presentation, mentors will offer constructive feedback to improve content and communication quality, helping both presenters and audience members improve their impact in the transportation field.

Just Transition to Electric Vehicles in Disadvantaged Communities: Integrating Transportation, Energy and Climate Justice (P25-20772)

Abdirashid Dahir/Ohio State University

Application of Multi-Capability Resilience Assessment to Rail Assets and Operations to Improve Safety (P25-20773)

Adair Garrett/Georgia Institute of Technology

Electric Vehicle Driver Evacuation Behavior: Route and Charging Choice Experiments (P25-20774)

Denissa Purba/University of Illinois, Urbana-Champaign

Mapping Resilience: Using GIS to Inform Corpus Christi Infrastructure Enhancement Decision Making (P25-20775)

Donner Kahl/High Street Consulting Group, LLC

Interactions Between Transportation Infrastructure and Dynamic Segregation Using Mobile Data: A Dallas Case Study (P25-20776)

Ehsan Poorvahedi/Southern Methodist University

Delivery Deserts: Mapping, Understanding, and Overcoming Service Challenges (P25-20777)

Marcella Kaplan/University of Tennessee, Knoxville

NEPA Tribal Land Evacuation Travel Time Assessment in California (P25-20779)

Meredith Milam/Fehr & Peers

Digital Twin for Sustainability and Resilience Analysis of the Global Electric Vehicles Supply Chain (P25-20778)

Tareq Alsaleh/Toronto Metropolitan University

2142 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 140

Advancing Electric Vehicle Charging Equity

Yan Zhou, Argonne National Laboratory, presiding

Sponsored By Standing Committee on Alternative Fuels and Technologies

This session explores strategies to enhance equity in electric vehicle (EV) access and charging infrastructure. Participants will learn about interventions to increase EV adoption in priority populations; equity considerations in EV charging based on battery-charger interactions; rural and tribal transit technologies; and a case study on EV charging equity.

What interventions could increase BEV adoption in priority populations? (TRBAM-25-01401)

Kelly Hoogland/University of California, Davis, Scott Hardman/University of California, Davis

How Equity of Electric-Vehicle Access Depends on Battery-Charger Interaction (TRBAM-25-03523)

Emily Moylan/University of Sydney, Bahman Lahoorpoor/University of Sydney, Jennifer Kent/University of Sydney, Stephen Greaves/University of Sydney, David Levinson/University of Sydney

Low Emission Technologies for Rural and Tribal Transit (TRBAM-25-04335)

Ranjit Godavarthy/North Dakota State University, Bright Quayson/North Dakota State University, Jeremy Mattson/North Dakota State University

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Equity in Electric Vehicle Charging Infrastructure: A Case Study of Baltimore City (TRBAM-25-04978)
Nneoma Ugwu/University of Maryland, College Park, Chester Harvey/University of Maryland, College Park, Deb Niemeier/University of Maryland, College Park

2143 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 145B
Automation, the Next Frontier for Demand-Response Services?
Joshua Schank, InfraStrategies LLC, presiding
Sponsored By Standing Committee on Transit Management and Performance, Standing Committee on Public Transportation Planning and Development

Demand Response and Automation are two innovations rocking the traditional fixed route transit landscape. Join us to discuss how these innovations may impact the future of public transportation. In this session, attendees will learn about recent research concerning: a DRT suburban system, scaling laws for dynamic high-capacity ride-sharing, the deployment of driverless DRT in low-demand areas, a framework to assess the integration of buses and shared autonomous vehicles, and a demand-responsive feeder transit system.

Smart Demand-Responsive Transit: Truthful People-Centric Design to Remove Information Asymmetry and Improve Welfare (TRBAM-25-02551)
Pooria Choobchian/University of Arizona, Ali Mohammadi/University of Arizona, Ali Shamshiripour/University of Arizona
Universal Scaling Laws of Dynamic High-capacity Ride-sharing (TRBAM-25-00834)
Wang Chen/University of Hong Kong, Linchuan Yang/University of Hong Kong, Xiqun Chen/University of Hong Kong, Jintao Ke/University of Hong Kong
How Driving Automation Will Save Demand Responsive Transit (TRBAM-25-01362)
Amir Brudner/Massachusetts Institute of Technology, Anne Patricio/Massachusetts Institute of Technology, Gonçalo Santos/Massachusetts Institute of Technology, Antònio Antunes/Massachusetts Institute of Technology, Moshe Ben-Akiva/Massachusetts Institute of Technology
Mobility Enhancement Through Shared Autonomous Vehicles and Public Transportation Integration (TRBAM-25-04408)
Madelaine Martinez Ferguson/University of Tennessee, Mustafa Camur/University of Tennessee, Xueping Li/University of Tennessee
Demand-Responsive Transit Scheduling with Modular Autonomous Vehicles: Integrating Fixed and Flexible Stations (TRBAM-25-00707)
Jie Zou/Southeast University, Min Yang/Southeast University, Mingye Zhang/Southeast University, Renjie Zhang/Southeast University

2144 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 147A
Intercity Bus, Mobility as a Service, and Artificial Intelligence for Rural Transit
Jill Hough, KFH Group, Inc., presiding
Sponsored By Standing Committee on Rural, Intercity Bus, and Specialized Transportation, Rural Transportation Issues Coordinating Council

This session focuses on various mobility topics in rural areas, including: the role of intercity networks in enhancing mobility; strategies for enabling intercity bus platooning in mixed environmental conditions; the implementation of Mobility-as-a-Service (MaaS) in rural communities, along with an examination of trip characteristics and equity implications; and the demonstration of AI's role in optimizing demand-response transit solutions.

When Greyhound Is the Only Option: A Predictive Model of the Travel Time and Prices on Secondary Routes on the U.S. Intercity Bus Network (TRBAM-25-04596)
Joseph Schwieterman/DePaul University, Carrie Craig/DePaul University
Eco-Driving Control Strategy for Intercity Bus Platoon under Mixed Traffic Environment (TRBAM-25-03537)
Zhanyu Feng/Southeast University, Jian Zhang/Southeast University, Yu Qian/Southeast University, Haiyan Zhang/Southeast University, Pinzheng Qian/Southeast University, Bo Wang/Southeast University

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Evaluating the Effects of Mobility-as-a-Service (MaaS) Platform in Increasing Equity and Transit Ridership in Rural Areas (TRBAM-25-04719)
Kwangho Baek/University of Minnesota, Twin Cities, Alireza Khani/University of Minnesota, Twin Cities
Advanced Demand Prediction for Demand-Responsive Transit (DRT) Systems: Integrating Graph Convolutional Networks and Deep Learning Techniques (TRBAM-25-05988)
Diana Al-Nabulsi/Western Michigan University, Jun-Seok Oh/Western Michigan University, Valerian Kwigizile/Western Michigan University

2145 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 145A
Beyond the Hype: Putting Artificial Intelligence to Work for Transit
Michael Eichler, Washington Metropolitan Area Transit Authority, presiding
Sponsored By Standing Committee on Transit Data, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Intelligent Transportation Systems

There is a lot of buzz around Artificial Intelligence (AI) but it is still unclear what the practical applications are, especially for transit agencies and those working with transit data. This session brings together leaders from the public sector, private sector, and academia to share how they are putting AI work for transit. Along the way, they'll demystify AI and explore practical, transit-oriented applications of these cutting-edge technologies available today and the near future, including prediction generation, computer vision, and data synthesis.

Applying AI to Solve Transit Operations Challenges (P25-20491)
Renee Autumn Ray/Hayden AI
Mens et Manus: Translating Academic Research into Transit Solutions (P25-20492)
Awad Abdelhalim/Massachusetts Institute of Technology
In-House AI: Building Models within Transit Agencies (P25-20493)
Paul Swartz/TransitOPS

2146

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 149
Toward Zero Emissions in Rail: Lessons Learned
Davidson Ward, FMW Solutions LLC, presiding
Sponsored By Standing Committee on Rail Rolling Stock and Motive Power

In the past decade, multiple agencies, railroads, and industry rail operations have worked closely with manufacturers to prototype new, zero emissions technologies utilizing batteries, hydrogen, and other propulsion methods. This round table session brings together railroads, manufacturers, agencies, and regulators to discuss lessons learned in the pursuit of introducing new technologies to one of the oldest transportation industries in the world.

Battery Electric Locomotives (P25-21151)
Michael Nicoletti/Innovative Rail Technologies
Regulations related to Zero Emissions Rail Technology (P25-21152)
Michael Hunter/Federal Railroad Administration (FRA)
Bringing Zero Emissions Rail Technologies to Market (P25-21153)
Marcin Taraszkiewicz/HDR

2147

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 144AB

Employee Well-Being, Resilience, and Traumatic Exposure: New Directions for Research and Applications in Transportation

Michael Coplen, TrueSafety Evaluation, LLC, presiding

Sponsored By Standing Committee on Rail Safety

This panel discussion will seek to tackle the critical issues surrounding employee mental health, well-being, and resilience, particularly in the context of traumatic exposure within the transportation industry. Participants will provide a multifaceted look at the strategies, research, and applications that aim to enhance employee well-being, resilience, and safety in the face of traumatic exposure, offering new directions for research and the latest advances in applications for transportation organizations.

Panelist (P25-20831)
Scott Gabree/OST-R/Volpe Center
Panelist (P25-21414)
Danielle Hiltunen/OST-R/Volpe Center
Panelist (P25-21415)
Denia Kramer/National Railroad Passenger Corporation
Panelist (P25-21416)
Michael Carroll/Global Coaching Alliance
Panelist (P25-21417)
Karen Philbrick/Mineta Transportation Institute

2148

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 144C

Preparing for Supply Chain Shifts

Joseph Bryan, WSP, presiding

Sponsored By Standing Committee on International Trade and Transportation, Joint Subcommittee on Supply Chains (with AT025, AT045, and AW010)

: In the aftermath of the COVID-19 pandemic, industrial supply chains are being rethought and restructured by their managements to reduce supplier and geographic risk. Location changes within Asia have consequences for marine and air cargo, the international ports and airports that serve them, and the modes that connect to U.S. markets. Looming even larger in U.S. planning is the likelihood of nearshoring to Mexico, with foreign direct investment by Asian and other companies appearing to grow with American markets and the routes to reach them in their sights. This session features speakers tracking or involved in such supply chain shifts and will discuss the practical implications.

Nearshoring to Mexico (P25-20747)
Juan Villa/Texas A&M Transportation Institute
Coastal Shifts (P25-20748)
Paul Bingham/S&P Global
Modal Shifts (P25-20749)
Gregg Zody/BNSF Railway

2149 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 143C

Perspectives on Federal Aviation Administration Reauthorization

Sierra LePore, Tampa International Airport, presiding

Sponsored By Standing Committee on Aviation Administration and Policy, Standing Committee on Environmental Issues in Aviation, Standing Committee on Aircraft/Airport Compatibility, Standing Committee on New Users of Shared Airspace

This session explores the recent multiyear Federal Aviation Administration (FAA) Reauthorization from a variety of perspectives, including the FAA, industry, and airports. Attendees will learn about what the impacts of the provisions within the legislation will have on aviation administration and policy.

FAA Perspective (P25-20420)

Danielle Rinsler/Federal Aviation Administration (FAA)

Analysis of Key Reauthorization Provisions: the 'Law' in the Law (P25-20421)

Steven Osit/Kaplan Kirsch LLP

Industry Association Perspective (P25-20531)

Gregory Cota/Airports Council International, North America

Airport Perspective (P25-20535)

Cindy Nichol/Sacramento County Department of Airports

2150 **CM** (1.75)

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 143AB

Embracing Technology from the Ground Up: Getting a Better Understanding of Ground Infrastructure to Support Advanced Air Mobility Going Forward

Daniel Friedenzohn, Embry Riddle Aeronautical University, presiding

Sponsored By Standing Committee on New Users of Shared Airspace, Standing Committee on Aviation Economics and Forecasting, Standing Committee on Airfield and Airspace Performance, Standing Committee on Aircraft/Airport Compatibility, Standing Committee on Aviation Safety, Security and Emergency Management

This session will provide an opportunity to hear from experts representing various parts of the broader AAM community. Speakers will share their thoughts on how they view the industry evolving in the coming years and what the ground infrastructure needs are to support that growth. Experts will share their thoughts about the necessary planning issues that must be addressed to support the integration of eVTOL technology. Speakers will also provide insights as to how states and local governments are planning for AAM/eVTOL operations. The session will also focus on the interplay between Advanced Air Mobility (AAM) and infrastructure development for optimizing drone delivery operations.

Unveiling Latent Factors of the Urban Dynamics for Vertiport Placement (TRBAM-25-01724)

Sungmin Sohn/Korea Advanced Institute of Science and Technology, Namwoo Kim/Korea Advanced Institute of Science and Technology, Mark Hansen/Korea Advanced Institute of Science and Technology, Yoonjin Yoon/Korea Advanced Institute of Science and Technology

Industry Perspective on AAM Technology Ground Infrastructure (P25-20799)

Tom Gunnarson/Wisk Aero

Permanent/Mobile Combined Charging Stations for a Drone-based Delivery Network under Uncertain Demand (TRBAM-25-04917)

Fateme Hafizi/Illinois Institute of Technology, Mohammad Miralinaghi/Illinois Institute of Technology, Sanaz Kazemzadehazad/Illinois Institute of Technology, Zongzhi Li/Illinois Institute of Technology, Mohammad Shahidehpour/Illinois Institute of Technology

Vertiport Site Analysis: A Geospatial Framework Based on FAA Guidelines for Advanced Air Mobility Infrastructure (TRBAM-25-05692)

Amirhossein Samavatekbatan/Utah State University, Simin Gholami/Utah State University, Brent Chamberlain/Utah State University

2151

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, 147B

Marine Safety and Human Factors Issues Related to Maritime Operations in the Arctic Environment

Tony Russell, U.S. Coast Guard Academy, presiding

Sponsored By Standing Committee on Marine Safety and Human Factors

This session will focus on the marine safety and human factors issues related to the growth of maritime commerce in the Arctic. It will feature speakers from academia, government, and industry sharing their perspectives on current conditions, future trends, and emerging regulatory and research needs. The session will blend presentations with a panel discussion.

The Risks and Opportunities of Sailing the Northern Sea Route - A Norwegian Stakeholder Perspective (TRBAM-25-02381)

Henrik Aslesen/University of Agder, Amund Fagereng/University of Agder, Naima Saeed/University of Agder

U.S. Committee on the Marine Transportation System: Arctic Marine Transportation Integrated Action Team Efforts (P25-21191)

Christopher Perrett/U.S. Maritime Administration

U.S. Coast Guard Policy, Readiness, and Research Needs for Marine Transportation System Operations in the Arctic (P25-21192)

Shannon Jenkins/U.S. Coast Guard (USCG)

Workforce Development and Future Research Needs to Assure Safe U.S. Arctic Operations (P25-21193)

Jereme Altendorf/University of Alaska, Anchorage

2152

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Ballroom A

U.S. Department of Transportation: Climate Resilience, Decarbonization, and Land Use

Christopher Coes, U.S. Department of Transportation Office of the Under Secretary for Policy, presiding

Sponsored By Executive Committee

For the past four years, USDOT has charted a course forward for a clean, efficient, and convenient transportation system fueled by the Bipartisan Infrastructure Law. Integral to this work is alignment between land use and transportation planning, as well as housing and transportation projects. Smart growth supports thriving communities that are affordable, equitable, sustainable, and resilient. This session will take stock of the progress made towards a resilient and decarbonized transportation system and the opportunities available to continue that work at a State and local level. The USDOT Assistant Secretary for Transportation Policy, Christopher Coes, will introduce TRB to the Climate Strategies that Work playbook and share reflections on successes from the Biden-Harris Administration on land use, as well as a path forward for 2025.

2153

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

New Frontiers in Artificial Intelligence Research in Transportation

Mo Zhao, Virginia Department of Transportation, presiding

Sponsored By Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session spotlights the transformative role of Artificial Intelligence (AI) in advancing efficiency, safety, and sustainability within the transportation sector. Attendees will explore the latest AI developments and their practical applications across traffic management, autonomous vehicles, transportation planning, and logistics.

Electric Vehicle Adoption Prediction: Coupling Open-Source Data and Machine Learning Algorithms (TRBAM-25-00019) - B474

Ali Shehabeldeen/McMaster University, Moataz Mohamed/McMaster University

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A Real-Time Computing Efficient Approach for Video-Based Vehicle Detection and Tracking in Low-Illumination Environment (TRBAM-25-00119) - B473
Igor Lashkov/University of Hawai'i, Manoa, Runze Yuan/University of Hawai'i, Manoa, Shanglian Zhou/University of Hawai'i, Manoa, Guohui Zhang/University of Hawai'i, Manoa
Advanced Multi-Agent Trajectory Prediction in Interactive Environments with Traffic States and Driving Styles (TRBAM-25-00255) - B464
Jiayu Yang/Central South University, Jaeyoung Lee/Central South University
Network Generation AI: Multimodal Road Network Generation Based on Large Language Model (TRBAM-25-00267) - B463
Jiajing Chen/Beihang University, Weihang Xu/Beihang University, Haiming Cao/Beihang University, Zihuan Xu/Beihang University, Yu Zhang/Beihang University, Siyao Zhang/Beihang University, Zhao Zhang/Beihang University, Bin Yu/Beihang University
MSTL-Net: A Novel Approach of Road Visibility Estimation Based on Time-Series Images and Meteorological Data (TRBAM-25-00604) - B454
Tianxiang Bu/Southeast University, Tianhao Ma/Southeast University, Junqing Zhu/Southeast University, Tao Ma/Southeast University
Decentralized Federated Learning-Driven Spatial-Temporal Framework for Predictive Analysis of Freight Traffic Speed (TRBAM-25-00628) - B453
Xiuyu Shen/Southeast University, Jingxu Chen/Southeast University
ArrowNet81: A Novel Deep Learning Architecture for Modeling Human-Like Decision to React in Asymmetric Car-Following Regime Considering Multi-Vehicle Heterogeneity (TRBAM-25-01053) - B430
Nazmul Haque/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, Farhana Mozumder Lima/Bangladesh University of Engineering and Technology, Md. Hadiuzzaman/Bangladesh University of Engineering and Technology
CooperFuse: A Real-Time Cooperative Perception Fusion Framework (TRBAM-25-01432) - B400
Zhaoliang Zheng/University of California, Los Angeles, Xin Xia/University of California, Los Angeles, Letian Gao/University of California, Los Angeles, Hao Xiang/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
LWSORT: A Lightweight Online Multi-Object Tracking Method Compatible (TRBAM-25-01482) - B452
Xiaoying Yi/Southeast University, Qi Liu/Southeast University, Yikang Rui/Southeast University, Bin Ran/Southeast University
Identifying Bicycles Illegally Parked on Sidewalks Using Deep-Learning-Based Object Detection (TRBAM-25-01510) - B444
Shoma Matsuda/No Organization, Shintaro Terabe/No Organization, Hideki Yaginuma/No Organization, Yu Suzuki/No Organization, Haruka Uno/No Organization
V2XPnP: A Real-World Sequential Dataset and Fusion Pipeline for Perception and Prediction with Vehicle-to-Everything Communication (TRBAM-25-01552) - B401
Zewei Zhou/University of California, Los Angeles, Hao Xiang/University of California, Los Angeles, Seth Zhao/University of California, Los Angeles, xin xia/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
DARK-LLM: Description Data Auto-Labeling with Reliable Keyword using Large Language Model for Analyzing Causes of Autonomous Vehicle Disengagements (TRBAM-25-01582) - B443
Jinwon Yoon/Korea Advanced Institute of Science and Technology, Byeongjoon Noh/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology
An Efficient Vehicle Trajectory Extraction Method Based on YOLO and DeepSORT-CFLR Algorithm (TRBAM-25-01924) - B442
Xiaoxiao Wei/Chang'an University, Wei Cong/Chang'an University, Guangyue Xue/Chang'an University, Ruyu Yan/Chang'an University, Jin Shao/Chang'an University, Yan Li/Chang'an University
Integrating Multiple Data Sources for Enhanced Urban Commuter Traffic Monitoring: A Cordon-Based Data Fusion Approach (TRBAM-25-02118) - B441
Florian Lammer/Technical University Graz, Martin Fellendorf/Technical University Graz
Pretrained Mobility Transformer: A Foundation Model for Human Mobility (TRBAM-25-02510) - B434
Xinhua Wu/Northeastern University, Haoyu He/Northeastern University, Yanchao Wang/Northeastern University, Qi Wang/Northeastern University
Performance of Large Language Models in Domain-Specific and Underrepresented Languages: A Case Study on the Transportation Domain and Dutch Language (TRBAM-25-02712) - B433
Thi Tran/Hasselt University, Davy Janssens/Hasselt University, Geert Wets/Hasselt University, Tom Brijs/Hasselt University, Burcu Can/Hasselt University, Jan Vuurstaek/Hasselt University, Lien Aerts/Hasselt University, Wim Ectors/Hasselt University

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Large Language Models for Mobility Analysis in Transportation Systems: A Survey on Forecasting Tasks (TRBAM-25-02937) - B432
Zijian Zhang/University of Washington, Yujie Sun/University of Washington, Zepu Wang/University of Washington, Yuqi Nie/University of Washington, Xiaobo Ma/University of Washington, Ruolin Li/University of Washington, Peng Sun/University of Washington
Sample-Efficient Collaborative Accurate Snow Removal for LiDAR Point Clouds Without Labels: A Federated Meta Unsupervised Learning with Omni-Dimensional Dynamic Convolution (TRBAM-25-03152) - B431
ZongWen Gu/Tongji University, Zhizhou Wu/Tongji University, Yunyi Liang/Tongji University
Towards Efficient Traffic State Estimation from Sparse Observations: A Spatial-Temporal Query Matching Approach (TRBAM-25-03260) - B424
Liyou Li/Sun Yat-Sen University, Lingshu Zhong/Sun Yat-Sen University
LLM-Enhanced Traffic Performance Analytics: A Real-Time Data Informed Intelligent ChatBot (TRBAM-25-03262) - B423
Bingzhang Wang/University of Washington, Muhammad Monjurul Karim/University of Washington, Chenxi Liu/University of Washington, Yinhai Wang/University of Washington
Ubiquitous Traffic Eyes: Trajectory Dataset Focus on Multiple Traffic States and State Transition on Urban Expressways (TRBAM-25-03284) - B482
Huihuang Zhu/Southeast University, Ruyi Feng/Southeast University, Dongyu Tian/Southeast University, Zhibin Li/Southeast University, Shunchao Wang/Southeast University
Efficient Model Compression for Improving Traffic Object Recognition using Lightweight Pruning Algorithm (TRBAM-25-03286) - B483
Huihuang Zhu/Southeast University, Ruyi Feng/Southeast University, Zhibin Li/Southeast University, Si Zheng/Southeast University, Shunchao Wang/Southeast University
Urban E-Scooter Usage Prediction Based on Semantic Descriptions: A Knowledge-Driven AI (TRBAM-25-03297) - B422
Huihai Wang/University of Texas, Austin, William Davis/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Yiming Xu/University of Texas, Austin
An Iterative Framework for Completing and Predicting Spatially and Temporally Incomplete Direction-Based Traffic Data (TRBAM-25-03320) - B421
Rong Cao/Nanyang Technological University, David Wang/Nanyang Technological University
Learning to Generate Synthetic Human Mobility Data: A Physics-Regularized Gaussian Process Approach Based on Multiple Kernel Learning (TRBAM-25-03958) - B420
Ekin Ugurel/University of Washington, Shuai Huang/University of Washington, Cynthia Chen/University of Washington
Population Synthesis Combining Statistical and Generative Models for Consistent and Diverse Household and Personal Attribute Association (TRBAM-25-04107) - B450
Hai Yang/New York University, Hongying Wu/New York University, Linfei Yuan/New York University, Xiyuan Ren/New York University, Joseph Chow/New York University, Jingqin Gao/New York University, Kaan Ozbay/New York University
Enriching OpenStreetMap with Machine Learning-Based Traffic Speed Predictions: Implications for Accessibility Metrics (TRBAM-25-04260) - B414
Sailesh Acharya/National Renewable Energy Laboratory (NREL), Michael Allen/National Renewable Energy Laboratory (NREL), Mingdong Lyu/National Renewable Energy Laboratory (NREL), Christopher Hoehne/National Renewable Energy Laboratory (NREL), Shivam Sharda/National Renewable Energy Laboratory (NREL), Venu Garikapati/National Renewable Energy Laboratory (NREL), Robert Fitzgerald/National Renewable Energy Laboratory (NREL)
Reconstructing Human Mobility Pattern: A Semi-Supervised Approach for Cross-Dataset Transfer Learning (TRBAM-25-04407) - B404
Xishun Liao/University of California, Los Angeles, Yifan Liu/University of California, Los Angeles, Chenchen Kuai/University of California, Los Angeles, Yueshuai He/University of California, Los Angeles, Shangqing Cao/University of California, Los Angeles, Chris Stanford/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
Online Machine Learning for Time-Dependent Mobile Wireless Charging Electric Vehicles (TRBAM-25-04492) - B440
Mandana Farhang Ghahfarokhi/Old Dominion University, Hyoshin Park/Old Dominion University, Venktesh Pandey/Old Dominion University, Gyugeun Yoon/Old Dominion University
Semantic Trajectory Data Mining with LLM-Informed POI Classification (TRBAM-25-04733) - B402
Yifan Liu/University of California, Los Angeles, Chenchen Kuai/University of California, Los Angeles, Haoxuan Ma/University of California, Los Angeles, Xishun Liao/University of California, Los Angeles, Yueshuai He/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles

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Human Mobility Modeling with Limited Information via Large Language Models (TRBAM-25-04734) - B403
Yifan Liu/University of California, Los Angeles, Xishun Liao/University of California, Los Angeles, Haoxuan Ma/University of California, Los Angeles, Yueshuai He/University of California, Los Angeles, Chris Stanford/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
Optimizing Prompt Engineering for Large Language Models in Transportation: A Freeway Segment Analysis Case Study (TRBAM-25-04882) - B413
Chenyu Yuan/University of California, Irvine, Sara-Grace Lien/University of California, Irvine, Wenlong Jin/University of California, Irvine, Stephen Ritchie/University of California, Irvine
Leveraging Large Language Models with Chain-of-Thought and Prompt Engineering for Traffic Crash Severity Analysis and Inference (TRBAM-25-04908) - B412
Hao Zhen/University of Georgia, Yucheng Shi/University of Georgia, Yongcan Huang/University of Georgia, Jidong Yang/University of Georgia, Ninghao Liu/University of Georgia
Acquiring and Accruing Knowledge from Diverse Datasets: A New Approach to Multi-Label Driving Scene Classification (TRBAM-25-05000) - B472
Ke Li/Stony Brook University, Chenyu Zhang/Stony Brook University, Ruwen Qin/Stony Brook University
Transformer-Based Federated Q-Learning to Mitigate Data Poisoning Attacks for Connected Vehicles and Micromobility Devices in Blockchain Consensus (TRBAM-25-05154) - B451
Junaid Khan/Western Washington University, Fan Zuo/Western Washington University, Yu Tang/Western Washington University, Kaan Ozbay/Western Washington University
Transferable Geospatial Encoding from Large Language Models for City-Wide Delivery Demand Joint Estimation and Prediction (TRBAM-25-05206) - B462
Tong Nie/Tongji University, Junlin He/Tongji University, Yuewen Mei/Tongji University, Guoyang Qin/Tongji University, Jian Sun/Tongji University, Wei Ma/Tongji University
Benchmarking the Capabilities of Large Language Models in Transportation System Engineering (TRBAM-25-05304) - B411
Soman Syed/University of Illinois, Urbana-Champaign, Ethan Light/University of Illinois, Urbana-Champaign, Xingang Guo/University of Illinois, Urbana-Champaign, Huan Zhang/University of Illinois, Urbana-Champaign, Lianhui Qin/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign, Bin Hu/University of Illinois, Urbana-Champaign
A Survey of Machine Learning Applications at State Departments of Transportation (TRBAM-25-05329) - B410
Mecit Cetin/Old Dominion University, Behrouz Salahshour/Old Dominion University, Haley Townsend/Old Dominion University, Sherif Ishak/Old Dominion University

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Emerging Patterns in Vehicle Ownership: Insights on Autonomous, Connected, and Electric Vehicles
Atiyya Shaw, University of Michigan, Ann Arbor, presiding
Sponsored By Standing Committee on Traveler Behavior and Values

This session will present cutting-edge studies exploring the dynamic landscape of vehicle ownership and usage, particularly about electric and autonomous vehicles. Topics will range from electric vehicle utility and market segmentation in diverse regions such as Guwahati, Halifax, and rural America to range anxiety and charging inconvenience barriers. The session also delves into autonomous vehicle adoption, including youth perceptions, campus mobility, and user willingness to adopt shuttle services. Attendees will gain insights into vehicle technology concerns, spatial data implications for car dependence, and how parking availability and household characteristics influence vehicle ownership patterns.

Exploring the Determinants of Electric Vehicle Utility in Guwahati Using Binary Logit Model (TRBAM-25-06316) - B513
Danial Doley/Indian Institute of Technology, Guwahati, Akhilesh Maurya/Indian Institute of Technology, Guwahati
Charged Up with Peace in Mind: Unraveling the Factors of Range Anxiety among Norwegian Electric Vehicle Drivers (TRBAM-25-00386) - B484
Junianna Zatsarnaja/Technical University Munich, Katharina Reiter/Technical University Munich, Milad Mehdizadeh/Technical University Munich, Alim Nayum/Technical University Munich, Trond Nordfjærn/Technical University Munich
Comparative Analysis of Factors Influencing Types of Household Car, Motorcycle, and Bicycle Ownership in Japan (TRBAM-25-00436) - B494
Chetan Doddamani/Indian Institute of Technology, Delhi, Toshiyuki Yamamoto/Indian Institute of Technology, Delhi
(continued)

Measuring the Impact of Residential Parking on Car Ownership Levels (TRBAM-25-01242) - B500
Ladan Berahman/University of Toronto, Mohammad Haghighi/University of Toronto, Eric Miller/University of Toronto
Exploring Latent Patterns in Vehicle Ownership by Tucker Decomposition with Rank Increment (TRBAM-25-02665) - B501
Xudong Wang/McGill University, Lijun Sun/McGill University, Luis Miranda-Moreno/McGill University
Temporal Instability in Consumer's Willingness to Pay for Autonomous Vehicles: An Exploratory Econometric Analysis of Public Perception in the United States (TRBAM-25-03073) - B502
Jiajun Pang/University at Buffalo, SUNY, Sheikh Ahmed/University at Buffalo, SUNY, Irina Benedyk/University at Buffalo, SUNY, Mohammad Hamed/University at Buffalo, SUNY, Panagiotis Anastasopoulos/University at Buffalo, SUNY
Exploring the Impact of Autonomous Vehicles on Youth Mobility Through Focus Groups and Simulations (TRBAM-25-03535) - B493
Andromachi Mourtzouchou/European Commission Joint Research Center, Ada Garus/European Commission Joint Research Center, Rubén Cordera/European Commission Joint Research Center, Ioan Cristinel Raileanu/European Commission Joint Research Center, Biagio Ciuffo/European Commission Joint Research Center
Uncovering Battery Electric Vehicle Owners' Charging Behavior and Its Correlation with Non-Charging Activities (TRBAM-25-03990) - B503
Xi Feng/Tongji University, Yuntao Guo/Tongji University, Xinwu Qian/Tongji University, Xinghua Li/Tongji University, Haobing Liu/Tongji University, Minghui Zhong/Tongji University
Understanding the value of (in)-convenience, sharing and travel time in the context of autonomous vehicles (TRBAM-25-04057) - B504
Eeshan Bhaduri/University of Leeds, Thijs Dekker/University of Leeds, Jillian Anable/University of Leeds, Zia Wadud/University of Leeds
Can a Broad Spatial Dataset Fully Explain Car Dependence? A Sensitivity Analysis Approach in Lombardy, Italy (TRBAM-25-04168) - B492
Jaime Sierra Muñoz/Politecnico di Milano, Louison Duboz/Politecnico di Milano, Biagio Ciuffo/Politecnico di Milano
2016-2024 CVS Focus Groups Longitudinal Analysis: Vehicle Technology Exposure and New Technology Concerns (TRBAM-25-04423) - B505
Mark Fowler/RSG, Justin Curtis/RSG, Eric Kapner/RSG, Aniss Bahreinian/RSG
False Dichotomies and Shifting Archetypes in the Market for Electric Vehicles (TRBAM-25-04482) - B506
K. Sydny Fujita/Lawrence Berkeley National Laboratory, Margaret Taylor/Lawrence Berkeley National Laboratory, Nica Campbell/Lawrence Berkeley National Laboratory, James Supeyo/Lawrence Berkeley National Laboratory
Beyond Charging Anxiety: An Explainable Approach to Understanding User Preferences of EV Charging Stations Using Review Data (TRBAM-25-04552) - B507
Zifei Wang/University of Michigan, Dearborn, Emmanuel Abolarin/University of Michigan, Dearborn, Kai Wu/University of Michigan, Dearborn, Venkatarao Rebba/University of Michigan, Dearborn, Zhen Hu/University of Michigan, Dearborn, Shan Bao/University of Michigan, Dearborn, Feng Zhou/University of Michigan, Dearborn
SEM-MIMIC Model to Identify Factors Influencing Users' Willingness to Use Autonomous Shuttle Across Various Land Uses (TRBAM-25-04843) - B508
Dil Samina Diba/University of Mississippi, Ninad Gore/University of Mississippi, Srinivas Pulugurtha/University of Mississippi
How Do University Students Perceive Shared Low-Speed Autonomous Vehicle Mobility Services on Campus: An Interpretable Machine Learning-Supported Path Analysis (TRBAM-25-05393) - B509
Zihe Zhang/University of Alabama, Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
Investigation of Electric Vehicle Market Segmentation, Barriers, and Facilitators in Halifax, Canada (TRBAM-25-06070) - B510
Muhammad Habib/Dalhousie University, Kashfia Nahrin Nokshi/Dalhousie University, Rifat Bhuiyan/Dalhousie University
Examining the Roles of Range Anxiety, Charging Inconvenience, and Environmental Benefits in How Rural Americans View Electric Vehicles (TRBAM-25-06165) - B511
Ming Wang/University of Nebraska, Lincoln, Li Zhao/University of Nebraska, Lincoln
Exploring User Satisfaction and Repurchase Intentions for BEVs: A Comparative Study of Two Chinese Cities in the Post-Subsidy Era (TRBAM-25-02610) - B512
Jieru Zou/Fujian University of Technology, Kan Yan/Fujian University of Technology, Feiyu Feng/Fujian University of Technology, Ao Xu/Fujian University of Technology

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Travel Behavior Elements: Activity, Mode, Time Use, Destination, and Activity Patterns

Adam Weiss, Carleton University, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

The session explores travel behavior in Northern Utah alongside the effects of urban visual diversity on household and travel dynamics. An innovative deep hybrid model will demonstrate how satellite imagery enhances travel behavior analysis. Topics include traveler responses to risk through a latent class choice approach, the role of household activities in commuting mode choice, and unique daily travel patterns in rural Guiyang, China. Additional insights cover experience-based variables in travel mode choices, attitudes toward Mobility as a Service (MaaS), and long-term mobility trends across multiple countries. This session is essential for scholars and practitioners focused on travel behavior and urban transportation policy complexities.

Assessing Urban Densification and Highway-to-Boulevard Transformations: Implications on Travel Mode Choices via MATSim/Eqasim Application (TRBAM-25-00728) - B515

Sara Gharavi/Université Laval, Jean Dube/Université Laval, Francesco Ciari/Université Laval

Exploring the Impacts of Air Quality on Travel Behavior and Activity Participation: Evidence from Travel Diary Surveys in Northern Utah (TRBAM-25-00979) - B518

Fariba Soltani/Utah State University, Mahyar Vahedi Saheli/Utah State University, Patrick Singleton/Utah State University

Examining Household and Travel Dynamics in Response to Urban Visual Diversity Using Street View Images (TRBAM-25-01062) - B519

Zeyu Wang/University of Washington, Seattle, Yingjie Liu/University of Washington, Seattle, Don MacKenzie/University of Washington, Seattle

Deep hybrid model with satellite imagery: how to combine demand modeling and computer vision for travel behavior analysis? (TRBAM-25-01706) - B520

Qingyi Wang/University of Florida, Shenhao Wang/University of Florida, Yunhan Zheng/University of Florida, Hongzhou Lin/University of Florida, Xiaohu Zhang/University of Florida, Jinhua Zhao/University of Florida, Joan Walker/University of Florida, Shenhao Wang/University of Florida

Heterogenous Responses to Risky Behavior Involving Monetary and NonMonetary Variables in Travel: A Latent Class Choice Approach (TRBAM-25-01798) - B521

Jianing Liu/Hong Kong University of Science and Technology, Chenyang Wu/Hong Kong University of Science and Technology, Sisi Jian/Hong Kong University of Science and Technology

Exploring the intermediary effect of household activities on commuting mode choice in young adults of childb earing age:A Bayesian network approach (TRBAM-25-01813) - B516

Yang Liu/Kunming University, Wei Yang/Kunming University, Zhuangbin Shi/Kunming University, Baohong He/Kunming University, Mingwei He/Kunming University

Exploring Daily Activity-Travel Patterns of Rural Residents Using Sequence Analysis: A Case Study in Guiyang, China (TRBAM-25-01820) - B517

Yueren He/Kunming University, Mingwei He/Kunming University, Yang Liu/Kunming University, Baohong He/Kunming University, Qian Qian/Kunming University

Understanding Travel Mode Choice with Experience-Based Variables Generated from Navigation Big Data (TRBAM-25-02134) - B522

Kehua Wang/Zhejiang University, Zhiyi Shi/Zhejiang University, Zheng Zhu/Zhejiang University

How does the passengers' attitude about Mobility as a Service (MaaS) change travel mode choice behavior under time uncertainty? (TRBAM-25-02158) - B523

Boqing Wang/Southeast University, Min Yang/Southeast University, Tao Feng/Southeast University, Jie Zou/Southeast University, Fan Jiang/Southeast University

Long-term Mobility Behavior for Selected Modes in the US, UK, Germany, and Switzerland from 1972 to 2018 (TRBAM-25-02173) - B524

Robert Kölbl/Technische Universitat Wien, Aybala Cakir/Technische Universitat Wien, Magdalena Molnar/Technische Universitat Wien, Alexander Gratzer/Technische Universitat Wien, Alexander Schirrer/Technische Universitat Wien, Martin Kozek/Technische Universitat Wien

A Novel Pattern Recognition Technique to Characterize Multi-Day Shopping and Entertainment Trip Activities (TRBAM-25-02300) - B525

Md Ashraful Imran/University of Texas, Arlington, Kate Hyun/University of Texas, Arlington

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Explorations of Neural Network Model for Binary Choices: An Application to Commuters' Auto Mode Choices (TRBAM-25-03328) - B526
Yuejiao Wang/Tongji University, Xin Ye/Tongji University, Siyu Wang/Tongji University, Kun Huang/Tongji University
Temporal Analysis of Non-Mandatory Activity Frequencies in Shanghai, China Using the Multivariate Ordered Probit Model (TRBAM-25-04395) - B527
Ying Liu/Tongji University, Xin Ye/Tongji University, Kun Huang/Tongji University
How would Urban and Regional Air Mobility (URAM) Affect Our Relocation Decisions: A Machine Learning-Supported Path Analysis (TRBAM-25-04564) - B528
Ningzhe Xu/University of Alabama, Javier Pena-Bastidas/University of Alabama, Cheuxuan Yang/University of Alabama, Jun Liu/University of Alabama, Trayce Hockstad/University of Alabama, Steven Jones/University of Alabama
Decoding Human Mobility Network in the US: Analyzing Work and Nonwork Trip Patterns Using NHTS NextGen Passenger OD Data (TRBAM-25-05060) - B529
Chisun Yoo/Modern Mobility Partners, LLC
Land Use and Travel Behavior: A Panel Study Using Relocated Households in Vermont to Assess Land Use Elasticities (TRBAM-25-05644) - B530
Clare Nelson/University of Vermont, Gregory Rowangould/University of Vermont
Classification and Analysis of Multi-Dimensional Individual Mobility Characteristics using Location-based Travel Information (TRBAM-25-05954) - B531
Jae Hyun Lee/Korea Transport Institute (KOTI), Jiyun Shim/Korea Transport Institute (KOTI), Soojeong Choi/Korea Transport Institute (KOTI), Minsu Won/Korea Transport Institute (KOTI)
Modelling Travel Behaviour Over Time in the Absence of Panel Data (TRBAM-25-06007) - B532
Victor Cantillo/University of Leeds, Chiara Calastri/University of Leeds, Stephane Hess/University of Leeds
Meet Me Halfway - Disentangling the Factors Affecting Leisure Joint Destination Choice (TRBAM-25-06188) - B533
Joanna Ji/Technische Universitat Munchen, Benjamin Gramsch-Calvo/Technische Universitat Munchen, Kay Axhausen/Technische Universitat Munchen, Rolf Moeckel/Technische Universitat Munchen, Giancarlos Parady/Technische Universitat Munchen
Heterogeneity in Intraregional Travel and Interregional Travel Patterns – A Classification of Travelers (TRBAM-25-06356) - B534
Yang Li/University of Texas, Austin, Ming Zhang/University of Texas, Austin
Urban Travel Mode and Timing Choices Considering Traveler Heterogeneity with Carbon Credit Incentives: A Case Study of Nanjing (TRBAM-25-06371) - B535
Ziyan Pan/Southeast University, Min Yang/Southeast University, Hou qi/Southeast University
The Role of Emerging Technologies in Urban Transportation: Impact on Commuter Preferences (TRBAM-25-06375) - B514
Danial Doley/Indian Institute of Technology, Guwahati, Akhilesh Maurya/Indian Institute of Technology, Guwahati, Surya Ravikumar/Indian Institute of Technology, Guwahati
Pre- and Post-Pandemic Urban Travel Behaviour: Analysing Changes in Travel Mode Choice in Kota City, Rajasthan Using Double Machine Learning (TRBAM-25-06398) - B536
Shahiq Ahmad Wani/Indian Institute of Technology, Jodhpur, Ranju Mohan/Indian Institute of Technology, Jodhpur
Latent segmentation of commuters' mode choice behavior with the provision of demand responsive transport in the Seoul metropolitan area (TRBAM-25-06409) - B537
Sujae Kim/HongIk University, Sungtaek Choi/HongIk University
Understanding University Students' Tour-Based Mode Choice Behavior (TRBAM-25-00682) - B538
Nishat Naila Meghna/Virginia Polytechnic Institute and State University, Md Sami Hasnine/Virginia Polytechnic Institute and State University

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Active and Transit Travel

Andre Carrel, Ohio State University, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session presents a range of research exploring commuting behavior and the built environment's influence on transportation choices. Key topics include the variety-seeking behaviors of e-cyclists analyzed through GPS data, the barriers older adults face in accessing public transit across Canada, and commuters' satisfaction levels across different transportation modes. Innovative methodologies are featured, such as analyzing route choice heterogeneity among metro passengers via mobile phone data and modeling path choice behavior by integrating this data with stated preferences. Additional discussions encompass transit-oriented development, cyclist typologies, and user preferences for customized feeder transit access.

Variety Seeking Route Choice Behavior of Commuting E-Cyclists Retrieved from GPS Data (TRBAM-25-00096) - B539

Xueting Zhao/Eindhoven University, Peter van der Waerden/Eindhoven University, Peng Jia/Eindhoven University

Who is willing to take transit in the future? Older adults' perceived challenges and barriers to using public transit across Canada (TRBAM-25-01402) - B544

Meredith Alousi-Jones/McGill University, Thiago Carvalho/McGill University, Merrina Zhang/McGill University, Isabella Jiminez/McGill University, Ahmed El-Geneidy/McGill University

Understanding travel behavior change and the role of public transport with megacity development (TRBAM-25-01612) - B545

He Hao/Beijing Jiaotong University, Enjian Yao/Beijing Jiaotong University, Long Pan/Beijing Jiaotong University, Yang Yang/Beijing Jiaotong University, Rongsheng Chen/Beijing Jiaotong University, Yue Wang/Beijing Jiaotong University

Are Cyclists Still the Happiest Commuters? Comparing Commute Satisfaction Across Different Transportation Modes (TRBAM-25-01983) - B546

Dea van Lierop/Utrecht University, Linlin Zhang/Utrecht University, Santiago Cardona Urrea/Utrecht University, Muchlis Muchlisin/Utrecht University, Patrick Pieters/Utrecht University, Jingran Xu/Utrecht University, Quintijn de Leng/Utrecht University, Xingxing Fu/Utrecht University, Jaime Soza Parra/Utrecht University

Revealing route choice heterogeneity of metro passenger groups from large-scale mobile phone data (TRBAM-25-02104) - B543

Xiaolei Liu/Tongji University, Zhengyu Duan/Tongji University, Weifeng Li/Tongji University

Modeling path choice behavior of metro users by fusing mobile phone data and stated preference data (TRBAM-25-02105) - B542

Xiaolei Liu/Tongji University, Zhengyu Duan/Tongji University, Mengyi Wang/Tongji University

Does Travel behaviour Impacts by TOD and non-TOD residents and its consequences on urban environment in developing countries context (TRBAM-25-02254) - B547

Mr. Shrikrishna Raghuram kesharwani/National Institute of Technology Warangal, Kadali Raghuram/National Institute of Technology Warangal

Exploring the Impact of Built Environment on Life between Stations: A Hong Kong Case Study (TRBAM-25-02282) - B548

Yunting Miao/University of Hong Kong, Jiangping Zhou/University of Hong Kong

Effects of Data Aggregation on Built Environment-Mode Share Models around Rail and BRT Stations in the United States (TRBAM-25-02409) - B541

Sajjad Abdollahpour/Virginia Polytechnic Institute and State University, Huyen Le/Virginia Polytechnic Institute and State University, Ralph Buehler/Virginia Polytechnic Institute and State University, Steven Hankey/Virginia Polytechnic Institute and State University

A Two-Stage Trip Purpose and Socio-Economic Attributes Inference Model of Regular Transit Users (TRBAM-25-03013) - B549

Yitong Chen/Tongji University, Chengcheng Yu/Tongji University, Chao Yang/Tongji University

Self-Perceived Cyclist Typology and Actual Cycling Behavior: Empirical Evidence from Hangzhou, China (TRBAM-25-04029) - B550

Bin Chi/University of New South Wales, Kensington, Richard Unuigboje/University of New South Wales, Kensington, Jinwoo (Brian) Lee/University of New South Wales, Kensington

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Modeling Analysis of the Impact of Connected Autonomous Buses on Travel Behavior Considering the Trip Chain (TRBAM-25-05298) - B551
Yue Du/Beijing Jiaotong University, Xumei Chen/Beijing Jiaotong University, Jie Shen/Beijing Jiaotong University
Basic Psychological Needs Supporting Walking Motivation (TRBAM-25-05660) - B552
Hernan Ortiz-Ramirez/Tecnológico de Monterrey, Aura Ramirez/Tecnológico de Monterrey, Jose Vallejo-Borda/Tecnológico de Monterrey, Alvaro Rodriguez-Valencia/Tecnológico de Monterrey, Jonas De Vos/Tecnológico de Monterrey
User Preferences and Design Strategies for Customized Feeder Transit Access to Large Transportation Hubs: Insights from Shanghai (TRBAM-25-05674) - B553
Jing Teng/Tongji University, Tong Wu/Tongji University, Cen Zhang/Tongji University
Heat and Noise Exposure during Active Travel: A Systematic Review (TRBAM-25-05767) - B540
Ruochen Yin/Ohio State University, Huyen Le/Ohio State University
Unraveling the network effects in station ridership growth patterns under metro network expansion (TRBAM-25-05808) - B554
Fangyi Ding/University of Hong Kong, Yan Tang/University of Hong Kong, Yamin Wang/University of Hong Kong, Zhan Zhao/University of Hong Kong

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Emerging Research in Economics and Finance
Yunping Liang, University of Nebraska, Lincoln, presiding
Sponsored By Standing Committee on Economics and Finance

This Poster Session highlights innovations in economic and financial analysis (such as benefit-cost analysis, life cycle cost analysis, pricing studies, public private partnership evaluation, financial analysis, etc.). The objective is to share research findings and case studies that identify new methodologies, best practices, and promote the use of economic and financial analysis in the decision-making process. Selections are based on meritorious poster abstracts submitted to and selected by the TRB Economics and Finance Committee.

Fiscal Impact of Federally Capitalized State Infrastructure Banks on Leveraging State and Local Transportation Investment: A Causal Reexamination (P25-20363) - B582
Can Chen/Georgia State University, Xianchen Hou/Georgia State University, Chaowang Ren/Georgia State University
Trade-offs of Progressive Public-Private Partnerships (P3s) (P25-20364) - B583
Michael Garvin/Virginia Polytechnic Institute and State University, Jonathan Gifford/George Mason University, Syed Jawad Agha/Virginia Polytechnic Institute and State University, Youngjin Kim/George Mason University
Review of Administrative Costs in Road Usage Charging Projects (P25-20365) - B572
Hyemin Ju/Texas A&M University, College Station, Jacqueline Kuzio/Texas A&M Transportation Institute, Maxwell Steadman/Texas A&M Transportation Institute, Nick Wood/Texas A&M Transportation Institute, Mark Burris/Texas A&M University
Equity in Road Usage Charge Program – Current Considerations and Future Pathways (P25-20366) - B584
Hajra Shahab, Mathew Kitchen/ECONorthwest, Kyle Schroeckenthaler/EBP, Scott Boardman/Oregon Department of Transportation
Assessing Equity Shifts in Rural and Urban Infrastructure Funding Post-IIJA through a Longitudinal Analysis of RAISE Grants (P25-20367) - B580
Qadri Shaheen/University of Maryland, Qingbin Cui/University of Maryland, College Park
Development of Framework for Distance-Based Dynamic Toll Pricing for Mixed Traffic Conditions (P25-20368) - B585
Chintaman Bari/Mahindra University, Shubham Gupta/Ables Education, Ashish Dhamaniya/Sardar Vallabhbhai National Institute of Technology, Surat
Rapid Screening Financial and Economic Evaluation Model for Intercity Rail: Application to the Kingdom of Saudi Arabia (P25-20369) - B575
Tolu Oke/Odara Mobility LLC, Bader Alhujailan/Kingdom of Saudi Arabia Transport General Authority, Sultan Alkarbi/Transport General Authority - Saudi Arabia, Muneeza Alam/World Bank
The Fate And Impact Of Challenged Public-Private Partnership Projects: An Assessment Of U.S. Experience (P25-20375) - B573
CINDY A QUIROZ/George Mason University, Muhammet Sever/George Mason University, Jonathan Gifford/George Mason University, Carter Cassidy/University College, London
(continued)

Capturing Emission Reductions Using Carbon Credits: I-64 Case Study (P25-20376) - B581
Huan Zhou/University of Maryland, College Park, Qingbin Cui/University of Maryland, College Park
Where to Find $3.9 Billion Per Year in State Transportation Funding? (P25-20377) - B574
Ronald Davis/HNTB, Aarne Frobom/HNTB
Economic Impact Analysis of UAS for Bridge Inspections in HDC Counties: A Case Study in Kansas State (P25-20378) - B562
Man Liang/University of Maryland, College Park, Yunfeng Zhang/University of Maryland, College Park, Yize Li/University of Maryland, College Park, Qingbin Cui/University of Maryland, College Park
Improving Transportation Public Finance Statistics (TPFS) (P25-20379) - B563
Kenneth Notis/Office of the Assistant Secretary for Research and Technology (OST-R), Julia Edmonds/OST-R/Bureau of Transportation Statistics, Stephanie Lawrence/OST-R/Bureau of Transportation Statistics, Robert Armstrong/OST-R/Bureau of Transportation Statistics, Rebecca Van Dyke/High Street Consulting Group, LLC, Brian Lee/High Street Consulting Group, LLC, Catherine Reddick/Mercator Advisors, LLC
Estimating Optimal Timing of Highway and Railway Infrastructure Investment Across Countries (P25-20380) - B564
Bismark Agbelie/Catholic University of America
Economic Prioritization in Asset Management – Achieving Extended Goals (P25-20381) - B565
Rimon Rafiah/Economikr

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Current Research Topics in Economics and Finance
Daniel Vignon, New York University, presiding
Sponsored By Standing Committee on Economics and Finance, Standing Committee on Data for Decision Making

This Poster Session highlights innovations in economic and financial analysis (such as benefit cost analysis, life cycle cost analysis, pricing studies, public private partnership evaluation, financial analysis, etc.). The objective is to share research findings and case studies that identify new methodologies, best practices, and promote the use of economic and financial analysis in the decision-making process. Selections are based on meritorious research papers submitted to and selected by the TRB Economics and Finance Committee and the Data for Decision Making Committee.

Revenue-Cost Analysis for Roadway Assets in Texas (TRBAM-25-00309) - B587
Danilo Inoue/University of Texas, Austin, Christian Sabillon-Orellana/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin, Brianne Glover/University of Texas, Austin
Modeling economic impacts of transportation infrastructure in Pennsylvania considering spatial dependency across counties (TRBAM-25-00486) - B586
Asif Mahmud/Kittelson & Associates, Inc., Vikash Gayah/Kittelson & Associates, Inc., S. Ilgin Guler/Kittelson & Associates, Inc.
Cost Overruns in Publicly-Funded Shared Mobility Projects: An Analysis of Regulatory and Organizational Challenges (TRBAM-25-00488) - B577
Miriam Pinski/Shared Use Mobility Center, Nicholas Perloff-Giles/Shared Use Mobility Center
A Methodology to Screen Candidate Public-Private Partnership Projects for Financial and Economic Viability (TRBAM-25-01339) - B556
Patrick DeCorla-Souza/Federal Highway Administration (FHWA)
Demonstration of a Tool to Screen Financial Viability of Alternative Public-Private Partnership Structures for Delivery of Electric Vehicle Charging Infrastructure (TRBAM-25-01344) - B557
Patrick DeCorla-Souza/Federal Highway Administration (FHWA), Mahir Hossain/Federal Highway Administration (FHWA)
Cost Overruns of Infrastructure Investments – Distributions, Causes and Remedies (TRBAM-25-03801) - B578
Jonas Eliasson/Swedish Transport Administration (TRAFIKVERKET)
A Framework for Assessing the Performance of the Private Operator in Managing a Concession Highway (TRBAM-25-05100) - B579
Rodrigo Delgadillo/Universidad Santa María, Alelí Osorio-Lird/Universidad Santa María, Felipe Araya/Universidad Santa María, Tomás Echaveguren/Universidad Santa María, Susan Tighe/Universidad Santa María
A Review of Mileage-Based User Fees for Sustainable Transportation Funding: Challenges, Opportunities, and Research Gaps. (TRBAM-25-05155) - B555
RIFA TASNIA/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University, Daud Nabi Hridoy/North Carolina A&T State University, Md Sami Hasnine/North Carolina A&T State University
(continued)

Commuters' Willingness to Pay for Perceived Benefits of Congestion Pricing: The case of Hyderabad, India (TRBAM-25-05561) - B567
Naveed Marazi/Birla Institute of Technology and Science, Pilani, Bandhan Majumdar/Birla Institute of Technology and Science, Pilani, Prasanta Sahu/Birla Institute of Technology and Science, Pilani
Genetic Algorithm (GA) Based Optimization of Capital Structure in Design-Build-Finance-Operate-Maintain Toll Highway Infrastructures (TRBAM-25-06093) - B568
Zhe Han/University of Texas, Austin, Zhanmin Zhang/University of Texas, Austin
Auction-Based Tolling: An Economic Experiment Exploring Risk-based Heterogeneous Bidding Behavior (TRBAM-25-06337) - B569
Tung Vo/University of South Florida, Michael Maness/University of South Florida
Innovative Approaches to Leveraging Big Data in a Volatile Market (TRBAM-25-05142) - B559
Kevin Johnson/RSG, Stephen Lawe/RSG
Understanding the Geospatial Data Needs for Road User Charging (TRBAM-25-05238) - B558
Poya Harirchi/University of Hawai'i, Manoa, Roger Chen/University of Hawai'i, Manoa

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Toward More Sustainable Asphalt Pavements
James Willis, National Asphalt Pavement Association, presiding
Sponsored By Standing Committee on Production and Use of Asphalt

A Systematic Approach to Identifying and Verifying the Optimal Rejuvenator Dose in Hot Mix Asphalt Recycling (TRBAM-25-00693) - A290
Ankit Sharma/Colorado School of Mines, Gondaimei Rongmei Naga/Colorado School of Mines, Praveen Kumar/Colorado School of Mines, Amar Kumar Duggi/Colorado School of Mines, Jahnvi Sharma/Colorado School of Mines
Value-Added Recycling of Plant Waste for Modification of Asphalt Pavement Used Aggregates: Interface Enhancement (TRBAM-25-00868) - A296
Dan Zhao/Southeast University, Jingling Wang/Southeast University, Jiwang Jiang/Southeast University, Xingyu Gu/Southeast University
Methodology for Determining Critical Characteristics of RAP Quality Using Simple Tests Without Binder Extraction and Recovery (TRBAM-25-01675) - A284
Hui Chen/Texas A&M Transportation Institute, Fujie Zhou/Texas A&M Transportation Institute, Dheeraj Adwani/Texas A&M Transportation Institute, Amit Bhasin/Texas A&M Transportation Institute, Pravat Karki/Texas A&M Transportation Institute
Recycling of Solid Wastes as Bitumen Fillers Towards Sustainable Pavements: Performance Evaluation and Life Cycle Assessment (TRBAM-25-01753) - A287
Jiaqiu Xu/Hong Kong Polytechnic University, Zhen Leng/Hong Kong Polytechnic University, Zhaojie Chen/Hong Kong Polytechnic University, Zepeng Fan/Hong Kong Polytechnic University, Guoyang Lu/Hong Kong Polytechnic University, Dawei Wang/Hong Kong Polytechnic University
Incorporating Recycled and Repurposed Plastic into 100% Reclaimed Asphalt Pavement Using Warm Mix Asphalt Additive (TRBAM-25-01917) - A288
Basant Bhatt/University of South Alabama, Carly Charbonnet/University of South Alabama, Shenghua Wu/University of South Alabama
Sustainable Engineering vs. Environmental Stewardship of Asphalt Mixtures Containing 50% RAP and Recycling Agents (TRBAM-25-02138) - A292
Ibrahim Elnaml/Louisiana Department of Transportation and Development, Louay Mohammad/Louisiana Department of Transportation and Development, Gaylon Baumgardner/Louisiana Department of Transportation and Development, Samuel Cooper, III/Louisiana Department of Transportation and Development, Samuel Cooper, Jr/Louisiana Department of Transportation and Development
Evaluation of Fumes Emitted During Laboratory Methods of Incorporating Post-Consumer Recycled (PCR) Plastics in Asphalt Mixtures Via the Dry Process (TRBAM-25-02308) - A297
Raquel Moraes/National Center for Asphalt Technology (NCAT), Maede Mottaghi/National Center for Asphalt Technology (NCAT), Todd Tambling/National Center for Asphalt Technology (NCAT), CJ DuBois/National Center for Asphalt Technology (NCAT), Gayle King/National Center for Asphalt Technology (NCAT), Fan Yin/National Center for Asphalt Technology (NCAT), Randy West/National Center for Asphalt Technology (NCAT)

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Enhancing Early Life Strength of Cold Mix Asphalt: Effects of Cellulose Fibre and Fillers on Mechanical, Fatigue, and Rutting Properties (TRBAM-25-02615) - A298
Daniel Addae/No Organization, Mujib Rahman/No Organization, Ahmed Abed/No Organization
Impact of Lubricating Oil-Treated Crumb Rubber (LOCR) on Asphalt Overlay Performance (TRBAM-25-02704) - A291
Lei Yin/Michigan Technological University, Dongzhao Jin/Michigan Technological University, Qi Ren/Michigan Technological University, Meng Wu/Michigan Technological University, Zhanping You/Michigan Technological University
Evaluation of Environmental and Structural Performance of Asphalt Mixtures with Recycled Asphalt Pavement (TRBAM-25-02754) - A293
THIAGO MARQUES DA FROTA/Universidade Federal do Ceará, ALINE CAVALCANTI FIALHO VALE/Universidade Federal do Ceará, JUCELINE BATISTA DOS SANTOS BASTOS/Universidade Federal do Ceará, JORGE BARBOSA SOARES/Universidade Federal do Ceará
Initial Performance Evaluation of Cold Recycled Binder Course with Same Day Overlay on Heavy Traffic Expressway (TRBAM-25-05290) - A295
Stephane Charmot/Ingevity Corporation, Rino Effendy/Ingevity Corporation, Nordin Yunus/Ingevity Corporation, Azmi Atan/Ingevity Corporation
Experimental Results from Hawaii's first Pilot Project on Recycling of Plastics in HMA (TRBAM-25-04511) - A286
Adrián Archilla/University of Hawaii, Arthur Sickels/University of Hawaii, Saroj Pathak/University of Hawaii, Seyed Yashar Beheshti Shirazi/University of Hawaii
Effects of Reducing Production Temperatures Using Warm Mix Technologies on Burner Fuel Consumption and Mixture Performance Properties (TRBAM-25-05632) - A294
Mohammad Sadeghi/Auburn University, Biswajit Kumar Bairgi/Auburn University, Zane Hartzog/Auburn University, Surendra Chowdari Gatiganti/Auburn University, Rohith Reddy Vangala/Auburn University, Amir Jafarmilajerdi/Auburn University, Heather Dylla/Auburn University, Nam Tran/Auburn University, Benjamin Bowers/Auburn University
Cold Recycling of Asphalt Pavements: Towards a Roadmap for Wider Implementation by Road Agencies (TRBAM-25-04671) - A285
David Jones/University of California, Davis, Stephanus Louw/University of California, Davis

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Quality Control and Quality Assurance of Asphalt in the Laboratory and Field
Nathan Awwad, Indiana Department of Transportation, presiding
Sponsored By Standing Committee on Production and Use of Asphalt

Evaluation of a Low-Activity Nuclear Density Gauge for Acceptance Testing of Asphalt Pavements for Percent-Within-Limit and Averaging Specifications (TRBAM-25-02101) - A270
Linus Dep/Troxler Electronic Laboratories, Inc, James Sawyer/Troxler Electronic Laboratories, Inc, Travis Cable/Troxler Electronic Laboratories, Inc, Austin Futrell/Troxler Electronic Laboratories, Inc
Asphalt Density Monitoring during Compaction (TRBAM-25-00101) - A281
Lama Abufares/University of Illinois, Urbana-Champaign, Yihan Chen/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Use of Dielectric Profiling System (DPS) for Rapid Continuous Measurement of Asphalt Mix Density — Case Studies in Michigan (TRBAM-25-00407) - A272
Fawaz Kaseer/Michigan Department of Transportation, Hamad Muslim/Michigan Department of Transportation, Syed Waqar Haider/Michigan Department of Transportation, Ethan Akerly/Michigan Department of Transportation
Refining Thermal Segregation Assessment: Insights from Field Evaluations to Enhance Texas Standards (TRBAM-25-00936) - A260
Jinho Kim/Texas A&M Transportation Institute, Stephen Sebesta/Texas A&M Transportation Institute, Sheng Hu/Texas A&M Transportation Institute, Changju Bak/Texas A&M Transportation Institute
Quality Control and Quality Assurance of Recycled Hot-Mix Asphalt Mixtures (TRBAM-25-01546) - A271
Ya Gao/Kansas Department of Transportation, Mustaque Hossain/Kansas Department of Transportation, Christopher Jones/Kansas Department of Transportation, Blair Heptig/Kansas Department of Transportation
Evaluation of Using Vacuum Oven for Residue Recovery of Asphalt Emulsion and Cutback Asphalt for Routine Screening (TRBAM-25-04021) - A283
Satyavati Komaragiri/Indian Institute of Science, Hui Chen/Indian Institute of Science, Darren Hazlett/Indian Institute of Science, Zahra Sotoodeh-Nia/Indian Institute of Science, Enad Mahmoud/Indian Institute of Science, Fujie Zhou/Indian Institute of Science, Amit Bhasin/Indian Institute of Science

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Thermal Segregation and Compaction Quality Analysis of Asphalt Pavements using Unmanned Aerial Vehicles (UAV) (TRBAM-25-04279) - A280
Naaga Vedula/Arizona State University, Tempe, Masih Beheshti/Arizona State University, Tempe, Shivkesh Madasu/Arizona State University, Tempe, Hasan Ozer/Arizona State University, Tempe
Recommendations for Standardizing Mix Design and Quality Control Testing Procedures for Asphalt Treated Cold Recycled Materials (TRBAM-25-05413) - A282
Stephanus Louw/University of California, Davis, David Jones/University of California, Davis, Joseph Hammack/University of California, Davis, Heather Tom/University of California, Davis

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Performance Evaluation of Asphalt Mixtures and Pavements
Brett Williams, National Asphalt Pavement Association, presiding
Sponsored By Standing Committee on Production and Use of Asphalt

Construction of Full-Depth Porous Asphalt Pavement Sections for High-Traffic Volume Roadways- An Accelerated Pavement Test Case Study in New Jersey (TRBAM-25-05045) - A258
Abu Bakar Md. Siddique/Rowan University, Abhary Eleyedath/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Thomas Baird/Rowan University
Performance Evaluation of Asphalt Concrete Reinforced with Different Recycled Fibers (TRBAM-25-00290) - A256
Alvaro Cerdas-Murillo/Clemson University, Victor Estrada-Escalante/Clemson University, Fabricio Leiva/Clemson University
Cracking Test for Recycled Hot-Mix Asphalt Overlay Mixtures and Field Performance Correlation (TRBAM-25-00946) - A261
Ya Gao/Kansas Department of Transportation, Mustaque Hossain/Kansas Department of Transportation, Stefan Romanoschi/Kansas Department of Transportation
Evaluation of 5-Year Field Performance of 100% RAP Cold Mix Asphalt Overlay in A Warm and Wet Climate Zone (TRBAM-25-00964) - A278
Shenghua Wu/University of South Alabama, Connor Novack/University of South Alabama, Abeeb Oyelere/University of South Alabama
Performance of Cationic and Anionic Tack Coats: Curing Time, Application Rate, and Elevated Temperature Effects on Interface Shear Strength (TRBAM-25-02945) - A267
Muhammad Tasnim Alam/No Organization, B S Pushpendue Biswas/No Organization, Md Saddam Hossain/No Organization, Rafi Tarefder/No Organization
Laboratory versus Plant Production: Impact of Specimen Preparation Techniques on the Performance of Balanced Mix Design Asphalt Mixtures in Arkansas (TRBAM-25-03713) - A266
Amarjeet Tiwari/University of Arkansas, Fayetteville, Mohammad Tahir Ansari/University of Arkansas, Fayetteville, Andrew Braham/University of Arkansas, Fayetteville
Mechanical Performance and Environmental Impact Analyses of Missouri SMA Mixtures Incorporated with Recyclates (TRBAM-25-04474) - A262
Nandita Gettu/University of Missouri, Columbia, AHMED Hassanin Mohamed/University of Missouri, Columbia, Punyaslok Rath/University of Missouri, Columbia, William Buttlar/University of Missouri, Columbia
Evaluation of Spray-on Rejuvenator-treated Asphalt Concrete Pavements for Stiffness and Cracking Resistance (TRBAM-25-03939) - A276
Tanzila Islam/Michigan State University, Poornachandra Vaddy/Michigan State University, Adrián Archilla/Michigan State University, Muhammed Kutay/Michigan State University
Variability of Plant-Produced High Recycled Content Mixtures within a State (TRBAM-25-02804) - A257
Gabriel Macedo Duarte/North Carolina State University, Wei Xie/North Carolina State University, Cassie Castorena/North Carolina State University
Feasiblity and Perforamnce of Recycling Reclaimed Asphalt Pavement Using Activated Rubber Pellets through Semi-Wet Process (TRBAM-25-01454) - A277
Danning LI/Hong Kong Polytechnic University, Mou Shen/Hong Kong Polytechnic University, Zhen Leng/Hong Kong Polytechnic University, Zhaojie Chen/Hong Kong Polytechnic University, Zhifei Tan/Hong Kong Polytechnic University, Binbin Yin/Hong Kong Polytechnic University, Fuliao Zou/Hong Kong Polytechnic University

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Impact of Binder Rheological Characteristics and Source on the Intermediate-Temperature Cracking and Cost of Three FHWA EDC-6 Target Overlay Pavement Solutions (TRBAM-25-01150) - A268
Ibrahim Abdalfattah/University of Massachusetts, Dartmouth, Walaa Mogawer/University of Massachusetts, Dartmouth, Kevin Stuart/University of Massachusetts, Dartmouth

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Inspection of Non-Bridge Structures: Retaining Walls and Traffic Signal Mast Arms
Richard Dunne, Greenman-Pedersen, Inc., presiding
Sponsored By Standing Committee on Structures Maintenance

Traffic signal mast arms are one of the most important structures over the roadway. These structures ensure safe and efficient flow of traffic by supporting traffic signal displays above the roadway, where they are clearly visible to drivers. Traffic signal mast arms and poles serve as primary supports for traffic signal displays, signs, cameras, and sensors, providing guidance and information to motorists and pedestrians. These structures come in different configurations and heights, depending upon the road characteristics and needs of the intersection. The cantilever mast arm is the most common type. The mast arm-to-pole connection is a critical part of the structure contributing to or causing the failure of the entire structure.

Identifying a Threshold for the Detailed Inspection of Traffic Signal Mast Arm Welds (TRBAM-25-02193) - A300
Ryan Fries/Southern Illinois University, Edwardsville, Srisha Devkota/Southern Illinois University, Edwardsville, Anne Werner/Southern Illinois University, Edwardsville
Advancing Retaining Wall Inspections: Comparative Analysis of Drone-LiDAR, Pix4D viDoc, and Traditional TLS Methods for Enhanced Structural Assessment (TRBAM-25-05327) - A301
Max Wondolowski/University of Connecticut, Alexandra Hain/University of Connecticut, Sarira Motaref/University of Connecticut, Karen Dedinsky/University of Connecticut, Michael Grilliot/University of Connecticut

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Advances in Bridge Inspection
Amir Gheitasi, WSP, presiding
Sponsored By Standing Committee on Structures Maintenance

As Artificial Intelligence (AI) becomes ubiquitous in our everyday lives, the demand for training our workforce increases. Using AI models in the domain of bridge inspection has great potential to increase worker productivity by increasing the amount of data an inspector can process, to minimize subjective inspection results, and eventually improve efficiency. However, the high barrier to entry precludes many inspectors from using AI to its full potential. A web application called BridgeNet is presented to bridge the gap between inspectors and their domain expertise with state-of-the-art AI models by creating a framework that integrates bridge inspection with executabe AI models.

Reconfigurable Machine Learning Tool for Image-based Bridge Inspection and Management (TRBAM-25-04268) - A302
Kevin Lai/Missouri University of Science and Technology, Zhenhua Shi/Missouri University of Science and Technology, Genda Chen/Missouri University of Science and Technology
Non-contact Cable Force Identification Method Using 3D Laser Point Cloud Data (TRBAM-25-02248) - A303
Yanjie Zhu/Southeast University, Tong Zhou/Southeast University, Wen Xiong/Southeast University
Loosening mechanism of clamp bolt pre-tightening considering main cable creeping for suspension bridges (TRBAM-25-03378) - A304
Chenghong Shi/Southeast University, Peng Fei Zhang/Southeast University, Xiang Xu/Southeast University, Yuan Ren/Southeast University, Hua Kai Zheng/Southeast University, Zhao Yuan Guo/Southeast University, Wen Zhe Zhong/Southeast University
Automated Structural Component Recognition for Bridge Inspection Using Scribble Annotations (TRBAM-25-04549) - A305
Chenyu Zhang/Stony Brook University, Ke Li/Stony Brook University, Zhaozheng Yin/Stony Brook University, Ruwen Qin/Stony Brook University

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Mainstreaming Gendered Travel in a Non-Automobile World and Paving the Way Toward Inclusive Policies

Mira Patel, Washington Metropolitan Area Transit Authority, presiding

Sponsored By Standing Committee on Women and Gender in Transportation

This session explores gender differences in travel patterns when using public transportation, ridesharing, and active transportation. With a growing need to mainstream gender and promote gender-inclusive policies, this session also explores work being done across the world to bridge this divide with unique perspectives from academia, industry, and the government.

Explainable Artificial Intelligence Approach for Understanding Gender Differences in Bike Sharing Services (TRBAM-25-00480) - A182

Eun Lee/Texas A&M Transportation Institute

Spatial Accessibility for Women: A Systematic Literature Review (TRBAM-25-01451) - A196

Ulfah Rahmah/Monash University, Alexa Delbosc/Monash University, Md Kamruzzaman/Monash University

Gender-Specific Risk Perceptions of COVID-19 Transmission in Different Travel Modes during the Normalization Phase: Insights from a Multivariate Ordered Probit Analysis (TRBAM-25-01760) - A176

Shengfang Niu/Hebei University of Technology, Pei Chen/Hebei University of Technology, Tao Wu/Hebei University of Technology, Zitao Du/Hebei University of Technology, Xinwei Ma/Hebei University of Technology

Women of Rail: The Path to Gender Diversity (TRBAM-25-02597) - A177

Anthony Dontoh/University of Memphis, Stephanie Ivey/University of Memphis, Janey Camp/University of Memphis, Kassandra Arellano/University of Memphis, Stefano Blasoni/University of Memphis, Dustie Flowers/University of Memphis, Jaila Kimbro/University of Memphis, Logan Sirbaugh/University of Memphis, Martin Lipinski/University of Memphis, Tanisha Hall/University of Memphis, Kristen Jud/University of Memphis, Jim McAteer/University of Memphis, Catherine K. Armwood-Gordon/University of Memphis, Shala Blue/University of Memphis

Gender and The Journey to Work: Spatial Discrepancies in Transit Supply and Utilization in Melbourne (TRBAM-25-03077) - A197

Ulfah Rahmah/Monash University, Alexa Delbosc/Monash University, Md Kamruzzaman/Monash University

Bridging the Divide: Unraveling Gender Differences in Post-Pandemic Shared Micromobility Usage Across the United States (TRBAM-25-03203) - A178

Farzana Tuli/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville, Anindya Debnath/University of Arkansas, Fayetteville

Analyzing Accessibility Disparities in Shared Bike Usage Across Gender and Age Subgroups: Implications for Equity from Large-Scale Trip Data (TRBAM-25-03207) - A172

Maozhen Zhou/Tongji University, Yuntao Guo/Tongji University, Ziqi Yang/Tongji University, Lu Teng/Tongji University, Xinghua Li/Tongji University

The Effectiveness of Gender Equity Initiatives in the USDOT Hiring Process: An Analysis from 2017 to 2021 (TRBAM-25-03501) - A192

Zahra Halimi/University of Maryland, College Park, Dongyang Zhen/University of Maryland, College Park, Qingbin Cui/University of Maryland, College Park

Hitting the Target: What 75% Travel Means for Men and Women and Their Travel Modes (TRBAM-25-03703) - A186

Shanna Trichês Lucchesi/iRAP, Monica Olyslagers/iRAP, James Bradford/iRAP

From 'What is Gender' to 'Not My Job': Institutional Barriers to Mainstreaming Gender in Transportation Planning in Panchkula, India (TRBAM-25-05351) - A187

Seema Singh/Cambridge Systematics, Inc.

Mind the Gender Gap: A Case Study Analysis of Transit Policies and Design Guidelines for Gender Inclusive Transit Planning (TRBAM-25-05420) - A181

Musharrat Jahan/University of California, Davis, Candace Brakewood/University of California, Davis, Susan Pike/University of California, Davis, Kari Watkins/University of California, Davis

Gender Difference in Active Transport Uptake in the Context of a Developing Megacity (TRBAM-25-05683) - A191

Md Shafiul Islam Akash/Bangladesh University of Engineering and Technology, Kashfi Sharaf/Bangladesh University of Engineering and Technology, Syed Navid Wali/Bangladesh University of Engineering and Technology, Email Haque Munmun/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, Moinul Hossain/Bangladesh University of Engineering and Technology

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Stick or Shift? Analyzing the Evolution of Travel Behavior Among Young Adults in the United States (TRBAM-25-06025) - A170
Srimantini Bhattacharya/Kittelson & Associates, Inc., Suhail Asghar/Kittelson & Associates, Inc., Nikhil Menon/Kittelson & Associates, Inc., Makarand Gawade/Kittelson & Associates, Inc.
Design Approaches to Secure Public Transit Vehicles for People of All Genders (P25-20701) - A188
Savana King/OST-R/Volpe Center, Gwyn Kash/OST-R/Volpe Center, Maggie Harger/OST-R/Volpe Center, Patrick Elwood/OST-R/Volpe Center, Michael Green/OST-R/Volpe Center
How do Couples Divide Their Mobility of Care? (P25-20702) - A180
Naomi Panjaitan/University of California, Davis, Susan Pike/University of California, Davis
Navigating Norms and Nerves: Uncovering What Stops Women from Driving in North India (P25-20703) - A198
Mansha Swami/Morgan State University, Parisa Masoumi/Morgan State University, Sankalp Swami/University of the Cumberlands, Mansoureh Jeihani/Morgan State University
Federal Highway Administration Gendered Travel Pattern Data Insights (P25-20704) - A208
Jennifer Andre/Federal Highway Administration (FHWA), Jenna Sinclair/Federal Highway Administration (FHWA), Allison Weber/Federal Highway Administration (FHWA), Rory Austin/Federal Highway Administration (FHWA)
Evaluating the Integration of Gender Equity in Smart City Transportation Initiatives: A Study of U.S. Cities (P25-20706) - A171
Faith Arayi/Pennsylvania State University, Harrisburg, Salman Haider Khan/Pennsylvania State University, Harrisburg, Nikhil Menon/Kittelson & Associates, Inc.
Trans on Transit: A Mixed-Methods Study of Transgender and Nonbinary Experiences of US Public Transit Spaces (P25-20707) - A207
Tam Guy/University of California, Los Angeles
Sexual Crimes and Harassment on Public Transportation In Chile: A Gender Approach (P25-20708) - A206
Alejandra Valencia/Pontificia Universidad Católica de Valparaíso, Chile, Gustavo Garcia Melero/University of Colorado, Denver, Maria Calahorra-Jimenez/California State University, Fresno

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Bridging the Gap: Transport Equity, Financial Stability, and Traffic Management in the Global South
Jeremy Halpern, presiding
Seema Singh, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Transportation in the Developing Countries, Subcommittee on Roadway System Management and Operations, Safety, and Resilience, Subcommittee on Sustainable and Equitable Access and Mobility for All

This session explores critical issues in transportation across the Global South, focusing on equity, financial stability, and traffic management. Topics cover both methodological models and approaches as well as novel data collection - filling a gap where existing research primarily uses data and norms of the Global North. The papers cover interrelated issues spanning urban to rural analysis, assessing transport poverty to contracting transport models.

Examining the Relationship between Perceived and Measured Walking Accessibility (TRBAM-25-02774) - A200
Yan Wang/Southeast University, Cong Qi/Southeast University, Yuliang Guo/Southeast University, Jiawen Yu/Southeast University, Xiucheng Guo/Southeast University
Assessing Disparities in Road Transport Services in Kenya: A GIS and Machine Learning Approach (TRBAM-25-04274) - A201
Rishav Jaiswal/University of Maryland, Manoj Jha/University of Maryland, Hellon Ogallo/University of Maryland, A Archita/University of Maryland
A Study of the Panic Driving Behavior in Non-Lane Based Heterogenous Traffic (TRBAM-25-04509) - A190
Ifratul Hoque/Bangladesh University of Engineering and Technology, Madeha Sattar Khan/Bangladesh University of Engineering and Technology, Maria Mehrin/Bangladesh University of Engineering and Technology, Mushirah Tasnim/Bangladesh University of Engineering and Technology, Sadia Tahsin Quadir/Bangladesh University of Engineering and Technology, Sadia Afrin Aiswarza/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, AFM Saiful Amin/Bangladesh University of Engineering and Technology
Upgrade of King Abdullah bin Abdulaziz Road in Dammam to Meet Latest Urban and Humanization Criteria: a Case Study (TRBAM-25-04583) - A202
Zaher Salim Al Basiouni Al Masri/No Organization, Abdullah Khalaf Al-Oufi/No Organization, Abdullatif Almukhadhab/No Organization, Sarah Alfozan/No Organization
(continued)

Factors Affecting for Private Vehicle Ownership in Sri Lanka (TRBAM-25-04690) - A203
Niranga Amarasingha/Sri Lanka Institute of Information Technology, Damrisi Kawsika Hewa Lunuwila/Sri Lanka Institute of Information Technology
The Influence of Urban Built Environment on Motorcycle-Related Traffic Collisions Exposure at the Macro-Level Scale (TRBAM-25-04776) - A204
Mario Penaranda-Marquez/Ohio University, Maria Valencia-Cardenas/Ohio University, Carlos A. Gonzalez-Calderon/Ohio University
Challenges in Climate Action Planning and Implementation in Developing Countries: A Case Study of Low Carbon Urban Mobility Governance in Thailand (TRBAM-25-05384) - A205
Saksith Chalermpong/Chulalongkorn University, Patanapong Sanghatawatana/Chulalongkorn University, Watcharapong Wongkaew/Chulalongkorn University, Phathinan Thaithatkul/Chulalongkorn University, Ornicha Anuchitchanchai/Chulalongkorn University
Improving Urban Mobility in Developing Countries: Effectiveness of Adaptive Traffic Signal Control in Non-Lane-Based Oversaturated Mixed Traffic (TRBAM-25-06434) - A210
Siam Junaed/Ahsanullah University of Science and Technology, Nazmus Sakib/Ahsanullah University of Science and Technology, Shariha Diya/Ahsanullah University of Science and Technology, Maliha Jannat/Ahsanullah University of Science and Technology, Md Shahid Mamun/Ahsanullah University of Science and Technology, Ahmed Hossain/Ahsanullah University of Science and Technology

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Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Dwight David Eisenhower Transportation Fellowship Program, Part 1 (Part 2, Session 2166; Part 3, Session 3155)
Latoya Jones, Federal Highway Administration (FHWA), presiding
Sponsored By Executive Committee

An opportunity to explore the topics undergraduate and graduate students are researching at institutions across the country. Dwight David Eisenhower Transportation Fellowship Program research presentations are selected by FHWA and are not reviewed by TRB standing committees.

Offloading Autonomous Vehicle Computations through Edge Computing and Roadside Units (P25-21219) - A100
Michael Ly/California State Polytechnic University, Pomona
Guide on Progressive Design-Build for Transportation Projects (P25-21221) - A101
Chaimae Nacir/California State Polytechnic University, Pomona
Enhancing Road Safety Through Cluster Analysis of US DOT Accident Data (P25-21222) - A102
Coreen Mullen/Elizabeth City State University
3D Printed VTOL Mini Flying Wing (P25-21223) - A103
Rylan Penley/Elizabeth City State University
Structural Health Monitoring (SHM) of Acrylonitrile Styrene Acrylate (ASA) using Piezoelectric Wafer Active Sensors (PWASs) in Transportation (P25-21243) - A104
David Warren/Elizabeth City State University
Detecting Intruder Unmanned Aerial Vehicle Using Machine Learning (P25-21244) - A105
Isabela Lujan/Elizabeth City State University
Assessing the Impact of Commuting and On-Campus Living on Student Success: A Case Study on Florida A & M University on Transporation Modes and Academic Success Outcomes. (P25-21245) - A106
John Williams/Florida A&M University-Florida State University
Exploring the Efficiency of Sustainable Materials in Bridge and Pavement Construction (P25-21246) - A107
Saniya Lewis/Florida A&M University-Florida State University
Importance and Advancements of Occupant Safety Technologies (P25-21247) - A108
Junie Saint Juste/Florida A&M University
Investigating the Resilience of Rising Sea Levels on Florida's Road Infrastructure (P25-21248) - A110
Emmanuel Ray/Florida A&M University-Florida State University
Mobile Grocery Stores as a Catalyst for Transportation Equity and Food Security (P25-21249) - A111
Javon Williams/Florida A&M University-Florida State University
Land-Use Patterns and Equitable Transportation: A Focused Study Plan (P25-21250) - A112
Charles Wally/Florida A&M University-Florida State University

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VSU Parking Decal Detection Using Visual AI (P25-21277) - A142
Daniel Stein/Virginia State University
Assessing Equity in Public Transportation with Open-Source Data and Tools (P25-21404) - A143
Ruimin Lin/University of Hawai'i, Manoa
VSU A.L.I.C.E. (Autonomous Lunar Icy-regolith Collection Excavator) Lunabotics (P25-21405) - A144
Desmond Komla/Virginia State University
VSU A.L.I.C.E. (Autonomous Lunar Icy-regolith Collection Excavator) Lunabotics (P25-21406) - A145
Melody Enwerem/Virginia State University
Electric Batteries (P25-21421) - A146
Alisha Richardson/Stillman College
How transit-oriented development (TOD) and financial incentives can improve transit use and create more sustainable communities (P25-21422) - A147
Hafsa Farooqui/California State University, Fullerton
Effects of temperature and other in-situ parameters on concrete resistivity for the improvement of bridge deck service life models (P25-21423) - A148
Paolo Madrigal/California State University, Fullerton
Sustainable Construction Methods and Materials for Retaining Walls along American Highways (P25-21424) - A150
Daniel Santa Maria/California State University, Fullerton
Autonomous Lunar Icy Regolith Collection Excavator (P25-21425) - A151
Olasubomi Favour Adesoye/Virginia State University
Balancing Profitability and Sustainability in the Transportation Sector (P25-21426) - A152
Miles Durant/North Carolina A&T State University
Job-Related Impacts of Urban Sprawl (P25-21433) - A153
Joshua Edwards/North Carolina A&T State University
Autonomous Vehicles and the Future of Transportation Logistics (P25-21498) - A154
Derick Kyere/North Carolina A&T State University
Long-Term Impact Analysis of Mileage-Based User Fees: A Case Study from North Carolina (P25-21499) - A155
Mikal Ali/North Carolina A&T State University
Optimizing Traffic Signals Through Statistical Data Analysis (P25-21500) - A156
Myra Ortigosa/University of Hawai'i, Manoa

2241

Monday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Navigating the Future of On-Demand Mobility: Innovations in Shared Automated Vehicles and Ridehailing Dynamics
Aarion Franklin, Michael Baker International, Inc., presiding
Sponsored By Standing Committee on Innovative Public Transportation Services and Technologies

Join us for an engaging poster session exploring the latest innovations in shared automated vehicles (SAVs) and ridehailing. This session showcases a diverse array of research such as operational and labor cost modeling for automated taxis, the impact of ridehailing on household car ownership, and optimization strategies for SAVs and ridehailing. Connect with researchers and practitioners to discuss the future and evolving landscape of shared mobility services.

Modeling the Operational and Labor Costs of Autonomous Robotaxi Services (TRBAM-25-00099) - A215
Leah Kaplan/George Washington University, Lola Nurullaeva/George Washington University, John Helveston/George Washington University
Solving a Ridesharing-Based First-and-Last-Mile Problem with an Autonomous Modular Shuttle System (TRBAM-25-00711) - A216
Bo Sun/National University of Singapore, Qiang Meng/National University of Singapore
Exploring Integration with Innovative Mobility Options to Complement Public Transit Networks. Insights from the Chicago Metropolitan Area (TRBAM-25-00891) - A217
Pietro Buffoni/University of Illinois, Chicago
Multi-Objective Optimization for Shared-Ride Automated Mobility-on-Demand Services (TRBAM-25-01455) - A218
Min-Ci Sun/Texas A&M University, Cheng Zhang/Texas A&M University, Luca Quadrifoglio/Texas A&M University

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Comparing The Performance Of Collaborative And Competitive Market Of Ride-sharing System: A Dynamic Graph-based Method (TRBAM-25-01480) - A222
Xin Dong/Pennsylvania State University, University Park, Jose Ventura/Pennsylvania State University, University Park, Vikash Gayah/Pennsylvania State University, University Park
Identification and Visualisation of Taxi Passenger Hotspots Considering Data Inhomogeneity (TRBAM-25-01840) - A226
Yuxin Zheng/Southeast University, Jingyue Wang/Southeast University, Zirui Zhong/Southeast University
Preference-Based Matching Mechanism for Large-Scale Ride-Sourcing Market Considering Service Diversity and Matching Thickness (TRBAM-25-02097) - A227
Shixuan Tang/Hong Kong Polytechnic University, Yanyan Ding/Hong Kong Polytechnic University, Sisi Jian/Hong Kong Polytechnic University
Making Real-Time Relocation-Dispatch-Pricing Decisions for Large-Scale Carsharing Systems under Demand and Supply Uncertainty (TRBAM-25-02292) - A228
Mengjie Li/Tongji University, Haoning Xi/Tongji University, Chi Xie/Tongji University
Optimizing On-Demand Shared Mobility Services with A Rollout Reinforcement Learning Algorithm: A Case Study Using Real-World Data (TRBAM-25-02530) - A213
Siavash Farazmand/Concordia University, Seyed Mehdi Meshkani/Concordia University, Zachary Patterson/Concordia University, Nizar Bouguila/Concordia University
Non-Myopic Dispatch in Large-Scale On-Demand Ride-Pooling Systems Using Simulation-Informed Reinforcement Learning (TRBAM-25-02548) - A230
Farnoosh Namdarpour/New York University, Joseph Chow/New York University
Challenges, Opportunities, and Strategies for the Electrification of the Ridehailing Fleet (TRBAM-25-02670) - A221
James Giller/University of California, Davis, Xiatian Iogansen/University of California, Davis, Giovanni Circella/University of California, Davis, Mischa Young/University of California, Davis, Yongsung Lee/University of California, Davis
Innovative Hybrid Transit Solutions: Integrating On-Demand and Fixed-Route Services for the First-Mile Problem (TRBAM-25-02753) - A214
Seyed Mehdi Meshkani/Concordia University, Siavash Farazmand/Concordia University, Nizar Bouguila/Concordia University, Zachary Patterson/Concordia University
Fair Optimization of Mobility Subsidies in Multimodal Transportation Networks (TRBAM-25-02859) - A231
Lindsay Graff/Carnegie Mellon University, Sean Qian/Carnegie Mellon University, Katherine Flanigan/Carnegie Mellon University, Peter Zhang/Carnegie Mellon University
Can E-hailing Improve Taxi Service Availability in Dense Cities? A Comparative Study from Hong Kong (TRBAM-25-03218) - A232
Xinyu Wang/Hong Kong Polytechnic University, Mingxi Li/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University
Ridepooling and Public Transit - How Pricing Schemes Reveal the Trade-off Between Intermodality and On-Demand Efficiency (TRBAM-25-03533) - A233
Tilmann Schlenther/Technische Universitat Berlin, Timofey Volotskiy/Technische Universitat Berlin, Gregor Leich/Technische Universitat Berlin, Felix Zwick/Technische Universitat Berlin, Nico Kühnel/Technische Universitat Berlin, Jaroslav Smirnov/Technische Universitat Berlin, Kai Nagel/Technische Universitat Berlin
Real-Time Demand Responsive Transit Operations to Improve Pickup Punctuality (TRBAM-25-04634) - A234
Khaknazar Mukash/Korea Advanced Institute of Science and Technology, Hyunmyung Kim/Korea Advanced Institute of Science and Technology, Junsik Park/Korea Advanced Institute of Science and Technology, Yoo-Jin Chang/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology
Multi-Stage Stochastic Linear Programming for Shared Autonomous Vehicle System Operation and Design with On-Demand and Pre-Booked Requests (TRBAM-25-04704) - A235
Riki Kawase/Tokyo Institute of Technology
Investigating Customers' Bundle Choices and Subscription Patterns in a Large-Scale Mobility as a Service (MaaS) Trial (TRBAM-25-05750) - A236
Xin Chen/University of Queensland, Ying Lu/University of Queensland, Jake Whitehead/University of Queensland, Mark Hickman/University of Queensland
Corner-to-Corner Mobility-on-Demand: Measuring Operator Benefits and User Costs under Uncertain Travel Times (TRBAM-25-05830) - A224
Navjyoth Jayashankar Shobha/Argonne National Laboratory, Krishna Murthy Gurumurthy/Argonne National Laboratory, Michael Hyland/Argonne National Laboratory, Younghun Bahk/Argonne National Laboratory, Felipe de Souza/Argonne National Laboratory, Omer Verbas/Argonne National Laboratory, Zifan Wang/Argonne National Laboratory

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Towards Stable and Fair Ride-Sourcing Service: Integrating Emerging Vehicle Fleet Technologies (TRBAM-25-05942) - A225
Hui Shen/Argonne National Laboratory, Yantao Huang/Argonne National Laboratory, Krishna Murthy Gurumurthy/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory
Simulation of Policies for Automated Ride-Hailing and Ride-Pooling Services (TRBAM-25-06088) - A237
Grace Kagho/ETH Zurich, Miloš Balać/ETH Zurich, Michael van Eggermond/ETH Zurich, Alexander Erath/ETH Zurich
Predicting Offers for Mobility-on-Demand Services: a Machine Learning-based Approach (TRBAM-25-06187) - A212
Chenhao Ding/No Organization, Florian Dandl/No Organization, Klaus Bogenberger/No Organization
Impact of Experiential Pilot Trial on Electric 3-Wheeler (e3W) Transition–A Case Study of Amritsar City, Punjab (TRBAM-25-06288) - A238
Seshadri Raghavan/Council on Energy, Environment and Water, Shubhi Vaid/Council on Energy, Environment and Water
Investigating the Effects of Ridesourcing on the Dynamics of Household Car Ownership using United Kingdom Household Longitudinal Study Data (TRBAM-25-00540) - A240
Pinar Bilgin/University of Leeds, Giulio Mattioli/University of Leeds, Malcolm Morgan/University of Leeds, Zia Wadud/University of Leeds
Optimizing Automated Mobility on-Demand Operation with Markovian Model: A Case Study of the Tel-Aviv Metropolis in 2040 (TRBAM-25-01713) - A241
Gabriel Dadashev/Tel Aviv University, Bat-hen Nahmias-Biran/Tel Aviv University, Lampros Yfantis/Tel Aviv University
Methodology to Assess Inter- and Intrapersonal Variability in Carsharing Usage (TRBAM-25-02460) - A242
Emilie Savard/Ecole Polytechnique de Montreal, Martin Trépanier/Ecole Polytechnique de Montreal, Catherine Morency/Ecole Polytechnique de Montreal
A Joint Optimization and Simulation Method for Shared Automated Electric Vehicles (TRBAM-25-03048) - A243
Shiqi Yang/Southeast University, Kai Huang/Southeast University, Zhiyuan Liu/Southeast University
Investigating Heterogeneity in User Acceptance of Autonomous Mobility-On-Demand Services Using Multinomial Mixed Logit-Based Recursive Partitioning (TRBAM-25-03593) - A244
Juhyoun Youm/Yonsei University, Jaehyung Lee/Yonsei University, Jinhee Kim/Yonsei University
Semi-on-Demand Off-Peak Transit Services with Shared Autonomous Vehicles - Service Planning, Simulation, and Analysis in Munich, Germany (TRBAM-25-03986) - A211
Max Ng/Technische Universitat Munchen, Roman Engelhardt/Technische Universitat Munchen, Florian Dandl/Technische Universitat Munchen, Vasileios Volakakis/Technische Universitat Munchen, Hani Mahmassani/Technische Universitat Munchen, Klaus Bogenberger/Technische Universitat Munchen
A Recursive Logit Model for Vacant Ride-Sourcing Vehicle Routing Behavior in a Large Network (TRBAM-25-05748) - A245
Guocheng Jiang/University of Massachusetts, Amherst, Song Gao/University of Massachusetts, Amherst
Decline of Ride-splitting: A Case Study of New York City (TRBAM-25-06347) - A223
Ayush Pandey/University of Illinois, Urbana-Champaign, Hao Liu/University of Illinois, Urbana-Champaign, Xin Dong/University of Illinois, Urbana-Champaign, Lewis Lehe/University of Illinois, Urbana-Champaign, Vikash Gayah/University of Illinois, Urbana-Champaign
Are All Ride-hailing Trips Created Equal? An Examination of Additional Trips Enabled by Ride-hailing and the Users Who Make Them (TRBAM-25-00484) - A220
Patrick Loa/University of California, Davis, Xiatian Iogansen/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis

2168 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 151B
Roadway Digital Infrastructure and Cities
Stephanie Dock, District Department of Transportation, presiding
Sponsored By City Transportation Issues Coordinating Council, Standing Committee on Intelligent Transportation Systems

Roadway digital infrastructure (RDI) in cities has some distinct nuances from broader RDI discussions: the work is primarily on arterial networks, infrastructure can be a whole range of ages and stages of connectivity, and the modes and populations you support are often more varied. This panel will explore how a handful of cities think about RDI and what they explore through pilots or implementation.

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City of Bellevue, Washington (P25-20767)
Franz Loewenherz/City of Bellevue
Seattle: Curb Data and Digital Infrastructure (P25-20811)
Mary Catherine Snyder/Seattle Department of Transportation

2169

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon C
International Perspectives on the Regulatory Challenges of Remote Automated Vehicle Operations
Jane Lappin, Blue Door Strategy and Research, presiding
Sponsored By Standing Committee on Vehicle-Highway Automation, International Coordinating Council, Standing Committee on Intelligent Transportation Systems

Remote operations for automated vehicles are an increasingly important element of automated driving systems with significant safety implications. There are numerous regulatory initiatives around the world moving to address the challenge, including remote driving and remote assistance to the system. This session will continue the discussion begun in November at a workshop organized by the TRB International Working Group on Connected and Automated Vehicles with experts from most of Europe, SDOs, US regulators, and industry with the objective of presenting a taxonomy for this complex set of activities, questioning the safety implications, and considering the opportunity for harmonized international regulations.

French Perspective (P25-20651)
Xavier Delache/French Ministry of Transport
German Perspective (P25-20652)
Lena Plum/Bundesanstalt für Strassenwesen
European Union Perspective (P25-20653)
Biagio Ciuffo/JRC: European Commission Joint Research Centre
Industry Perspective (P25-20654)
Edward Straub/SAE International
California Perspective (P25-20655)
Bernard Soriano/California Department of Motor Vehicles
US Motor Vehicle Administrators' Perspective (P25-20673)
Paul Steier/American Association of Motor Vehicle Administrators (AAMVA)

2170

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon B
2025 Traffic Control Device Student Challenge: Innovative Traffic Control Device Solutions to Improve Roadway Worker Safety
Nagham Matout, American Traffic Safety Services Association, presiding
Fan Ye, Ohio Northern University, presiding
Sponsored By Standing Committee on Traffic Control Devices

Now in its 8th year of competition, the objective of the Traffic Control Device (TCD) Student Challenge is to promote innovation and stimulate ideas in the traffic control devices area with a goal to improve operations and safety. The challenge is sponsored by and conducted cooperatively by the Transportation Research Board (TRB) Standing Committee on Traffic Control Devices (ACP55) and the American Traffic Safety Services Association (ATSSA). The theme for the 2025 TCD Student Challenge is Innovative Traffic Control Device Solutions to Improve Roadway Worker Safety.

Improving Roadway Worker Safety Using Temporary Rumble Strips and Barrel Cover (P25-20957)
Gagan Gupta/Michigan State University, Sagar Keshari/Michigan State University, Sakar Pahari/Michigan State University
Temporary Smart Speed Bumps and Wearable Haptic Feedback Devices for Word Zone Safety University of Illinois Urbana-Champaign (P25-20958)
Dewan Tanvir Ahammed/University of Illinois, Urbana-Champaign
Conditional Automated Traffic Flagger (P25-20959)
Alexa Baruela/Oregon State University, Emily Dahbura/Oregon State University, Eamon Haverty/Oregon State University, Charles Tuckfield/Oregon State University

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DrumSense: An Intelligent Platform to Enhance Work Zone Safety and Data Collection (P25-21066)
Seth Wilder/North Carolina State University
Camera-Assisted AFADs (P25-21067)
Emilio Ronaldo Calderon/Oregon State University, Aiden Gray/Oregon State University, Keith Kobayoshi/Oregon State University
Automated Audible TMA Alert System (P25-21068)
Neema Jakisa Owor/University of Missouri, Columbia, Linlin Zhang/University of Missouri
Safeguarding Roadside Workers: Innovating Work Zone Safety (P25-21069)
Jean Paul Talledo Vilela/Virginia Polytechnic Institute and State University, Marc Issa/Virginia Polytechnic Institute and State University
Multi-Tiered Traffic Control and Safety System for Construction Zones Using Temporary Asphalt Text, Lidar, and Work Zone Intrusion Monitoring (P25-21070)
Quinn Packer/University of Connecticut, Manmohan Joshi/University of Connecticut, Haimanti Bala/University of Connecticut, Prakash Ranjan/University of Connecticut, Sepehr Golrokh Amin/University of Connecticut
Use of Rectangular Rapid-Flashing Beacons (RRFBs) in Improving Worker Safety (P25-21071)
Hellen Shita/Florida International University
Smart Wrist Band and LED Helmet Integrated to Speed Detector LED Screen (P25-21072)
Ernest Nsong Asiedu/Auburn University, Tonghui Li/Auburn University, Md Roknuzzaman/Auburn University, Li Quan/Auburn University

2171

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon A
Decision Making with Safety Surrogates
Jun Liu, University of Alabama, presiding
Sponsored By Standing Committee on Transportation Safety Management Systems

Development of a Driver Safety Reward System Incorporating YOLO-based Traffic Violation Detection at Roundabouts under Highly Heterogeneous Traffic (TRBAM-25-01152)
Abhijnan Maji/Indian Institute of Technology, Roorkee, Apeksha Shah/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee
Assessing Traffic Conflicts Severity Through Simulated Collision Dynamics and Impact Analysis (TRBAM-25-04594)
Ahmed Mohamed/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
Traffic Conflict-Based Micro-level Hotspots Identification at Signalized Intersections (TRBAM-25-05224)
Nuri Park/University of Central Florida, Juneyoung Park/University of Central Florida, Yang-Jun Joo/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida
Estimating Incident-Induced Delays Using Connected Vehicle Data with Machine Learning Algorithms (TRBAM-25-03870)
Minsoo Oh/Iowa State University, Jing Dong-O'Brien/Iowa State University

2172

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 103A
To Use or Not to Use Helmets and Seatbelts: Examinations of Key Influences in Various Countries
Praveena Penmetsa, University of Alabama, presiding
Shashi Nambisan, University of Nevada, Las Vegas, presiding
Sponsored By Standing Committee on Occupant Protection

This session features presentation that examine key influences / factors that affect the use of safety equipment such as helmets by bicyclists and seat belts by motor vehicle occupants. They include the analyses of observational and survey data from various geographic settings across the world.

Investigation of the Influence of Geometrical and Temporal Variabilities on Seatbelt Non-compliance Behavior in New Jersey (TRBAM-25-05131)
Md. Arifuzzaman Nayeem/Rowan University, Ahmed Sajid Hasan/Rowan University, Deep Patel/Rowan University, Mohammad Jalayer/Rowan University

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Determinants of Helmet Usage among Motorized Two-Wheeler Riders: A Case Study of Tiruchirappalli City (TRBAM-25-06189)
Rohit Kumar Gupta/National Institute of Technology, Tiruchirappalli, Darshana Othayoth/National Institute of Technology, Tiruchirappalli
Childhood Interpersonal Factors and Educational Initiatives Associations with Helmet Use Among a Sample of College Students (TRBAM-25-01336)
Kayleigh Murray/University of South Florida, Tampa, Leomar White/University of South Florida, Tampa, Jason Jackman/University of South Florida, Tampa
The Influence of Educational Experience on Helmet Wearing Among E-Bike Riders (TRBAM-25-04811)
Huixin Zhang/Tongji University, Xuesong Wang/Tongji University, Shishay Gebru/Tongji University, Andrew Morris/Tongji University

2173

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 102B
Heavy Vehicle Drivers' Risk Analysis with Innovative Approaches
Mouyid Islam, Michigan Department of Transportation, presiding
Sponsored By Standing Committee on Truck and Bus Safety

Risk Assessment of Bus Drivers Considering Physical and Psychological Health Using a Risk Scoring Model (TRBAM-25-03331)
Yujun Jiao/Tongji University, Xuesong Wang/Tongji University, Andrew Morris/Tongji University, Yueng-hsiang Huang/Tongji University, Mengjiao Wu/Tongji University
Truck Drivers' Cognitive Feature Learning with Multimodal Information Fusion (TRBAM-25-03387)
Qi He/Tongji University, Yibing Wang/Tongji University, Xuewen Yao/Tongji University, Jingqiu Guo/Tongji University
Crash Severity Risk Modeling Strategies under Data Imbalance (TRBAM-25-04902)
Abdullah Al Mamun/Clemson University, Abyad Enan/Clemson University, Debbie Indah/Clemson University, Judith Mwakalonge/Clemson University, Gurcan Comert/Clemson University, Mashrur Chowdhury/Clemson University, Abdullah Al Mamun/Clemson University
An Integrated Methodology for Assessing Long-term and Short-term Driving Risks of Heavy-duty Trucks Considering Vehicle Weight (TRBAM-25-05415)
Zhuoyuan Zhang/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Zhiqiang Zhai/Beijing Jiaotong University, Zhaotong Yue/Beijing Jiaotong University, Yizheng Wu/Beijing Jiaotong University

2174 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 150A
New-Generation Transport Safety Analysis Using High-Resolution Data: Advanced Statistical and Machine Learning Models
Md. Mazharul Haque, Queensland University of Technology, presiding
Grigorios Fountas, Aristotle University of Thessaloniki, presiding
Sponsored By Section - Data and Data Science, Standing Committee on Human Factors of Vehicles, Standing Committee on Transportation Safety Management Systems, Standing Committee on Safety Performance and Analysis, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Information Systems and Technology, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Statistical and Econometric Methods

High-resolution data from CCTV cameras, LiDAR, and in-vehicle sensors have opened new opportunities to rethink transportation safety models, particularly by advancing traffic conflict and safety surrogate techniques. This lectern session will feature an interactive panel discussion with three key objectives: 1. Map the current state of research on new-generation transportation safety analysis.2. Discuss emerging research needs for statistical and machine learning models. 3. Foster intellectual exchange among experts from diverse fields on the development of a roadmap for transport authorities to implement these advanced safety models.

Presenter (P25-20158)
Md. Mazharul Haque/Queensland University of Technology

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Panelist (P25-20153)
Fred Mannering/University of South Florida
Panelist (P25-20154)
Linda Boyle/New York University
Panelist (P25-20155)
Simon Washington/Transoft Solutions, Inc.
Panelist (P25-20156)
Mohammed Quddus/Imperial College London
Discussant (P25-20159)
Stacey Bricka/MacroSys Research and Technology

2175

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 150B
Freight Data Insights: From Infrastructure Mapping to Flow Analysis
Makaela Niles, Massachusetts Department of Transportation, presiding
Sarah Hernandez, University of Arkansas, Fayetteville, presiding
Sponsored By Standing Committee on Freight Transportation Data

This podium session presents four research papers on topics related to national commodity and vehicles surveys, transload facilities, and commercial data comparisons.

Longitudinal Analysis of Freight Flows in the Commodity Flow Survey and Freight Analysis Framework (TRBAM-25-04297)
Carl Cloyed/OST-R/Bureau of Transportation Statistics, Monique Stinson/OST-R/Bureau of Transportation Statistics
Use Characteristics of Confidential Commodity Flow Survey Data in the United States (TRBAM-25-04616)
Young-Jun Kweon/OST-R/Bureau of Transportation Statistics, WenWei Zeng/OST-R/Bureau of Transportation Statistics, Mike Carter/OST-R/Bureau of Transportation Statistics, Ryan Grube/OST-R/Bureau of Transportation Statistics, Cha-Chi Fan/OST-R/Bureau of Transportation Statistics
Development of Transload Facilities Database in the U.S. (TRBAM-25-01195)
Sanjeev Bhurtyal/No Organization, Magdalena Asborno/No Organization, Kenneth Mitchell/No Organization, Steven Peterson/No Organization
Evaluating Commercial Origin-Destination Data: Insights from a Multi-Vendor Comparison in Virginia (TRBAM-25-02950)
Aliakbar Kabiri/University of Maryland, College Park, Zachary Vander Laan/University of Maryland, College Park, Stanley Young/University of Maryland, College Park

2176 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 151A
Understanding Travel Behavior: Insights, Theories, and Methods
Michelle Bina, WSP, presiding
Abigail Donkor, Modern Mobility Partners, LLC, presiding
Sponsored By Standing Committee on Transportation Demand Forecasting, Standing Committee on Traveler Behavior and Values

This session will present recent research findings on travel behavior that should inform policy and planning decisions and evaluate the effectiveness and differences of various travel analysis methods. Topics include if/how off-peak travel can and should be included in our planning processes; methods to evaluate how “good” a particular scenario is for the population outside of typical “time and cost” attributes; how to get feedback on and analyze potential outcomes for scenarios that users have never encountered before; and if/how machine learning analysis approaches differ in outcomes than econometric ones.

Working 'round the Clock: Assessing the Needs of Off-Peak Commuters (TRBAM-25-00660)
Matthew Bhagat-Conway/University of North Carolina, Matthew Palm/University of North Carolina

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A Methodology for Evaluating Wellbeing Implications of Activity-Travel Engagement and Time Use Patterns (TRBAM-25-05813)
Irfan Batur/Arizona State University, Sara Khoeini/Arizona State University, Shivam Sharda/Arizona State University, Denise Baker/Arizona State University, Tassio Magassy/Arizona State University, Xin Ye/Arizona State University, Ram Pendyala/Arizona State University
Goal Pursuit And Its Applications to Transportation (TRBAM-25-00051)
Jason Hawkins/University of Calgary, Omid Armantalab/University of Calgary
Comparing Hundreds of Machine Learning and Discrete Choice Models for Travel Demand Modeling: An Empirical Benchmark (TRBAM-25-01705)
Shenhao Wang/University of Florida, Baichuan Mo/University of Florida, Yunhan Zheng/University of Florida, Stephane Hess/University of Florida, Jinhua Zhao/University of Florida, Shenhao Wang/University of Florida
A Trip to the Future: Investigating the Preference for New Transport Modes Using Virtual Reality (TRBAM-25-06323)
Charisma Choudhury/University of Leeds, Thomas Hancock/University of Leeds, Yu Wang/University of Leeds, Bastian Henriquez/University of Leeds, Jorge Garcia/University of Leeds, albert solernou/University of Leeds, Brontie Auld/University of Leeds
Comparing and Contrasting Econometric and Machine Learning Algorithms for Modelling Daily Time-Use Patterns (TRBAM-25-03451)
Azam Ali/University of Leeds, Charisma Choudhury/University of Leeds

2177

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 152A
Bridges and Crosswalks: A Discussion of Transportation Vocabularies and Ontologies, Moving from Silos to Collective Innovation
Kendra Levine, University of California, Berkeley, presiding
Sponsored By Standing Committee on Information and Knowledge Management

Controlled vocabularies, taxonomies, and ontologies are useful tools for transportation researchers and practitioners. Many subject areas and disciplines rely on them as a fundamental part of their work – especially in the collection and analysis of data. But how well do these different ontologies and controlled vocabularies work across subjects? Join us for a panel discussion where researchers will present their background and perspective on how ontologies relate to the field and their work, and to other fields. Subject areas will include asset management, automated vehicles, safety, and active transportation. We will discuss ways to break down silos, reuse ontologies, and how to collaborate across fields in the future.

Perspectives on Ontologies in Safety and Active Transportation (P25-20717)
Seth LaJeunesse/University of North Carolina
Perspectives on Ontologies in Transportation Planning and Automated Vehicles (P25-20720)
James Fishelson/University of California, Berkeley, Richard Boadi/WSP

2178 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 152B

New York Congestion Pricing: Where to from Here?

Rimon Rafiah, Economikr, presiding

Michael Iacono, Minnesota Department of Transportation, presiding

Sponsored By Standing Committee on Economics and Finance, Standing Committee on Transportation Demand Management, Joint Subcommittee on Congestion Pricing Economics (with AEP60)

This session will reflect the latest status and prospects for the proposed New York City congestion pricing plan, which was indefinitely paused by the state in June 2024. Topics include the history of pricing in NYC and effective examples of congestion and cordon pricing around the world. In addition, since NYC cordon pricing was intended to raise funds to implement certain goals, the session will examine alternatives for implementing these goals. The lessons learned are intended to be valuable to other U.S. cities considering congestion pricing, as well as other places around the globe. The session will also address any new developments in NYC congestion pricing which may occur up to the time of the conference.

Who, What, and Where: An Empirical Briefing on Commute Patterns, Congestion Externalities and Tax Incidence (P25-20360)

Alejandro Molnar/World Bank

A Review of Global Congestion Pricing Projects and Lessons Learned (P25-20361)

Adrian Moore/Reason Foundation

NYC Congestion Pricing - Where to from Here? (P25-20362)

Jonathan Peters/City University of New York

2179

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 209AB

Revisiting Methodological Issues in Measuring Disadvantaged Business Enterprise Availability

Samuel Myers, University of Minnesota, Twin Cities, presiding

Sponsored By Standing Committee on Contracting Equity

This panel discussion will explore some of the methodological issues associated with measuring DBE availability among ready, willing and qualified firms. It will also outline the potential biases in using bidders' lists, vendors' lists, and related techniques to measure availability. The strengths and weaknesses of alternative methods, e.g., the DBE list and Dun and Bradstreet methods, will be compared. The panel will also address the question of the suitability of using the Survey of Business Owners to measure DBE availability.

Panel Member (P25-20941)

Blanca Monter/Keen Independent Research, Benjamin Rosa/University of Michigan, Mark Turner/Optimal Solutions Group, LLC, Steve Ha/Western Carolina University, Xiting Zhang/University of Minnesota, Haiyue Jiang/University of Minnesota, Twin Cities

2180

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 156

Buy America, Build America

Jeff Graham, Texas Department of Transportation, presiding

Sponsored By Standing Committee on General Law

The Build America, Buy America Act (BABA) significantly altered the domestic preference requirements for Federal-aid infrastructure projects. Since BABA's enactment in 2021, these requirements have continued to change. The Office of Management and Budget (OMB) issued guidance on the construction materials preferences, and the Federal Highway Administration (FHWA) has proposed discontinuing its general waiver of Buy America requirements for manufactured products. This session addresses: 1) the domestic content preferences generally; 2) OMB's domestic construction materials preferences guidance and FHWA's proposed rescinding of the general waiver for manufactured products; 3) documenting and certifying compliance; and 4) the waiver processes.

Panel Member (P25-20900)

Jessica Butler/Texas Department of Transportation, Ryan Gaulke/Minnesota Department of Transportation

2181

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 202B

So You Want to Be an Expert Witness?

Terri Parker, Missouri Department of Transportation, presiding

Sponsored By Standing Committee on Tort Liability and Risk Management

This session introduces the technical practitioner to the world of being an expert witness. Engineers and other professionals will discuss the basics of litigation such as deposition preparation, drafting of the Curriculum Vitae, collaboration with counsel, clarity of language and expert report writing.

So You Want to be an Expert Witness ? (P25-20062)

Michael Fleming/Washington State Department of Transportation, Danett Galbraith/Missouri Department of Transportation, Gene Hawkins/Kittelson & Associates, Inc., Joshua Root/Minnesota Department of Transportation

2182

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 202A

Dialogue with Leaders

Edith Arambula-Mercado, Texas A&M Transportation Institute, presiding

Leslie Myers, Federal Highway Administration (FHWA), presiding

Austin Jarrell, Federal Highway Administration (FHWA), presiding

Sponsored By Transportation Infrastructure Group, Section - Materials, Section - Pavements

Join us for Dialogue with Leaders, an engaging and interactive event designed for professionals, academics, and students eager to explore the latest trends and challenges in transportation infrastructure. This session brings together experts from the Materials and Pavements Sections to share their knowledge, insights, and visions for the future. Whether you're advancing your research, beginning your career, or looking for fresh perspectives, this event offers valuable opportunities for learning and collaboration.

Session Opening (P25-21074)

Tara Cavalline/University of North Carolina, Charlotte

Materials Section (AKM) Leader Presentation (P25-21076)

Jo Sias/University of New Hampshire

Dialogue moderated by Dr. Edith Arámbula-Mercado (P25-21077)

Edith Arambula-Mercado/Texas A&M Transportation Institute

Pavements Section (AKP) Leader Presentation (P25-21079)

John Harvey/University of California

(continued)

Dialogue moderated by Dr. Leslie Myers (P25-21080)
Leslie Myers/Federal Highway Administration (FHWA)
Open Audience Q&A (P25-21082)
Austin Jarrell/Federal Highway Administration (FHWA)
Session Closing (P25-21081)
Tara Cavalline/University of North Carolina, Charlotte

2183

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 102A
Concrete Bridge Safety, Inspection, and Durability
Andrew Wagner, HDR, presiding
Sponsored By Standing Committee on Concrete Bridges

Experimental Study on Over-height Lateral Impact Response of Prestressed Concrete Isolated and T-Girder Bridges: A Crucial Investigation in Bridge Safety (TRBAM-25-06119)
Francis Ashun/Missouri University of Science and Technology, Haitham Abdelmalek/Missouri University of Science and Technology, Mohanad Abdulazeez/Missouri University of Science and Technology, Mohamed ElGawady/Missouri University of Science and Technology
Emergency Closure and Repair of the West Seattle High Rise Bridge (TRBAM-25-02782)
Matthew Donahue/Structura Management, PLLC, Kit Loo/Structura Management, PLLC, Greg Banks/Structura Management, PLLC, Brett Commander/Structura Management, PLLC
Introducing CHARISMA for Automated Ground Penetrating Radar (GPR) Data Interpretation in Concrete Bridge Deck Inspection and Beyond (TRBAM-25-02325)
Steve Yang/Highway Technology Partners LLC, Heng Liu/Highway Technology Partners LLC, Shengxin Cai/Highway Technology Partners LLC, Hoda Azari/Highway Technology Partners LLC
Additive Manufacturing of Concrete for Corrosion Protection of Prestressed Concrete Bridges (P25-20766)
Pranay Singh/University at Buffalo, SUNY, Pinar Okumus/University at Buffalo, SUNY, Ravi Ranade/University at Buffalo, SUNY

2184

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 101
Technology Has Entered the (Construction Management) Room
Jennifer Shane, Iowa State University, presiding
Sponsored By Standing Committee on Construction Management

Technology is no longer an uninvited guest that tags along in construction management. In fact, construction management has started embracing technology and pushing the boundaries well into the future. Speakers will talk about how technology is being used in the field today and helping prepare for the future.

An Overview of State Departments of Transportation's Current State of Practice of Mobile Devices for Inspection (TRBAM-25-01528)
Nisa Zahin/No Organization, Bassam Ramadan/No Organization, Hala Nassereddine/No Organization, Gabriel Dadi/No Organization, Ryan Griffith/No Organization
The Impacts of Back Exoskeletons and Ergonomic Handles on Joint Mechanics during Shoveling Activities (TRBAM-25-04899)
Xinran Hu/Purdue University, Xingzhou Guo/Purdue University, Yunfeng (Cindy) Chen/Purdue University, Jiansong Zhang/Purdue University
Future World Vision (P25-20732)
David Noyce/University of Wisconsin, Madison

2185

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 206

Alliancing and Integrated Project Delivery Methods 101

Jay Hietpas, Minnesota Department of Transportation, presiding

Sponsored By Standing Committee on Project Delivery Methods, Standing Committee on Contract Law

Increasing demand to rapidly deliver new transportation projects often requires creative ways to fund, design, and construction these critical infrastructure needs. Alliancing and Integrated Project Delivery are relatively new to the transportation industry and have been used by some project owners. These new alternative contracting techniques provide different models on how owners, designers, contractors and suppliers work together and share risks and opportunities. This session will provide an overview of these methods and discuss some recent success stories.

2186

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 201

Technological Advancements in Low-Volume Roads: Stabilization, Recycled Materials, and Data Analysis

Ilker Boz, Virginia Transportation Research Council, presiding

Andrew Ceifetz, WSP, presiding

Sponsored By Standing Committee on Low-Volume Roads, Rural Transportation Issues Coordinating Council, Standing Committee on Information Systems and Technology, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Design and Rehabilitation of Asphalt Pavements, International Coordinating Council

This session will present on cutting edge research in stabilization, recycled materials, and data analysis methods applied to low volume roads.

Case Studies of Unpaved Roads in Wet and Non-Freeze Climates Making Use of Steel Slag (TRBAM-25-02284)

Taylor S. Cagle/Mississippi State University, Leigh E.W. Ayers/Mississippi State University, Travis Zimber/Mississippi State University, Kelly Cook/Mississippi State University, Isaac Howard/Mississippi State University

Comparative Analysis of Performance and Cost of Chemical Stabilizers for Iowa Granular Roads: Field and Lab Evaluation (TRBAM-25-01313)

Mohammad Ahmad Alsheyab/Iowa State University, Bo Yang/Iowa State University, Halil Ceylan/Iowa State University, Sunghwan Kim/Iowa State University

Detecting Lateral Offset Distance on Rural Road in Thailand by Using Point Cloud Data : A Case Study (TRBAM-25-05287)

Nutvara Jantarathaneewat/University of Washington, Chenxi Liu/University of Washington, Shucheng Zhang/University of Washington, Yinhai Wang/University of Washington

2187

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 207A

Roundabouts and Intersection Safety, Design, and Operational Noteworthy Practices

Scott Davis, Washington State Department of Transportation, presiding

Sponsored By Standing Committee on Roundabouts and other Intersection Design and Control Strategies

Join us for an informative session focusing on roundabouts, median u-turn, and continuous flow intersections. Presentations will focus on yielding behavior of vehicles for pedestrians and bicyclists, data collection with drones, and operational and safety focus of connected and autonomous vehicles at intersections.

Utilizing Drones to Analyze Roundabouts and Evaluate Countermeasures (TRBAM-25-03807)

Jared Calise/Kimley-Horn and Associates, Inc.

Examining Speed Selection and Driver Yielding Behavior Towards Pedestrians and Bicyclists at Roundabouts (TRBAM-25-04014)

Nischal Gupta/Michigan State University, Matin Mohammadpour/Michigan State University, Sunday Imosemi/Michigan State University, Yazmin Dasgar/Michigan State University, Gagan Gupta/Michigan State University, Peter Savolainen/Michigan State University, Timothy Gates/Michigan State University

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Re-designing Intersections in the Era of Connected and Automated Vehicles (TRBAM-25-04515)
Natalie Steinmetz/Technical University of Munich, Tanja Niels/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Introducing Two New Versions of Continuous Flow and Median U-turn Combination Intersection Designs (TRBAM-25-00557)
Amirarsalan Mehrara Molan/University of Mississippi, William Rasdorf/University of Mississippi, Ali Hajbabaie/University of Mississippi, Gaurav Aryal/University of Mississippi, Stephen Osafo-Gyamfi/University of Mississippi, Hayden Edwards/University of Mississippi

2188

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 207B
Developments in Practice for Geotechnical Instrumentation and Modeling
Derrick Dasenbrock, Federal Highway Administration (FHWA), presiding
Matt Sullivan, Geokon, Inc., presiding
Margarita Ordaz, U.S. Army Engineer Research and Development Center, presiding
Sponsored By Standing Committee on Geotechnical Instrumentation and Modeling

This session includes technical papers on a variety of topics related to geotechnical instrumentation and modeling, including the application of new and novel instrumentation techniques and application of geotechnical analysis models.

Assessing Geosynthetic-Reinforced Pile-Supported Embankment Performance Considering Soil Variability and Different Geometries using Conventional Design Methods and 3D Finite Element Model (TRBAM-25-02559)
Ekansh Agarwal/Texas A&M University, Corpus Christi, Ning Luo/Texas A&M University, Corpus Christi
Elastic Analysis of Buried Culverts under Pavement Structures Subjected to Surface Loading using the Semi-Analytical Finite Element Method (TRBAM-25-03161)
Jeremiah Stache/U.S. Army Engineer Research and Development Center
Machine Learning Based GPR Echo Sigal Determination Model of Voids Beneath Cement Slab (TRBAM-25-06083)
Fei Liu/Tongji University, Jie Yuan/Tongji University, Wenhao Li/Tongji University
The Impact of Close-spaced Construction of Subway Tunnels in Ground Fissure Sites on Surface Subsidence and Existing Metro Depot (TRBAM-25-02831)
Xuan Shi/Chang'an University, Jinxing Lai/Chang'an University, Yunxiang Yan/Chang'an University, Chi Liu/Chang'an University, Ke Wang/Chang'an University
Feasibility Study of Slope Monitoring and Landslide Forecasting Based on Multi-node SmartRock Senor (TRBAM-25-02970)
Jianyi Wu/Southeast University, Xunhao Ding/Southeast University, Tao Ma/Southeast University, Feng Chen/Southeast University

2189

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 204AB
Working on Stable Ground: Geosynthetics in Highways, Railways, and Embankment Applications
Robert Gladstone, Association for Mechanically Stabilized Earth, presiding
Sponsored By Standing Committee on Geosynthetics

Learn about multiple applications for the use of geosynthetics to improve highway, rail, and embankments applications. Geosynthetics covered in this session include geogrids, geotextiles, and geofoam.

Geogrid Stabilization Effectiveness – Comprehensive Assessment through Multiscale Experiments with Bender Element Sensor Technology (TRBAM-25-04251)
Han Wang/University of Illinois, Urbana-Champaign, Youngdae Kim/University of Illinois, Urbana-Champaign, Mingu Kang/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Heather Shoup/University of Illinois, Urbana-Champaign

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Incorporating Knowledge from Sensor Data and In-Situ Testing into the Design Framework of Geogrid-stabilized Pavement Aggregate Layers (TRBAM-25-04289)
Syed Husain/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Issam Qamhia/University of Illinois, Urbana-Champaign, Peter Becker/University of Illinois, Urbana-Champaign, Nayyar Siddiki/University of Illinois, Urbana-Champaign
Assessment of Wicking Geotextiles for Enhanced Drainage and Reinforcement in Flood-Prone Coastal Highway Slopes (TRBAM-25-02565)
Puneet Bhaskar/Texas A&M University, College Station, Jaime Suarez/Texas A&M University, College Station, Darlene Goehl/Texas A&M University, College Station, Anand Puppala/Texas A&M University, College Station
Numerical Analysis of Geosynthetic Mitigation of Faulting Effects on Railway Embankments (TRBAM-25-02061)
Haohua Chen/Sun Yat-Sen University, Jiankun Liu/Sun Yat-Sen University, Jie Han/Sun Yat-Sen University

2190

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 103B
Technological Advances in Vegetation Management
Ken Murray, California Department of Transportation, presiding
Sponsored By Standing Committee on Roadside Maintenance Operations, Standing Committee on Environmental Analysis and Ecology, Standing Committee on Landscape and Environmental Design

Looking at recent research and advancements in roadside vegetation management equipment

Tools and Technology for Roadside Vegetation Asset Management (P25-21448)
Cheryl Daniels/Davey Resource Group, Angela Burdell/Davey Resource Group
Mapless Obstacle Avoidance in Sparse Outdoor Environments Using Deep Learning with RGB Camera Input (P25-21451)
Nathan Sprague/Purdue University
Digital Twin Roadside Vegetation Management and Real-World Verification (P25-21452)
Michael Mardikes/Purdue University, Nathan Sprague/Purdue University

2191 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 146B
Safe and Secure Journeys: A Gendered Perspective
Meghna Chakraborty, UNC Highway Safety Research Center, presiding
Sponsored By Standing Committee on Women and Gender in Transportation

This session is centered around women's unique views, needs, and perspectives on safety and security during travel. More specifically, the presentations highlight women's experiences as they utilize transportation modes at various times of the day while also navigating unforeseen challenges during travel.

Rethinking Cycling Safety: The Role of Gender in Cyclist Crash Injury Severity Outcomes (TRBAM-25-00013)
Natalia Barbour/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida
Gender Differences Across Adolescents In Travel Mode Decision To School And Perceived Parental Involvement: A Case Study In The Sarbagita Metro Area, Indonesia (TRBAM-25-00970)
I Made Sukmayasa/Utrecht University, Jaime Soza Parra/Utrecht University, Dick Ettema/Utrecht University
Environmental Factors and Gender Perspective: An Analysis of Safety Perceptions Around Two Transit Stations in Monterrey (TRBAM-25-05712)
Camila Hernandez/Danone, Andrea Martinez/Danone, Rounaq Basu/Danone, Nelida Escobedo Ruiz/Danone, Roberto Ponce-Lopez/Danone
Women Public Bus User's Perception Regarding the Public Bus Service in Dhaka, Bangladesh (TRBAM-25-02549)
Nawshin Tabassum/University of Utah, Mohammad Akther/University of Utah

2192 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 146A

Transforming Urban Mobility: Innovations and Challenges in Developing Contexts

Ning Li, Virginia Department of Transportation, presiding

Nicholas Caros, International Transport Forum, presiding

Sponsored By Standing Committee on Transportation in the Developing Countries, International Coordinating Council, Subcommittee on Roadway System Management and Operations, Safety, and Resilience, Subcommittee on Sustainable and Equitable Access and Mobility for All

In the pursuit of sustainable urban development, the transportation landscape in developing countries faces unique challenges and opportunities. This session will explore critical insights into urban roads and their role in promoting or hindering mobility, with a focus on pedestrian safety, infrastructure development, and the implications of environmental factors on transportation systems. Key topics include the evaluation of urban road in Rwanda; the assessment of road safety amidst the construction of Bus Rapid Transit (BRT) corridors in Dar es Salaam, and the adaptation of Vision Zero principles to in Nigeria during the COVID-19 pandemic.

Adapting Vision Zero for Improving Pedestrian Safety in Developing Countries: Strategies and Priorities for Urban Roads (TRBAM-25-01098)

Abbas Sheykhfard/Texas Southern University, Subasish Das/Texas Southern University, Soheila Saeedi/Texas Southern University, Mohammad Mehdi Oshanreh/Texas Southern University, Boni Kutela/Texas Southern University

Spatiotemporal Analysis of Nigeria's Flooding Season Impacts On Human Mobility And COVID-19 Spread (TRBAM-25-02786)

Kailun Liu/Villanova University, Xin Wu/Villanova University, Lele Zhang/Villanova University, Chenfeng Xiong/Villanova University

Urban Roads: Enablers or Barriers to Walking? Insights from Kigali, Rwanda (TRBAM-25-03752)

Polycap Chebe/Technion - Israel Institute of Technology, Alphonse Nkurunziza/Technion - Israel Institute of Technology, Karel Martens/Technion - Israel Institute of Technology

Evaluation of Dragon Teeth Markings in High-Speed to Low-Speed Transition Zones on Rural Highways: An Empirical Study in a Developing Country City (TRBAM-25-06193)

Antonio Hurtado-Beltran/Universidad Michoacana de San Nicolás de Hidalgo, Emilio Rubio-Torres/Universidad Michoacana de San Nicolás de Hidalgo, Jorge Estrada-Cortez/Universidad Michoacana de San Nicolás de Hidalgo

Assessing Road Safety During Construction of Bus Rapid Transit (BRT) Corridors in Dar es Salaam: A Case Study of BRT Phase 3 (TRBAM-25-06247)

Jaqueline Masaki/University of Dar Es Salaam, Lorain Salufu/University of Dar Es Salaam, Kofi Adanu/University of Dar Es Salaam

2193 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 146C

Considering Mobility for All: Addressing Barriers and Shaping an Equitable Future

Veronica Murphy, New Jersey Department of Transportation, presiding

Sponsored By Standing Committee on Community Resources and Impacts

Mobility continues to be a significant challenge for diverse communities, as changing preferences, attitudes and behaviors around vehicle ownership increase the demand for transportation options. Transportation professionals are trying to understanding the economic, social, and environmental impacts of mobility. This session will explore various scenarios to illustrate mobility challenges and also present actionable solutions to help policymakers, service providers, and transportation practitioners create more equitable and efficient mobility systems.

Multimodal Accessibility Premiums in Housing Prices across Canada (TRBAM-25-05061)

Christopher Higgins/University of Toronto, Scarborough, Robert Arku/University of Toronto, Scarborough, Steven Farber/University of Toronto, Scarborough, Eric Miller/University of Toronto, Scarborough

Evaluating Accessibility and Equity Impacts of Pandemic Transit Service Adjustments: A Case Study of the San Francisco Bay Area (TRBAM-25-04376)

Phoebe Ho/University of California, Berkeley, Johanna Zmud/University of California, Berkeley, Joan Walker/University of California, Berkeley

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Exploring Transit Disconnectivity in Baltimore City (TRBAM-25-05505)
Ramina Javid/Morgan State University, Eazaz Sadeghvaziri/Morgan State University, Mansoureh Jeihani/Morgan State University
The Concept of Car Dependence: When the Capability to Participate in Location-based Activities Depends on the Car (TRBAM-25-03491)
Matthias Cremer-Schulte/TU Dortmund, Bert van Wee/TU Dortmund, Eva Heinen/TU Dortmund
Impact of Transit on Mobility, Equity, and Economy in the Chicago Metropolitan Region (TRBAM-25-02457)
Omer Verbas/Argonne National Laboratory, Taner Cokyasar/Argonne National Laboratory, Seamus Joyce-Johnson/Argonne National Laboratory, Scott Wainwright/Argonne National Laboratory, Maeve Coates Welsh/Argonne National Laboratory, Aymeric Rousseau/Argonne National Laboratory, Jim Aloisi/Argonne National Laboratory, Anson Stewart/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory

2194

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 140
Research on Economic Development and Land Use, Part 2 (Part 1, Session 2084)
Noreen McDonald, University of North Carolina, Chapel Hill, presiding
Sponsored By Standing Committee on Economic Development and Land Use

Changes in Mode Use after Residential Relocation: Attitudes and the Built Environment (TRBAM-25-00472)
Katja Schimohr/ETH Zurich, Eva Heinen/ETH Zurich, Petter Naess/ETH Zurich, Joachim Scheiner/ETH Zurich
Estimating Vehicle Miles Traveled (VMT) Reduction from Infill Housing: A Discussion on the Choice of Modeling Tool (TRBAM-25-02611)
Kiana Wong/California Polytechnic State University, San Luis Obispo, Anurag Pande/California Polytechnic State University, San Luis Obispo, Shishir Mathur/California Polytechnic State University, San Luis Obispo, Hilary Nixon/California Polytechnic State University, San Luis Obispo, Mykola Sauciur/California Polytechnic State University, San Luis Obispo
Measuring Accessibility at the Local Level: Comparing the LOS, VMT, and Accessibility metrics in Evaluating Transportation Impacts of Land Use Projects (TRBAM-25-04182)
Hao Ding/University of California, Los Angeles

2195 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 145A
Enhancing Mobility for All: Updates on U.S. Department of Transportation Accessibility Initiatives and Innovative Mobility Strategies
Adam Cohen, University of California, Berkeley, presiding
Sponsored By Standing Committee on Innovative Public Transportation Services and Technologies

Join us for an informative session on the latest updates from the U.S. Department of Transportation (USDOT). This session features the latest updates from ongoing and planned accessibility initiatives, such as Mobility on Demand (MOD), paratransit enhancements, the Accessible Transportation Technologies Research Initiative (ATTRI), ITS4US, and others. Discover how these initiatives are advancing accessible mobility, promoting inclusivity, and leveraging innovative technologies to enhance access for individuals with disabilities and other underserved populations. Engage with experts and learn how these efforts are shaping the future of accessible transportation.

Accessible Transportation Technologies Research Initiative (P25-20907)
Robert Sheehan/Federal Highway Administration (FHWA)
Mobility Next (P25-20908)
Gwo-Wei Torng/Federal Transit Administration (FTA)
ITS4US (P25-20909)
Elina Zlotchenko/Federal Highway Administration (FHWA)
FTA Office of Civil Rights (P25-21496)
Dawn Sweet/Federal Transit Administration (FTA)
Bureau of Transportation Statistics, Office of Spatial Analysis and Visualization (P25-21518)
Justyna Goworowska/OST-R/Bureau of Transportation Statistics

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Bureau of Transportation Statistics, Office of Spatial Analysis and Visualization (P25-21519)
Jay Davis/OST-R/Bureau of Transportation Statistics

2196 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 145B
Strategies for Managing Urban Rail System Efficiency and Resilience
Saeid Saidi, University of Calgary, presiding
Sponsored By Standing Committee on Urban Rail Transit Systems

This session explores innovative approaches to optimizing the performance and resilience of urban rail systems. Papers presented will delve into dynamic real-time headway management strategies, algorithm-driven train delay adjustments, and the detection of chaotic delay cascading dynamics in railway systems. Additionally, the session addresses balancing service quality and resilience in the face of disruptions, and analyzes the causal effects of subway accidents on passenger flow patterns, providing comprehensive insights for improving transit planning and operations.

Real-time adjustment method with train delays for metro system based on D3QN algorithm (TRBAM-25-03355)
Yushen Hu/Shenzhen Technology University, Wei Li/Shenzhen Technology University, Qin Luo/Shenzhen Technology University, Mo Yihong/Shenzhen Technology University
Headway Management Strategies for High-Ferequency Urban Rail Transit: A Dynamic Approach to Real-Time Train Holding in Metro Systems (TRBAM-25-05090)
Mojtaba Yousefi/Northeastern University, Haris Koutsopoulos/Northeastern University
Balancing System Service Quality and Resilience for Urban Rail Networks: Preventive Train Timetabling with Disruptions (TRBAM-25-01940)
Zehai Liu/Beijing Jiaotong University, Jiateng Yin/Beijing Jiaotong University, Andrea D'Ariano/Beijing Jiaotong University, Lixing Yang/Beijing Jiaotong University, Tao Tang/Beijing Jiaotong University
Estimating and Analyzing the Causal Effects of Subway System Accidents on Passenger Flows (TRBAM-25-02775)
Xiannan Huang/Tongji University, Quan Yuan/Tongji University, Shuhan Qiu/Tongji University, Chao Yang/Tongji University
Do Railway Systems Exhibit Chaotic Delay Cascading Dynamics? Early Empirical Evidence From Switzerland (TRBAM-25-01161)
Jan Lordieck/ETH Zürich: Eidgenossische Technische Hochschule Zurich, Florian Fuchs/ETH Zürich: Eidgenossische Technische Hochschule Zurich, Francesco Corman/ETH Zürich: Eidgenossische Technische Hochschule Zurich

2197 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 147A
Topics in Transit Safety: Automation and Technology in the Transit Environment
Lisa Staes, USF Center for Urban Transportation Research, presiding
Sponsored By Standing Committee on Transit Safety and Security

Automation and technology applications in the transit operating environment are becoming increasingly common. During this session, a wide range of topics will be addressed within these area, from how to prepare for and plan the institution of shared autonomous vehicles in the services provided to how they can make transit systems more resilient, to the use of data-driven machine learning applications to identify safety events, and finally to the use of human driving assistance in service delivery.

Data-Driven Machine Learning Approach to Identifying Safety-Critical Events Among Professional BRT Drivers for Road Safety Applications (TRBAM-25-03231)
Harpreet Singh/Queensland University of Technology, Ankit Kathuria/Queensland University of Technology
Improving Transit System Resilience using Shared Autonomous Vehicles (SAVs) (TRBAM-25-06056)
Arash Ghaffar/University of California, Irvine, Jiangbo Yu/University of California, Irvine, Michael Hyland/University of California, Irvine

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Preparing for the Deployment of a Self-Driving Shuttle in Buffalo, NY: Safety Management Plan and Deployment Route Risk Assessment (TRBAM-25-03760)
Yunpeng Shi/University at Buffalo, SUNY, Cemre Kavvasoglu/University at Buffalo, SUNY, Ali Peker/University at Buffalo, SUNY, Stephen Still/University at Buffalo, SUNY, Chunming Qiao/University at Buffalo, SUNY, Adel Sadek/University at Buffalo, SUNY
Human Driving Assistance: An Insight from a Developing City (TRBAM-25-03890)
Suraiya Afrin Raisa/Bangladesh University of Engineering and Technology, Kaynat Rahman/Bangladesh University of Engineering and Technology, Ishika Rahman/Bangladesh University of Engineering and Technology, Nahiyan Bazlul/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, Moinul Hossain/Bangladesh University of Engineering and Technology

2198

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 144AB
Advancements in Ballast Condition Assessment: Impact of Vehicles, Subgrade, and Cold Weather
Stephen Wilk, Association of American Railroads, presiding
Sponsored By Standing Committee on Railroad Infrastructure Design and Maintenance

This session will provide an overview of the latest ballast condition assessment research. Assessment methods will include modeling, assessment with new technologies, and the effects of weather conditions.

Investigating Effect of Ballast Degradation on Track Dynamic Behavior using Coupled Train-Track Discrete-Element-Method Model (TRBAM-25-02830)
Zhongyi Liu/University of Illinois, Urbana-Champaign, Kelin Ding/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Youssef Hashash/University of Illinois, Urbana-Champaign
Application of Falling Weight Deflectometer in Railway Track to Assess Ballast and Subgrade Conditions (TRBAM-25-02866)
Youngdae Kim/University of Illinois, Urbana-Champaign, Rami Chkaiban/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Jeremy Beasley/University of Illinois, Urbana-Champaign, Abby Cisko/University of Illinois, Urbana-Champaign, Ryan Langlois/University of Illinois, Urbana-Champaign, Michael Harrell/University of Illinois, Urbana-Champaign
Triaxial Testing on Frozen New and Degraded Ballast Aggregates under Cyclic Loading and Progressive Thawing Conditions (TRBAM-25-01610)
Shihao Huang/University of South Carolina, Yu Qian/University of South Carolina
Effect of Sub-Freezing Temperatures on Ballast Strength: A Laboratory Study (TRBAM-25-00479)
Coleman Froehlke/University of Illinois, Urbana-Champaign, Marcus Dersch/University of Illinois, Urbana-Champaign, John Edwards/University of Illinois, Urbana-Champaign, Arthur de Oliveira Lima/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign

2199

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 144C
New Approaches to Grade Crossing Safety and Community Impacts
Samantha Chadwick, Federal Transit Administration (FTA), presiding
Sponsored By Standing Committee on Highway/Rail Grade Crossings

This session will include five presentations on topics related to grade crossing safety, and the impact of grade crossings on the wider community. Topics will include the impact of humped crossings, the use of Variable Message Signs to redirect drivers in advance of blocked crossings, and the economic and community impact of delays at crossings.

Development of a National Humped Rail Grade Crossing Database and Exploratory Dashboard (TRBAM-25-03243)
Przemyslaw Sekula/University of Maryland, College Park, A. M. Tahsin Emtenan/University of Maryland, College Park, Sara Zahedian/University of Maryland, College Park, Mark Franz/University of Maryland, College Park, Ateet Maharjan/University of Maryland, College Park

(continued)

Motor Vehicle Traffic Diversion to Alternate Routes for Improving Safety at Highway-Rail Grade Crossings (TRBAM-25-04667)
Myungwoo Lee/University of Nebraska, Lincoln, Aemal Khattak/University of Nebraska, Lincoln
Investigating the Operational Impact of Variable Message Sign on Railroad Highway Grade Crossing Near Signalized Intersection (TRBAM-25-04496)
Deo Chimba/Tennessee State University, Sandeep Bist/Tennessee State University, Shala Blue/Tennessee State University
Assessing Monetized Delay Costs and Mitigation Strategies for At-Grade Highway-Rail Crossings: A Case Study of Dolton, Illinois (TRBAM-25-02044)
Kazuya Kawamura/University of Illinois, Chicago, Joseph Fazio/University of Illinois, Chicago, Pooria Choobchian/University of Illinois, Chicago
An Optimization Model and Solution Algorithm for Sustainable Selection of Level Crossings for Closure with Safety, Economic, and Environmental Considerations (TRBAM-25-00235)
Bokang Li/Florida A&M University-Florida State University, Payam Afkhami/Florida A&M University-Florida State University, Razieh Khayamim/Florida A&M University-Florida State University, Zeinab Elmi/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University, John Sobanjo/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Maxim Dulebenets/Florida A&M University-Florida State University

2200

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 149
Strategic Models in Freight Economics: Market Dynamics, Pricing, and Regulatory Interactions
Seckin Ozkul, University of South Florida, presiding
Sponsored By Standing Committee on Freight Transportation Economics and Regulation

This session explores advanced strategic models in freight economics, focusing on the interaction between market dynamics, pricing strategies, and regulatory frameworks. Presentations will examine topics such as market modeling, multi-stage game theory for route promotion, and dynamic pricing in container port services, providing insights into the evolving relationships between shippers, carriers, and governments.

Modeling the US Spot Market for Truckloads (TRBAM-25-00004)
Max Resende/Universidade Federal de Santa Catarina, Francis Petterini/Universidade Federal de Santa Catarina
A Multi-Stage Game Framework for New Route Promotion: Behavioral Strategy and Dynamic Evolution of Shippers, Carriers, and Governments (TRBAM-25-01503)
Haosong Wen/Southeast University, De Zhao/Southeast University, Weijie Yu/Southeast University, Jun Chen/Southeast University, Wei Wang/Southeast University
REVELATION OF THE FOLK THEOREM IN DYNAMIC PRICING OF CONTAINER PORT SERVICES, AS A REINFORCED BIDING PROCESS (TRBAM-25-04563)
Dimitrios Papadakis/University of Cyprus, Loukas Dimitriou/University of Cyprus, Filippos Alogdianakis/University of Cyprus

2201 **CM** (1.75)

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 143AB

Accommodating the Travel Needs of the Airport Workforce: It Ain't Just 9 to 5

Peter Mandle, InterVISTAS Consulting LLC, presiding

Sponsored By Standing Committee on Airport Terminals and Ground Access

At large airports the airlines, federal government, cargo and freight shippers, terminal concessionaires, rental car companies, fixed base operators, and other tenants employ thousands of people. Often an airport is one of a region's largest employment centers. However, employers often have difficulty recruiting and maintaining their airport work force due to the challenges employees encounter traveling to/from work. These challenges reflect the 24/7 nature of airport operations, unusual work schedules which often do not coincide with the availability of public transit service, and the long trip distances between airports and major residential centers/downtown areas. This session describes the efforts of major concessionaires and airports to address these challenges including the use Transportation Management Associations, providing adequate parking, and multi-modal solutions.

Employee/Hiring Experience of a Major Multi-Airport Concessionaire (P25-20740)

Pat Murray/SSP America

Employee Parking at Denver International Airport and Forecasting Employee Parking Needs (P25-20821)

Bill Poole/Denver International Airport, Daniel Barton/InterVISTAS Consulting LLC

Massport's Transportation Management Association, Logan Sunrise Special (P25-20823)

Mia Healy-Waldron/Massport

Multimodal Ground Transportation Case Study (P25-20825)

Mike Coleman/Port of Portland

2202

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, 147B

Progress in Port Decarbonization

Elizabeth Ogard, Prime Focus, LLC, presiding

Sara Walfoort, Southwestern PA Commission, presiding

Sponsored By Standing Committee on Marine Environment

Setting the Stage for Port Decarbonization (P25-20448)

Daniel Yuska/U.S. Maritime Administration

Clean Ports Programs and Practices (P25-20449)

Sarah Froman/U.S. Environmental Protection Agency (EPA)

Progress and Challenges with Port Adaption of Decarbonization Strategies (P25-20450)

Ian Gansler/American Association of Port Authorities

2203

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Ballroom A

U.S. Department of Transportation: Beyond the Bipartisan Infrastructure Law: Lasting Legacy in a Time of Transition

Polly Trottenberg, U.S. Department of Transportation Office of the Under Secretary for Policy, presiding

Sponsored By Executive Committee

Join Deputy Secretary Polly Trottenberg and senior transportation leaders for an engaging discussion on how DOT is shaping the nation's mobility future to deliver lasting impact. This will include how the historic investments in infrastructure of the last 3 years have changed the way we work together to improve safety, mobility, and sustainability while creating new jobs and righting past wrongs.

Panel Presentation (P25-21401)
Christopher Coes/U.S. Department of Transportation Office of the Under Secretary for Policy, Mariia Zimmerman/U.S. Department of Transportation Office of the Under Secretary for Policy, Amit Bose/Federal Railroad Administration (FRA), Stephanie Pollock/U.S. Department of Transportation Office of the Under Secretary for Policy, Veronica Vanterpool/Federal Transit Administration (FTA)

2204

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Managed Lanes
Srikanth Panguluri, Jacobs, presiding
Sponsored By Standing Committee on Managed Lanes

Control Strategy for Connected and Autonomous Vehicles Utilizing Hard Shoulders at Highway Merging Areas Based on Deep Deterministic Policy Gradient (TRBAM-25-00114) - B520
Rui Peng/Southeast University, Min Yang/Southeast University, Wenbo Zhang/Southeast University, Lichao Wang/Southeast University, Renjie Zhang/Southeast University
Travel Time Delay Model of Mixed Traffic Flow Considering Different Dedicated Lane Management Policies for CAVs (TRBAM-25-01052) - B521
Tingting Ren/Southwest Jiaotong University, Zhihong Yao/Southwest Jiaotong University, Yangsheng Jiang/Southwest Jiaotong University
Evaluation of Dedicated Lanes for Connected Autonomous Vehicles in Mixed Traffic: A Cell Transmission Model Approach (TRBAM-25-01919) - B522
Jian Zhang/Beijing University of Technology, Jia He/Beijing University of Technology
Socially Responsible Pay for Priority Traffic Control System for E-Commerce Delivery Vehicles (TRBAM-25-04525) - B523
Slavica Gavric/University of Pittsburgh, Ismet Erdagi/University of Pittsburgh, Aleksandar Stevanović/University of Pittsburgh
Analytical Derivation of Multi-State Effective Discharge Rates for Connected and Automated Vehicles Dedicated Lane Optimization (TRBAM-25-05851) - B524
Yuxin Ding/Pennsylvania State University, Xianbiao Hu/Pennsylvania State University
Vehicle Occupancy and Person Throughput Analysis of High-Occupancy Vehicle (HOV) Lanes inside I-285 in Atlanta, GA (P25-20942) - B525
Hongyu Lu/Georgia Institute of Technology, Meghan McGurk/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
An Assessment of Potential Vehicle Class Sampling Bias in Vehicle Occupancy Observations (P25-20944) - B526
Daniel Hunsaker/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Meghan McGurk/Georgia Institute of Technology, Abhiram Puppala/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
Machine Vision Vehicle Reidentification in vehicle Occupancy Studies: I-75 and I-85 Case Study in Atlanta, GA (P25-20945) - B527
Ziming Liu/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
Implementing an Express Lane Project in a New VMT World (P25-20946) - B528
Stephanie Hu/Contra Costa Transportation Authority, Matthew Kelly/Contra Costa Transportation Authority
Managed Lanes Facilities Attractiveness and Consumer Choice (P25-20947) - B529
Claire Textor/Battelle Memorial Institute, Anthoni Goble/Battelle Memorial Institute, Stephen Taylor/Toxcel, LLC
I-4 Express: A Managed Lane Solution for Congestion Relief (P25-20948) - B519
Muraduzzaman Masum/Texas Southern University, Sadia Sultana/University of Rajshahi, Md Sakoat Hossan/WSP
Long-term Technology Trends for Pricing Applications (P25-20949) - B518
Sruthi Ashraf/WSP, Richard Baker/WSP, Chris Swenson/WSP
Advanced Data Strategy on Managed Lane Dynamic Pricing (P25-20950) - B517
Ning Zhang/WSP, Sabrina Li/WSP
Machine Vision Identification of Electric Vehicles (EVs) and other Alternative Fuel Vehicles (AFVs) on Managed Lanes in Metro Atlanta (P25-21111) - B516
Ziming Liu/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology

2205

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Advancements and Innovation in Highway Capacity and Quality of Service Analysis

Alexandra Kondyli, University of Kansas, presiding

Sponsored By Standing Committee on Highway Capacity and Quality of Service

This presentation session is sponsored by the TRB Committee on Highway Capacity and Quality of Service (ACP40), and features a variety of topics on advancements and innovation in highway capacity and traffic operations analysis.

Lateral Driving Behavior on Narrowed Motorway Lanes (TRBAM-25-00239) - B530
Jeroen Hogema/TNO, Alex van Loon/TNO

Deriving Capacity and Critical Density of Basic Freeway Segments (TRBAM-25-01055) - B531
Siavash Shojaat/California Department of Transportation, Justin Geistefeldt/California Department of Transportation, Alexandra Kondyli/California Department of Transportation

An Integrated Control Strategy Combining Dynamic Shared Bus Lane with Transit Signal Priority Control (TRBAM-25-01662) - B532
Zhentian Bao/Southwest Jiaotong University, Can Liu/Southwest Jiaotong University, Fangfang Zheng/Southwest Jiaotong University, Youhua Tang/Southwest Jiaotong University

Influential Factors Analysis for the Coupling Relationship between Urban Road Structural Importance and Traffic State based on CatBoost (TRBAM-25-02218) - B533
Yajuan Deng/Chang'an University, Siliang Song/Chang'an University, Liangbin Cui/Chang'an University, Yu Li/Chang'an University

Graph-Based Generative Model for Automatic Intelligent Highway Interchange Design (TRBAM-25-03747) - B534
Chenxiang Ma/Southeast University, Chengcheng Xu/Southeast University

Impact of Connected and Automated Vehicles (CAVs) on Intersection Performance with Varying Lane Arrangements and Angles: A Microsimulation-Based Analysis (TRBAM-25-03995) - B535
Siam Junaed/Louisiana Transportation Research Center (LTRC), M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Milhan Moomen/Louisiana Transportation Research Center (LTRC), Elisabeta Mitran/Louisiana Transportation Research Center (LTRC), Julius Codjoe/Louisiana Transportation Research Center (LTRC)

A Systematic Review of Traffic Operation Risk Analysis on Highways in a Connected and Automated Environment (TRBAM-25-04577) - B536
Zhang Mengya/Tongji University, Yang Xiaoguang/Tongji University

Conflict-based Before-After Safety Evaluation of Changing Single Lane LWA into Dual Lanes LWA at Signalized Intersection (TRBAM-25-05479) - B537
Xiaowei Chen/Southeast University, Shailong Guo/Southeast University, Yanyong Guo/Southeast University, Yao Wu/Southeast University, Quan Yuan/Southeast University

Before-after Safety Evaluation of TWB at Signalized Intersection Based on Traffic Conflict Technique (TRBAM-25-05498) - B538
Xiumei WU/Southeast University, Shailong Guo/Southeast University, Yanyong Guo/Southeast University, Yao Wu/Southeast University, Quan Yuan/Southeast University

Impact of Connected and Autonomous Vehicles on the Capacity of a Three-Lane Freeway Work Zone (TRBAM-25-06040) - B539
Fahmida Rahman/Rowan University, Nazmul Haque/Rowan University, Joseph Nadolny/Rowan University, Joseph Mackin/Rowan University, Md. Arifuzzaman Nayeem/Rowan University, Abu Bakar Md. Siddique/Rowan University

2206

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Safety Performance and Analysis with Crash Predictions

Ward Vanlaar, Traffic Injury Research Foundation, presiding

Xiao Qin, University of Wisconsin, Milwaukee, presiding

Sponsored By Standing Committee on Safety Performance and Analysis

Join the TRB Committee on Safety Performance and Analysis for a selection of papers related to safer roads, including intersections and roadsides.

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Crash Risk Prediction and Analysis from the Perspective of Alignment and Environment Features: A Study on Expressway in Hilly Area (TRBAM-25-00395) - B540
Pengcheng Qin/Southeast University, Jie He/Southeast University, Changjian Zhang/Southeast University, Xintong Yan/Southeast University, Chenwei Wang/Southeast University, Yuntao Ye/Southeast University, Zhiming Fang/Southeast University
Developing Fatal-and-Injury Distraction-Specific Safety Performance Functions along Ramp Segments (TRBAM-25-00750) - B541
Arunabha Banerjee/Western Kentucky University, Tathagatha Khan/Western Kentucky University, Kirolos Haleem/Western Kentucky University, Bharat Pathivada/Western Kentucky University
Development of a New Safety Indicator for Predictive Safety Analysis Based on Different Arbitrary Surrogate Safety Measures Using LiDAR Sensor Data. (TRBAM-25-00926) - B542
Mohammad Soltanirad/Texas Tech University, Saber Naseralavi/Texas Tech University, Keshav Jimee/Texas Tech University, Qiyang Luo/Texas Tech University, Tamer Bataineh/Texas Tech University, Morris Igene/Texas Tech University, Hongchao Liu/Texas Tech University
Collision Risk Prediction in the First Phase of Overtaking on Two-lane Highway Based on Nearest Distance Risk Indicator (TRBAM-25-01271) - B543
Yinghao Xu/Kunming University, Xiaofeng Ji/Kunming University, Wenwen Qin/Kunming University
Time-Varying Causality Analysis of Successive Secondary Conflicts Using Hazard-Based Duration Models (TRBAM-25-01768) - B548
Hao Zhong/Tongji University, Ling Wang/Tongji University, Helai Huang/Tongji University, Wanjing Ma/Tongji University
Study on Regional Risk Evaluation Model of Mountainous Secondary Highway Based on BN-DS (TRBAM-25-01960) - B544
Hui Chen/No Organization, Fenlian Huang/No Organization, Yiyuan Peng/No Organization
Large-Scale Real-time Crash Prediction: A Comprehensive System and Analyses (TRBAM-25-02171) - B557
Samgyu Yang/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Zubayer Islam/University of Central Florida, Dongdong Wang/University of Central Florida
Two-level Real-time Prediction of Rear-end Conflict Risk Levels and Drivers' Longitudinal Evasive Styles on the Expressway (TRBAM-25-02280) - B549
Yunting Miao/University of Hong Kong, Ling Wang/University of Hong Kong, Wanjing Ma/University of Hong Kong, Jiangping Zhou/University of Hong Kong
Roadway Safety Performance Estimation Using Incomplete Data (TRBAM-25-02602) - B545
Vinayak Dixit/California Polytechnic State University, San Luis Obispo, Anurag Pande/California Polytechnic State University, San Luis Obispo
Sequential Accidents on Likelihood of Having Injuries: Assessing the Relationship between the Likelihood of Having Injuries of the Current and Previous Crashes (TRBAM-25-02717) - B546
Jiajun Pang/University at Buffalo, SUNY, Gongda Yu/University at Buffalo, SUNY, Mohammad Hamed/University at Buffalo, SUNY, Irina Benedyk/University at Buffalo, SUNY, Ahmad AlShaer/University at Buffalo, SUNY, Panagiotis Anastasopoulos/University at Buffalo, SUNY
Predicting Crash Frequency at Upstream Diverging Section of Toll Plaza in Heterogenous Traffic (TRBAM-25-03242) - B547
Debashis Ray Sarkar/Indian Institute of Technology, Delhi, Parveen Kumar/Indian Institute of Technology, Delhi, Dr. Ramachandra Kalaga/Indian Institute of Technology, Delhi
Quantifying Road Network Structure and Its Impact on Traffic Crashes: A Bayesian Hierarchical Approach (TRBAM-25-03631) - B550
Mehraab Nazir/Indian Institute of Technology, Delhi, Sai Chand/Indian Institute of Technology, Delhi, Rahul Goel/Indian Institute of Technology, Delhi
Time-Dependent Negative Binomial-Lindley Model for Addressing Temporal Variations and Excess Zeros in Crash Data (TRBAM-25-04756) - B551
Richard Dzinyela/Texas A&M Transportation Institute, Mohammadali Shirazi/Texas A&M Transportation Institute, Subasish Das/Texas A&M Transportation Institute, Dominique Lord/Texas A&M Transportation Institute
A Joint Count and Generalized Ordered Fractional Split Approach for Addressing Temporal Instability in Road Safety Analysis (TRBAM-25-04831) - B552
Kazi Redwan Shabab/Portland State University, Tanmoy Bhowmik/Portland State University, Mohamed Zaki/Portland State University, Naveen Eluru/Portland State University
Applying Extreme Value Theory to Road Safety Evaluation using Safety Pilot Model Deployment (SPMD) Data (TRBAM-25-04901) - B553
Zhaoxiang He/University of Wisconsin, Madison, Xiao Qin/University of Wisconsin, Madison

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Adopting Individual Vehicle Motion Patterns for Real-time Crash Risk Prediction Based on Empirical Vehicle Trajectories Prior to Crashes (TRBAM-25-04982) - B554
Jin Liu/Southeast University, Hao Yu/Southeast University, Pan Liu/Southeast University, Xudong Ren/Southeast University, Shuo Kong/Southeast University
Real-Time Conflict Risk Level Prediction Using Macroscopic Traffic Variables (TRBAM-25-05553) - B555
Ritvik Chauhan/Indian Institute of Technology, Roorkee, Ninad Gore/Indian Institute of Technology, Roorkee, Said Easa/Indian Institute of Technology, Roorkee, Shriniwas Arkatkar/Indian Institute of Technology, Roorkee, Md. Mazharul Haque/Indian Institute of Technology, Roorkee
Analyzing Crash Frequency and Crash Type Dynamics in Sweden from 2017 to 2022 Using a Hierarchical Modeling Approach (TRBAM-25-05657) - B556
Qikang Zheng/Southeast University, Fariya Sharmeen/Southeast University, Chengcheng Xu/Southeast University
ENHANCING CRASH SEVERITY PREDICTIONS ON NATIONAL HIGHWAYS: AN ORDERED MODELING APPROACH WITH FEATURE SELECTION (TRBAM-25-05809) - B568
Kommoju Prathyusha/Indian Institute of Technology, Roorkee, Amit Agarwal/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee
Predicting Injury Severity of Work Zone Crashes Along Florida Freeways (TRBAM-25-05847) - B562
Hellen Shita/Florida International University, HM Nayem/Florida International University, Priyanka Alluri/Florida International University
Developing Temporal Safety Performance Functions for Fully Separated Express Lanes Using the Poisson Lognormal Lindley (PLN-L) Model (TRBAM-25-05992) - B558
Abdulrahman Faden/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Samgyu Yang/University of Central Florida, Abdulrahman Faden/University of Central Florida
Investigating the Impact of Recommended Fragment Size to Improve Crash Count Prediction Models (TRBAM-25-00996) - B563
Farzin Maniei/Parsons Corporation, Stephen Mattingly/Parsons Corporation
A Hybrid Model for Real-time Secondary Crash Likelihood Prediction Excluding Post Primary Crash Features (TRBAM-25-01393) - B559
Lei Han/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Zubayer Islam/University of Central Florida, Chenzhu Wang/University of Central Florida
Out-Of-Sample Prediction for Random Parameter Generalized Linear Models (TRBAM-25-02751) - B564
Jonathan Wood/Iowa State University, Vikash Gayah/Iowa State University
Evaluating the Accuracy of Vehicle Tracking Data from UAV Videos and Identifying Traffic Conflict Points to Develop a Conflict Frequency Predictive Model for Roundabout Safety Assessment under Mixed Traffic (TRBAM-25-01145) - B569
Abhijnan Maji/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee
Validation Analysis of Traffic Simulation Safety Metrics with Real-World Crash Data (TRBAM-25-02287) - B565
Maria Oikonomou/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Safety Performance Functions for Rural Two-Lane Two-Way Roadways in New Jersey (TRBAM-25-03413) - B567
Bekir Bartin/Ozyegin Universitesi, Kaan Ozbay/Ozyegin Universitesi
Development of a Functional Conflict-based Safety Performance Function for Signalized Intersections Using the pNEUMA Data (TRBAM-25-04602) - B572
Tianyu Shen/Morgan State University, Di Yang/Morgan State University, Kun Xie/Morgan State University, Hong Yang/Morgan State University, Xianfeng Yang/Morgan State University, Mansoureh Jeihani/Morgan State University
An Exploration into Factors that Influence the Accuracy of CMFs Estimated by the Empirical Bayes Methodology (TRBAM-25-04839) - B573
Robert Mansell/Toronto Metropolitan University, Bhagwant Persaud/Toronto Metropolitan University

2207

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Road Scholars: New Research in Travel Time, Speed, and Reliability Data

Mei Chen, Kentucky Transportation Center, presiding
Samuel Granato, Ohio Department of Transportation, presiding
Anil Yazici, Stony Brook University, presiding
Yueshuai He, University of Louisville, presiding

Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Joint Subcommittee on Travel Time Speed and Reliability (with ACP70), Standing Committee on Highway Traffic Monitoring

This session covers the use, analysis, and estimation of travel time, speed, and reliability. Topics covered include methods to predict travel times; variable posted speed limits; estimating “free-flow” speed: and cyclist travel time reliability.

A Novel Spatio-Temporal Attention Network for Traffic Speed Prediction Based on Time Series Decomposition (TRBAM-25-02895) - A114
Lei Lin/Beijing Jiaotong University, Xumei Chen/Beijing Jiaotong University, Peikun Li/Beijing Jiaotong University

A Deep Spatio-Temporal Graph Attention Operator Network for Traffic Speed Prediction on Highways (TRBAM-25-03398) - A111
Qi Ai/Southeast University, Chengcheng Xu/Southeast University, Hao Tong/Southeast University

Short-Term Speed Prediction Over Space and Time: A Machine Learning and Deep Learning Approach (TRBAM-25-03997) - A126
Vineet Jain/Sardar Vallabhbhai National Institute of Technology, Surat, Vaishnavi Kharat/Sardar Vallabhbhai National Institute of Technology, Surat, Ashish Dhamaniya/Sardar Vallabhbhai National Institute of Technology, Surat

Assessing an AI-based Variable Speed Limit System on Proactive Slowdown Warnings with Ultra-High Fidelity Speed Data (TRBAM-25-05786) - A105
Yuhang Zhang/Vanderbilt University, Junyi Ji/Vanderbilt University, Zhiyao Zhang/Vanderbilt University, Marcos Quinones-Grueiro/Vanderbilt University, William Barbour/Vanderbilt University, Derek Gloudemans/Vanderbilt University, Matthew Nice/Vanderbilt University, Gergely Zachár/Vanderbilt University, Gautam Biswas/Vanderbilt University, Daniel Work/Vanderbilt University

Analyzing the Impact of Segment-Based Factors on Cyclist Travel Time Reliability on Cass Avenue, Detroit: A Case Study (TRBAM-25-05900) - A104
Anahita Zahertar/ITERIS, Inc., Steven Lavrenz/ITERIS, Inc.

Travel Times across the United States: An Exploration of the Variability of Mobility Patterns (TRBAM-25-06112) - A102
Federico Messa/Fondazione Transform Transport ETS, Alessandro Pedrazzoli/Fondazione Transform Transport ETS, Dante Presicce/Fondazione Transform Transport ETS, Andrea Gorrini/Fondazione Transform Transport ETS

Exploring the Impact of Free-Flow Speed Estimation on Travel Time Reliability (TRBAM-25-06245) - A101
Chien-Lun Lan/Virginia Department of Transportation, Mo Zhao/Virginia Department of Transportation

2208

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Applications and Innovations in Urban Travel Data

Krishnan Viswanathan, Whitman, Requardt and Associates, LLP, presiding
Clotilde Minster, The World Bank, presiding
Michael Fontaine, Virginia Transportation Research Council, presiding

Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Subcommittee on Urban Big Data

The variety of data sources available to capture urban travel characteristics is increasing, and innovative methods are being developed to utilize this data. This session presents papers that use urban travel data to examine a broad range of topics, including probe-based volume data, multimodal transportation data, post-pandemic travel behavior, and location-based services data.

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SHIV-NATRAJ Dataset: Spatiotemporal Heterogeneous Integrated Vehicular Naturalistic Aerial Trajectory Dataset (TRBAM-25-01274) - A127
Rajesh Chouhan/Sardar Vallabhbhai National Institute of Technology, Surat, Ashish Dhamaniya/Sardar Vallabhbhai National Institute of Technology, Surat, Constantinos Antoniou/Sardar Vallabhbhai National Institute of Technology, Surat
Low-Rank Bi-Directional Neighbor Tucker Decomposition for Traffic Data Imputation (TRBAM-25-00600) - A112
Jiaxin Lu/Southern University, Wenwu Gong/Southern University, Lili Yang/Southern University
On-Street Parking Availability Forecasting Using Spatial Temporal Graph Neural Networks (TRBAM-25-06369) - A100
Ayman Agoube/Montreal Polytechnic, Abdessamad Ait El Cadi/Montreal Polytechnic, Thierry Delot/Montreal Polytechnic, Martin Trépanier/Montreal Polytechnic
Assessing Urban Traffic Intelligence Based on Travel Experiences via Sentiment Analysis (TRBAM-25-02162) - A110
Sa Gao/Tongji University, Qingsong Ran/Tongji University, Zicheng Su/Tongji University, Ling Wang/Tongji University, Wanjing Ma/Tongji University, Ruochen Hao/Tongji University
Mitigating Spatial Disparity in Urban Prediction Using Residual-Aware Spatiotemporal Graph Neural Networks: A Chicago Case Study (TRBAM-25-02844) - A113
Dingyi Zhuang/Massachusetts Institute of Technology, Hanyong Xu/Massachusetts Institute of Technology, Xiaotong Guo/Massachusetts Institute of Technology, Yunhan Zheng/Massachusetts Institute of Technology, Jinhua Zhao/Massachusetts Institute of Technology
Data Quality Evaluation of Mobile Device Location Data: A Literature Review (TRBAM-25-05996) - A103
Yixuan Pan/University of Maryland, College Park, Qianqian Sun/University of Maryland, College Park, Mohammad Ashoori/University of Maryland, College Park, Guangchen Zhao/University of Maryland, College Park, Aref Darzi/University of Maryland, College Park

2209

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Understanding Census Data Through Visualization
Kathleen Yu, North Central Texas Council of Governments, presiding
Kyla Elzinga, Institute of Transportation Engineers, presiding
Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Subcommittee on Census for Transportation Planning

The goal of this poster session is to highlight the innovative ways in which people are visualizing the Census to gain a better understanding of the demographic data. In keeping with the theme of our parent committee, the posters do all focus on transportation planning but represent a diverse array of uses. The poster session would also like to share any challenges and lessons learned from translating complex Census data into visual and analytical products.

Microtransit Propensity Index: Feasibility and Prioritization Tool (P25-20215) - A125
Adrianna Fragozo/University of New Mexico, Lisa Losada-Rojas/University of New Mexico
Mapping Climate Vulnerability in Southern California: A Comprehensive Analysis Using Census and Climate Change Data (P25-20216) - A124
Kimberly Clark/Southern California Association of Governments, Matthew Hernandez/Southern California Association of Governments
Hexagons are the Bestagons: A Method to Standardize Mapping Data Across Varying Geographies (P25-20217) - A123
Sarah Windmiller/Cambridge Systematics, Inc., Jack Glodek/Cambridge Systematics, Inc.
Endogeneity of Electric Vehicle Adoption and Charging Equipment: Variations across Disadvantaged and Non-Disadvantaged Communities (P25-20218) - A122
A. Latif Patwary/Oak Ridge National Laboratory, Majbah Uddin/Oak Ridge National Laboratory
Modeling the Influence of Socio-Demographic Characteristics on Worker Departure Times Using a Time Series Cross-Sectional Model (P25-20219) - A121
Nikhil Menon/Kittelson & Associates, Inc., Sonu Mathew/Kittelson & Associates, Inc., Ananta Sinha/Kittelson & Associates, Inc.
Who is Responsible? Investigating the Origins of Through Traffic and Its Air Quality Impact on Boston's Communities (P25-20220) - A120
Lijiao Wang/Northeastern University, Muhammad Usama/Northeastern University, Haris Koutsopoulos/Northeastern University, Zhengbing He/Massachusetts Institute of Technology

2210

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Integrating Statistical and Machine Learning Approaches for Analyzing Travel Patterns, Safety, and Spatio-Temporal Data in Transportation

Sheikh Shahriar Ahmed, Steer, presiding

Achille Fonzone, Edinburgh Napier University, presiding

Sponsored By Standing Committee on Statistical and Econometric Methods

In this session, innovative statistical and machine learning approaches will be showcased for highly disaggregate analysis of travel patterns, enhancing safety assessments and predictions, and addressing spatio-temporal challenges or partial observability issues in transportation data.

Time Series Clustering Methods for Categorizing Active Travel Trends (TRBAM-25-00284) - A117

Rachael Panik/Georgia Institute of Technology, Julie Shorey/Georgia Institute of Technology, Kari Watkins/Georgia Institute of Technology, Patrick Singleton/Georgia Institute of Technology, B. Aditya Prakash/Georgia Institute of Technology

An Investigation into the Sample Size Effects on Extreme Value Models for Predicting Pedestrian Crash Frequencies from Traffic Conflicts (TRBAM-25-00378) - A106

Faizan Nazir/Loughborough University, Yasir Ali/Loughborough University, Md. Mazharul Haque/Loughborough University

A Special Cholesky-Based Parametrization for Estimation of Restricted Correlation Matrices (TRBAM-25-03111) - A108

Kun Huang/Tongji University, Xin Ye/Tongji University, Mengyi Wang/Tongji University, Huizhuo Zhang/Tongji University

Predicting with Missing Spatiotemporal Data: A Self-Imputation Assisted Prediction Model (TRBAM-25-03240) - A116

Mingxi Li/Hong Kong Polytechnic University, Zhengmin Shi/Hong Kong Polytechnic University, Jinlei Zhang/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University

Optimizing RWIS Locations with Wasserstein Distance and Geostatistics: A Case Study in South Korea (TRBAM-25-03459) - A128

Nancy Huynh/University of Alberta, Jinhwan Jang/University of Alberta, Tae Kwon/University of Alberta

Statistical Inferences of Artificial Neural Networks for Nonlinear and Interactive Relationships: Applications to Model Vehicle Miles Traveled with Significance Tests (TRBAM-25-03563) - A107

Siyu Wang/Tongji University, Xin Ye/Tongji University, Kun Huang/Tongji University

Using Bayesian Posterior Analysis to Predict Missing Information in Passively Collected Data (TRBAM-25-06046) - A118

Azam Ali/University of Leeds, Stephane Hess/University of Leeds, Thijs Dekker/University of Leeds, Charisma Choudhury/University of Leeds

2211

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Travel Behavior Studies: Insights from Pre-, During, and Post-COVID-19 Pandemic Periods

Md Sami Hasnine, Virginia Polytechnic Institute and State University, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session will explore the impacts of the COVID-19 pandemic on travel behavior and activity participation. Presentations will examine post-pandemic disparities in activity engagement, shifts in commuting preferences and frequencies, changes in school travel patterns, and the long-term effects on public transit use. Additionally, the relationship between vaccination status and public transportation consumption will be analyzed, highlighting how the pandemic has reshaped travel habits and preferences across various demographics and contexts.

Understanding Disparities in Activity Participation in Post-Pandemic California: A Clustering Analysis Approach (TRBAM-25-05033) - A142

Basar Ozbilen/University of California, Davis, Lynn Waiyan Kyaw/University of California, Davis, Siddhartha Gulhare/University of California, Davis, Xiatian Iogansen/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis

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Vaccination and Public Transport Consumption: Post-Pandemic Behavioural Shifts (TRBAM-25-00076) - A143
Md Shahin/University of New South Wales, Canberra, Milad Ghasri/University of New South Wales, Canberra, Alireza Abbasi/University of New South Wales, Canberra
An Evaluation of the Long-Term Effects of the COVID-19 Pandemic on Public Transit Use (TRBAM-25-01538) - A144
Bonny Smith/University of Texas, Austin, Dale Robbennolt/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
School Travel Behavior: How the Pandemic Impacted Families (TRBAM-25-02790) - A145
Kevin Chang/University of Idaho, Xinyi Li/University of Idaho, Ahmed Abdel-Rahim/University of Idaho
Analyzing Post-COVID Commuting Preferences and Frequencies in California: A Hybrid 1 Multiple Discrete-Continuous Extreme Value Approach (TRBAM-25-04731) - A146
Aurojeet Jena/University of California, Davis, David Bunch/University of California, Davis, Giovanni Circella/University of California, Davis
Does Commuting Really Make You Unhappy? The Causal Relationship Between Commuting and Depression - Evidence from China (TRBAM-25-05791) - A147
Yage Liu/University of California, Berkeley
The Impact of Knowing the Toll Rate on Toll Facility Use (TRBAM-25-05774) - A148
Natchaphon Leungbootnak/Texas A&M University, Evan Cheung/Texas A&M University, Rajdeep Pal/Texas A&M University, Hyemin Ju/Texas A&M University, Mark Burris/Texas A&M University

2212

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Reimagining Mobility: Shared, Micro, and Transit Solutions for the Future
Patrick Loa, University of California, Davis, presiding
Sponsored By Standing Committee on Traveler Behavior and Values

This session delves into the evolving landscape of shared and micro-mobility, highlighting the diverse factors influencing their adoption and use. Presentations explore e-scooter and e-bike usage patterns, car-sharing behaviors, and the preferences of young users across different trip types. Studies from Madrid, Nanjing, China, India, and South Florida provide insights into user preferences, built environment influences, and spatial heterogeneity in shared micro-mobility adoption. The session also discusses factors affecting the acceptance of robotaxis, emphasizing how incentives, land use, and attitudes shape the demand for new mobility solutions.

Who Rides E-scooters? Insights into the Use of Shared and Private E-scooters in Madrid (TRBAM-25-01232) - A130
Álvaro Aguilera-García/Universidad Politecnica de Madrid, Juan Gomez/Universidad Politecnica de Madrid, Thais Rangel/Universidad Politecnica de Madrid, José Manuel Vassallo/Universidad Politecnica de Madrid
Characterizing Usage Patterns and Trip Purposes of Carsharing Systems: A multi-city analysis in China (TRBAM-25-01795) - A131
Zhixuan He/University of Hong Kong, Jinyan Zu/University of Hong Kong, Xiaohu Zhang/University of Hong Kong
Study on Shared Bicycle Transfer Behavior and Influencing Factors Considering Spatial Heterogeneity (TRBAM-25-01825) - A132
Feifei Xin/Tongji University, Xiuping Zhao/Tongji University, Xiaobo Wang/Tongji University, Dan Linghu/Tongji University
Heterogeneous Behaviors and Preferences in Young People for Different Trip Purposes Within Shared Micro-Mobility Services (TRBAM-25-01866) - A133
Christos Gkartzonikas/University of Cyprus, Loukas Dimitriou/University of Cyprus
Eliciting Traveler Preferences for Conventional vs. Electric Bike-Sharing in Last-Mile Metro Context: A Case Study in Nanjing's Urban and Suburban Areas (TRBAM-25-01922) - A134
Jiang Ning/Southeast University, Jingxu Chen/Southeast University, Xuewu Chen/Southeast University, Xinlian Yu/Southeast University
What's the Key Features of Robo-Taxi Services Determing Passenger Acceptance? (TRBAM-25-03556) - A135
Haiyi Yang/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Chen Chen/Beijing University of Technology, Zhaowei Huang/Beijing University of Technology, Shengjun Tong/Beijing University of Technology
Bayesian Machine Learning Insights into Built Environment Influences on E-scooter Trip Fees (TRBAM-25-03676) - A136
Ruigan Wang/National University of Singapore, Guocong Zhai/National University of Singapore, Hongtai Yang/National University of Singapore, Zhizhao Zhao/National University of Singapore

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What incentives can increase adoption of e-bike conversion kits and pedal-assist e-bikes in India? (TRBAM-25-04176) - A137
Ashique Hussain/University of Colorado, Denver, Manoj M/University of Colorado, Denver, Manish Shirgaokar/University of Colorado, Denver
Unveiling the Factors Influencing Individual Usage Behavior of Shared E-Scooters (TRBAM-25-04547) - A138
Sajad Askari/University of Illinois, Chicago, Mahsa Merikhipour/University of Illinois, Chicago, Ehsan Rahimi/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago
Exploring the Impact of Users' Attitudes and Land Use Patterns on E-scooter Usage in South Florida Using Machine Learning (TRBAM-25-04933) - A140
Md Al Adib Sarker/Florida International University, Daniel Frolich/Florida International University, Xia Jin/Florida International University
Investigation of Factors Influencing the Intention to Use Shared E-bikes among Inexperienced Users (TRBAM-25-06420) - A141
Hye Won Do/Seoul National University, Jongho Oh/Seoul National University, Yeonwoo Jeong/Seoul National University, Chungwon Lee/Seoul National University

2213

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Demographics, Life Stages, and Travel Behavior: Attitudes and Insights
Ramin Shabanpour, University of North Florida, presiding
Sponsored By Standing Committee on Traveler Behavior and Values

This session delves into the interplay between demographics, life stages, and travel behavior, focusing on the impact of attitudes, well-being, and life events. Presentations will explore temporal stability in travel attitudes, attitudinal influences on travel demand models, and how messaging can drive behavior change. Additionally, the relationship between the built environment, time use, and subjective well-being across demographics is examined, along with travel trends among understudied populations, older adults, teens, and young adults. The insights will deepen our understanding of how demographic factors shape travel behavior and attitudes.

Analysis of the Relationship between Spatiotemporal Patterns of Older Adults and Built Environment (TRBAM-25-00085) - A156
Chen Guang Li/Chang'an University, Hong Chen/Chang'an University, Duo Wang/Chang'an University, Hanchu Zhou/Chang'an University
Studying Understudied Populations' Travel Behaviors with a Machine Learning Approach – A Focus on Hispanic and Latinx Households (TRBAM-25-00359) - A157
Guang Tian/University of New Orleans, Bob Danton/University of New Orleans
Different Effects of Time Use on Subjective Well-being by Gender and Life Stage (TRBAM-25-00659) - A158
Ziyue "Davia" Dong/University of Toronto, Eric Miller/University of Toronto
Will Flying Cars Drive Us to Relocate? Socio-Economic Responses Based on Income and Current Residential Patterns in the U.S: An Exploratory Study (TRBAM-25-02942) - A160
Gongda Yu/University at Buffalo, SUNY, Grigorios Fountas/University at Buffalo, SUNY, Jiajun Pang/University at Buffalo, SUNY, Irina Benedyk/University at Buffalo, SUNY, Panagiotis Anastasopoulos/University at Buffalo, SUNY
Headed Out Less: Analyzing Teen and Young Adult Travel Trends in the 21st Century (TRBAM-25-05815) - A161
Andy Fung/University of California, Los Angeles, Fariba Siddiq/University of California, Los Angeles, Yu Hong Hwang/University of California, Los Angeles, Brian Taylor/University of California, Los Angeles
How Much Do Attitudinal Variables Improve Travel Demand Models? Evaluation Using an Overlap Sample from an Attitude-rich Survey and the 2017 National Household Travel Survey (TRBAM-25-04739) - A162
Ilsu Kim/Georgia Institute of Technology, Patricia Mokhtarian/Georgia Institute of Technology
Driving Behavior Change: The Role of Positive Messaging in Reducing Roadside Litter (TRBAM-25-05548) - A166
Avani Aravind/University of Memphis, Sabyasachee Mishra/University of Memphis, Michael McClanahan/University of Memphis
Examining Subjective Well-Being and Environmental Satisfaction in Travel Behavior (TRBAM-25-06020) - A167
Alireza Ermagun/George Mason University

2214

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Climate, Sustainability, and Travel Behavior: Exploring the Intersection of Weather, Green Mobility, and Travel Patterns

Khandker Nurul Habib, University of Toronto, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session brings together diverse studies that explore post-pandemic shifts, green mobility preferences, and the evolving dynamics of travel behavior. Topics include the impact of vaccination on public transport, the role of the built environment in older adults' travel choices, micromobility use, shared and electric mobility, and commuting preferences across different demographics. The session also examines route choice behavior, air quality impacts, public transport dynamics, and emerging technologies like e-scooters and autonomous vehicles. These studies offer valuable insights into the factors shaping travel decisions, promoting more sustainable and inclusive urban mobility.

Does Social Influence Matter Green Travel Preferences? The Moderating Role of Travel Purposes and Companionship (TRBAM-25-01041) - A150

Huiying Lei/Southeast University, Wei Wang/Southeast University, Xuedong Hua/Southeast University, Weijie Yu/Southeast University

Exploring Green Travel Preference: The Impact of Carbon Credits Strategies on Travel Choices Across Demographics (TRBAM-25-00684) - A151

Yichen Gu/Southeast University, Xiang Zhang/Southeast University, Zijuan Yin/Southeast University, Wenquan Li/Southeast University

Preferences for Eco-friendly Transportation Based on Current Transportation Affinity and Carbon-related Attitudes (TRBAM-25-02869) - A152

Jahun Koo/HongIk University, Sujae Kim/HongIk University, Gyeongjae Lee/HongIk University, Sangho Choo/HongIk University

The case for rethinking rural: How simplification of rural places clouds our understanding of sustainable rural travel behavior (TRBAM-25-04909) - A153

Harrison Schukei/University of Vermont, Dana Rowangould/University of Vermont

Impact of Extreme Weather Events on Commuting Travel Behavior: Insights from the Zhengzhou 7-20 Rainstorm (TRBAM-25-03198) - A154

Xinghua Li/Tongji University, Yaocheng Zhou/Tongji University, Yuntao Guo/Tongji University

What is the Effect of Hurricane Evacuation on Driver Behavior? A Driving Volatility Study Using Real-World Data (TRBAM-25-05026) - A155

Niloufar Roozegar/University of South Florida, Sisinnio Concas/University of South Florida, Achilleas Kourtellis/University of South Florida, Vishal Kummetha/University of South Florida

2215

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Behavioral Travel Demand Analysis

Khandker Nurul Habib, University of Toronto, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session focuses on various topics related to behavioral travel demand analysis. Presentations will explore localized behavior of food delivery choices, tourists' preferences for spatial proximity to religious epicenters, and the factors influencing behavior.

Tourists' Preference for Spatial Proximity and Tourism Value of Spots around a Religious Epicenter (TRBAM-25-00819) - A168

Suvam Banerjee/Indian Institute of Technology, Roorkee, Rajat Rastogi/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee

Study on the Pre-Acceptance of Canceling the LPR Policy Based on Structural Equation Modeling: A Case Study of Hangzhou (TRBAM-25-00853) - A170

Yexing Yin/Zhejiang University, Gang Yu/Zhejiang University, Sheng Jin/Zhejiang University

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Travel Time Tolerance of Alternative Paths in Road Networks: A National Survey Study in China (TRBAM-25-01210) - A171
Yibing Hu/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Xiangdong Xu/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
Determinants of the Localized Behavior of Individual Online Food Delivery Choices (TRBAM-25-02533) - A172
Rongxiang Su/Massachusetts Institute of Technology, Javad Eshtiyagh/Massachusetts Institute of Technology, Paolo Santi/Massachusetts Institute of Technology, Songhua Hu/Massachusetts Institute of Technology, Fábio Duarte/Massachusetts Institute of Technology, Martina Mazzarello/Massachusetts Institute of Technology, Carlo Ratti/Massachusetts Institute of Technology
Factors Influencing the Decision to Switch to Electric Motorcycles Among Various Motorcycle Driver Profiles in Bangkok (TRBAM-25-03294) - A176
Ornicha Anuchitchanchai/Transportation Institute, Patanapong Sanghatawatana/Transportation Institute, Saksith Chalermpong/Transportation Institute
Influence of Message Based Nudges on Travel Choices on Express Lanes (TRBAM-25-03798) - A177
Mark Burris/WSP, Sruthi Ashraf/WSP, Musfira Rahman/WSP, Winfred Arthur. Jr/WSP, Alexander Brown/WSP, Susan Chrysler/WSP, Amy Benedick/WSP, Lindsay Hunker/WSP, Rick Huey/WSP, Matthew Airola/WSP, Nick Wood/WSP
Exploring Hetergeneity in Value of Time on Express Lanes from Passively Collected Big Data (TRBAM-25-04032) - A178
Shihan Lin/University of Maryland, College Park, Erika Spissu/University of Maryland, College Park, Cinzia Cirillo/University of Maryland, College Park
What Determines Travel Time and Distance Decay in Spatial Interaction and Accessibility? (TRBAM-25-05068) - A188
Rajat Verma/Purdue University, Satish Ukkusuri/Purdue University

2216

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Innovative Ecology and National Environmental Policy Act Strategies
Kris Gade, Pima County Department of Conservation Lands and Resources, presiding
Meridith Krebs, Kimley-Horn and Associates, Inc., presiding
Sponsored By Standing Committee on Environmental Analysis and Ecology

This poster session includes a variety of topics relating to the scope of the Standing Committee on Environmental Analysis and Ecology.

FHWA Habitat Connectivity Programs (P25-20460) - A180
Daniel Buford/Federal Highway Administration (FHWA), Colleen Fletcher/Federal Highway Administration (FHWA)
Wildlife Infrastructure Funding Guide: Funding Opportunities within the Infrastructure Investment and Jobs Act (P25-20464) - A181
Renee Callahan/ARC Solutions, Marta Brocki/ARC Solutions
The Rapidly Evolving World of Fish and Wildlife Crossings: Case Studies of Successful Ecological Connectivity (P25-20469) - A182
Shannon Crossen/Jacobs, Nicholas VanBuecken/Jacobs, Tom McIntyre/Jacobs, Jeffrey Kamps/Jacobs
Prioritizing Wildlife Crossing Locations Across Nevada's State Highway System (P25-20475) - A186
Nathan Jones/HDR, Julia Kintsh/Jacobs, Nova Simpson/Nevada Department of Transportation, Tanya Diamond/Pathways for Wildlife, Mark Traxler/HDR, Juan Garcia/BEC Environmental Inc
North Carolina's Next Chapter in Wildlife Passage Partnership (P25-20486) - A187
Marissa Cox/North Carolina Department of Transportation
Multi-agency collaboration spawns AlosApp: A web application tool for predicting anadromous fish migration and more effectively managing time-of-year restrictions for in-stream construction (P25-20487) - A190
Daniel Redgate/Virginia Department of Transportation, Amy Golden/Virginia Department of Transportation
The Effect of In-Stream Construction Activities on Aquatic Species: Monitoring Turbidity and Suspended Sediment Associated with the Use of Cofferdams (P25-20488) - A191
Lewis Lloyd/Virginia Department of Transportation, Bridget Donaldson/Virginia Transportation Research Council
Freshwater mussel tools to support conservation, mitigation, and restoration (P25-20489) - A192
James Kunz/U.S. Geological Survey, Jeffery Steevens/U.S. Geological Survey, Ning Wang/U.S. Geological Survey, David Soucek/U.S. Geological Survey, Bethany Kunz/U.S. Geological Survey

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Lessons learned - NCDOT's Use of Innovative Technologies through Conservation Measures (P25-20514) - A196
Cheryl Knepp/North Carolina Department of Transportation
Conserving Pollinators and Identifying Roadside Management Strategies (P25-20516) - A197
Cathy Ford/Idaho Transportation Department, Julie Hausknecht/Idaho Transportation Department
Artificial Intelligence (AI) Engage: A Case Study in Revolutionizing Public Involvement with Intelligent Interaction (P25-20519) - A198
Lauren Schramm/Pond and Company, Eric Duff/Georgia Department of Transportation, Glenn Martin/Pond & Company, Alexa Banke/Pond & Company
Local governments and VMT threshold of significance in CEQA; how far can we go? (TRBAM-25-02422) - A200
Rey Hosseinzade/University of California, Davis, Jamey Volker/University of California, Davis
How Does Electric Vehicle Adoption and Institutional Quality Impact CO2 Emissions and Economic Growth? Empirical Evidence from a Panel Study (P25-20530) - A201
Ann Mary Varghese/Indian Institute of Technology, Kharagpur, Rudra P Pradhan/Indian Institute of Technology, Kharagpur
Develop Screening Applications to Identify Transportation Issues in Large Areas using the Climate Vulnerability Index (CVI) (P25-20534) - A202
Bumsik Kim/Texas A&M Transportation Institute, Rodolfo Souza/Texas A&M Transportation Institute, P. Grace Lewis/Environmental Defense Fund, Maia Draper/Environmental Defense Fund, Madhusudhan Venugopal/Texas A&M Transportation Institute
A highway environmental evaluation model based on the life cycle theory: Case study in China (TRBAM-25-05492) - A203
Tiandong Xu/Northeast Forestry University, Chen Zhang/Northeast Forestry University

2217

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Building Information Modeling, Accelerated Bridge Construction, and Other Technologies in Bridge Design and Construction
Matthew Chynoweth, RS&H, Inc., presiding
Sponsored By Standing Committee on Innovative Highway Structures and Appurtenances

Research on BIM-based Forward Design of Bridges and Its Related Secondary Development (TRBAM-25-01913) - B586
Chundi Pang/Southeast University, CS Cai/Southeast University
A Few-Shot Learning Model for Bridge Layout Design (TRBAM-25-02307) - B585
Wen Xiong/Southeast University, Minrong Jiang/Southeast University, Yanjie Zhu/Southeast University
Monitoring during the Unbraced Network Tied Arch Bridge Construction using ABC Techniques (TRBAM-25-04227) - B584
Harsha Amunugama/Western Michigan University, Upul Attanayake/Western Michigan University, Mike LaViolette/Western Michigan University, Bradley Wagner/Western Michigan University, Matt Longfield/Western Michigan University, Purushotham Pakala/Western Michigan University, John Belcher/Western Michigan University

2218

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Advanced Inspection and Structural Assessment Technologies
Hoda Azari, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Testing and Evaluation of Transportation Structures

This poster session focuses on structural analysis, inspection, and monitoring methods that leverage both digital technologies and physical modeling. The posters will explore advancements in remote sensing, mixed-reality tools, and numerical modeling to improve the safety, reliability, and maintenance of highway infrastructure.

A Day-to-Day Traffic Load Evolution Model for Bridge Structure Safety Prediction After an Unexpected Network Change (TRBAM-25-00658) - B583
Zhen Yang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Ruiping Zheng/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Xiaojin Ji/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhe Gong/Key Laboratory of Road and Traffic Engineering of the Ministry of Education

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Numerical Modeling of the BEAST Specimen Considering Delamination Scenarios (TRBAM-25-02362) - B582
Peter Grubits/CAIT, Maurizio Morgese/CAIT, John Braley/CAIT, Raffaele Cucuzza/CAIT, Marco Domaneschi/CAIT, Majid Movahedi Rad/CAIT, Ali Maher/CAIT
Evaluation and Load Rating of an Aging and Impact Damaged Steel Girder Bridge: Case Study (TRBAM-25-03590) - B581
Mohd Mezanur Rahman/CONSOR Engineers, Nur Yazdani/CONSOR Engineers, Eyosias Beneberu/CONSOR Engineers, Khadiza Binte Jalal/CONSOR Engineers
Automated Drone-Based Bridge Coating Inspection Using Ultrawide Band (UWB) Sensors and Vision-Based Machine Learning (TRBAM-25-06029) - B580
Yiming Liu/Federal Highway Administration (FHWA), Frank Jalinoos/Federal Highway Administration (FHWA)

2219

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Advanced Tools to Support Maintenance Management Decision Making
Rob Zilay, Dye Management Group, Inc., presiding
Sponsored By Standing Committee on Maintenance and Operations Management

Long-term maintenance decision-making and case application of highway asphalt pavement combined with risk assessment (TRBAM-25-00108) - A294
jiuda huang/JSTI GROUP, enyu wang/JSTI GROUP, chao han/JSTI GROUP, wuju wei/JSTI GROUP, shouxin wang/JSTI GROUP
Classification Algorithms for Identifying Unrecorded Maintenance in Pavement Management Systems (TRBAM-25-00867) - A293
James Bryce/West Virginia University
Determination of Minimal Pavement Performance Thresholds for Municipal Capital Budget Planning (TRBAM-25-00874) - A286
Wang Chen/Toronto Metropolitan University, Arnold Yuan/Toronto Metropolitan University, Chris Yang/Toronto Metropolitan University
Multi-uncertainty and Rejecting Maintenance are Necessary in Project-level Maintenance Decision-making (TRBAM-25-02135) - A277
Tianqing Hei/Southeast University, Tao Ma/Southeast University, Zheng Tong/Southeast University, Siqi Wang/Southeast University
A GIS-Based, Machine Learning Approach for Model Inventory Roadway Elements Surface Type Classification from Aerial Imagery (TRBAM-25-02657) - A296
Stephen Taylor/Toxcel, LLC, Sarah Weissman Pascual/Toxcel, LLC, Kevin Koester/Toxcel, LLC, Ally Barlow/Toxcel, LLC, Ian Hamilton/Toxcel, LLC
Pavement Rehabilitation Training for Frontline Employees through Virtual Reality Simulation of Field Conditions (TRBAM-25-02808) - A278
Yu-Ting Huang/Purdue University, Tarutal Ghosh Mondal/Purdue University, Mohammad Jahanshahi/Purdue University, Shirley Dyke/Purdue University, Tommy Nantung/Purdue University, Matt Kraushar/Purdue University
Decision Framework to Determine the Maintenance Strategy Based on Both Structural and Functional Conditions of Asphalt Pavements (TRBAM-25-02917) - A295
Bongsuk Park/Indiana Department of Transportation, Cheng Zhang/Indiana Department of Transportation, Seonghwan Cho/Indiana Department of Transportation, Tommy Nantung/Indiana Department of Transportation, John Haddock/Indiana Department of Transportation
Multispectral Satellite Data for Pavement Maintenance Decision-Making: Assessing its Value in Partially Observable Stochastic Environments (TRBAM-25-04825) - A297
Mahyar Shahri/University of Georgia, Sung-Hee Kim/University of Georgia
Optimizing Design and Maintenance: A Pathway to Decarbonizing Concrete Pavements' Life Cycle (TRBAM-25-04834) - A288
Haoran Li/Massachusetts Institute of Technology, Miaomiao Zhang/Massachusetts Institute of Technology, Hessam Azarijafari/Massachusetts Institute of Technology, Randolph Kirchain/Massachusetts Institute of Technology
Weighting Variables for Condition Indices Using Subjective Data Framework (TRBAM-25-05054) - A287
Abdallah Al-Hamdan/Iowa State University, Yazan Alatoom/Iowa State University, Inya Nlenanya/Iowa State University, Omar Smadi/Iowa State University

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A Predictive and Precision Pavement Maintenance Methodology Utilizing Multi-Temporal Pavement Images (TRBAM-25-05136) - A292
Zhongyu Yang/Georgia Institute of Technology, Jordan Fung/Georgia Institute of Technology, Hoang Ho/Georgia Institute of Technology, Yichang Tsai/Georgia Institute of Technology
A Machine Learning Framework for Transportation Asset Management (TRBAM-25-06175) - A298
Mohammad SafariTaherkhani/University of Maryland, College Park, Narjes Shayesteh/University of Maryland, College Park, Kaveh Farokhi Sadabadi/University of Maryland, College Park

2220

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Advances in Pavement Management
Nima Kargah-Ostadi, Callentis Consulting Group, presiding
Sponsored By Standing Committee on Pavement Management Systems

This session covers an array of topics in pavement management from data collection to decision making and maintenance management all demonstrating advances in pavement management and use of pavement management data.

Deep Learning Pipeline for Modeling Pavement Cracks With an Imbalanced Dataset (MoPaC) (TRBAM-25-06415) - A280
Andrew Scouten/Texas State University, Haitao Gong/Texas State University, Jelena Tesic/Texas State University, Feng Wang/Texas State University
Multimodal Perception-Guided Intelligent Pavement Crack Detection Approach: A Novel Combining Vision and Semantic Supervision Framework (TRBAM-25-05452) - A281
Tiandong Xu/Northeast Forestry University, Chen Zhang/Northeast Forestry University
A Novel Diagnosis Method of Pavement Distress Combining Knowledge Graph and Large Language Models (TRBAM-25-03810) - A284
Peilong He/Tongji University, Qun Yang/Tongji University
A Matrix Completion Approach for Imputing Missing Pavement Condition Data and Its Impact on Pavement Performance Prediction (TRBAM-25-00723) - A285
Linyi Yao/Hong Kong Polytechnic University, Zhen Leng/Hong Kong Polytechnic University, Fujian Ni/Hong Kong Polytechnic University
Enhancing Road Maintenance Prioritization: Single Index Screening and Unified Pavement Assessment Metric (UPAM) Integration (TRBAM-25-02262) - A270
Saroch Boonsiripant/No Organization, Ponlathep Lertworawanich/No Organization, Auckpath Sawangsuriya/No Organization, Kuljira Jinakub/No Organization
Which Impacts Matter for Pavement Management Decisions? Quantifying Social Sustainability Based on A Capability Approach (TRBAM-25-02391) - A271
Jessica Boakye/University of Massachusetts, Amherst, Egemen Okte/University of Massachusetts, Amherst
Large-scale Pavement Management Considering Reliability and Traffic Dynamics (TRBAM-25-00901) - A272
Abhishek Kumar Prajapati/Pennsylvania State University, S. Ilgin Guler/Pennsylvania State University
Fiber Optic Axle Load Monitoring for Asphalt Pavement Maintenance Management (TRBAM-25-01515) - A290
Yi Hu/Tongji University, Tijun Jiang/Tongji University, Qun Yang/Tongji University
Quality Assurance of Chip Seals Using Macrotexture Metric (TRBAM-25-04604) - A282
Norovbanzad Tsogt-Ochir/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University, Edgar de León Izeppi/Virginia Polytechnic Institute and State University, Ilker Boz/Virginia Polytechnic Institute and State University
Ontology-driven semantic enhancement and VPL-Based Workflow for modeling automation of a Stone-Paved Road Building Information Model (TRBAM-25-01131) - A291
Mattia Intignano/University of Naples Federico II, Salvatore Antonio Biancardo/University of Naples Federico II, Gianluca Dell'Acqua/University of Naples Federico II
Particle Swarm Optimization for Cost-Effective Decision Making in Pavement Management Systems (TRBAM-25-00392) - A283
Serdal Terzi/Suleyman Demirel University, Sebnem Karahancer/Suleyman Demirel University, Ekinhan Eriskin/Suleyman Demirel University, Bekir Aksoy/Suleyman Demirel University, Osamah Salman/Suleyman Demirel University

2221

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Advances in Critical Transportation Infrastructure Resilience

Sybil Derrible, University of Illinois, Chicago, presiding
Arif Mohaimin Sadri, University of Oklahoma, presiding
Angelo Furno, University Gustave Eiffel, presiding
Sponsored By Standing Committee on Critical Transportation Infrastructure Protection

This poster session showcases recent advances in critical transportation infrastructure protection and transportation resilience more generally. The posters cover a variety of topics pertaining to transportation resilience, from multi-modal transportation resilience and climate resilience to preparing for wildfires and public transportation planning.

Assessing the Robustness and Resilience of U.S. Strategic Highways: A Network Science Perspective (TRBAM-25-04694) - A221
Sukhwan Chung/U.S. Army Engineer Research and Development Center, Daniel Sardak/U.S. Army Engineer Research and Development Center, Jeffrey Cegan/U.S. Army Engineer Research and Development Center, Igor Linkov/U.S. Army Engineer Research and Development Center

Curation of a Natural Hazards Database for U.S. Railroad Infrastructure (TRBAM-25-04341) - A215
Benyamin Ghoreishi/Oregon State University, Brian Staes/Oregon State University, Chenqiang Liu/Oregon State University, Haizhong Wang/Oregon State University, Robert Bertini/Oregon State University

Investigating Resiliency of Transportation Network Under Targeted and Potential Climate Change Disruptions (TRBAM-25-04925) - A216
Maedah Rahimitouranposhti/University of Tennessee, Knoxville, Bharat Sharma/University of Tennessee, Knoxville, Mustafa Camur/University of Tennessee, Knoxville, Olufemi Omitaomu/University of Tennessee, Knoxville, Xueping Li/University of Tennessee, Knoxville

Compound Risk of Wildfire and Inaccessible Shelters is Disproportionately Impacting Disadvantaged Communities (TRBAM-25-05688) - A225
Fatemeh Janatabadi/George Mason University, Alireza Ermagun/George Mason University

The Relationship between Subnetwork Resilience and Large Network Resilience under Severe Disruption Scenarios (TRBAM-25-03482) - A217
Yilin Shi/Beijing Jiaotong University, Tingting Zhao/Beijing Jiaotong University, Victor Knoop/Beijing Jiaotong University

Graph-Theoretic Pathfinding for Infrastructure Resilience with Matrix-Based Reliability-Cost Analysis and Bench--marking (TRBAM-25-01289) - A222
Seyed Hooman Ghasemi/University of Alabama, Birmingham, Andrzej Nowak/University of Alabama, Birmingham, Rouzbeh Nazari/University of Alabama, Birmingham

Defining and Measuring Urban Road Network Dynamic Traffic Resilience under Frequent Disturbances (TRBAM-25-05958) - A218
Siyao Zhang/Beihang University, Zhao Zhang/Beihang University, Jinghua Wang/Beihang University, Lei Mo/Beihang University, Bin Yu/Beihang University

Climate Resilience of Transportation Infrastructure: Challenges and Opportunities (TRBAM-25-05792) - A226
Marta Vicarelli/University of Massachusetts, Amherst, Eleni Christofa/University of Massachusetts, Amherst, Chengbo Ai/University of Massachusetts, Amherst, Michael Knodler/University of Massachusetts, Amherst, Camille Barchers/University of Massachusetts, Amherst, Sarah Welch/University of Massachusetts, Amherst, Ishaan Singh Sarna/University of Massachusetts, Amherst, Saniya Jain/University of Massachusetts, Amherst

The Design of Critical Infrastructure Assets and the Impact on System Resilience (TRBAM-25-04546) - A220
Eric Treyz/Bates College, Stergios Mitoulis/Bates College, Alexandre Bredikhin/Bates College, Noah Bridges/Bates College, Owen Karpeles/Bates College, Alexander Karhunen/Bates College, Shreeya Gurav/Bates College, Alexander Infeld/Bates College, Billy Leung/Bates College, Igor Linkov/Bates College, Celso Lopez/Bates College

Assessing Urban Multimodal Transportation System Resilience Considering Passenger Demand and Infrastructure Supply (TRBAM-25-00792) - A227
Wang Nanxi/Nanyang Technological University, Kum Fai Yuen/Nanyang Technological University

Planning for Resilience Hubs: Learning from the 2023 Lahaina Fire Disaster (TRBAM-25-01600) - A210
Karl Kim/University of Hawaii, Joshua Cooper/University of Hawaii, Cuong Tran/University of Hawaii, Dingyi Liu/University of Hawaii, Eric Yamashita/University of Hawaii

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Constructing and Analyzing the Resilience of Integrated Multi-Modal Transportation Hyper-Network: A Case Study of the United Kingdom (TRBAM-25-05782) - A228
Zhengyang Bei/Nanjing University, Kun Tang/Nanjing University, Tangyi Guo/Nanjing University
Measuring Resilience Hub Coverage Across Transportation Modes: A Case of Edmonton, Canada (TRBAM-25-01714) - A230
Thayanne Ciriaco/University of Alberta, Emily Grise/University of Alberta, Stephen Wong/University of Alberta
On Topological Measures and Network Vulnerability Patterns: A Comparative Analysis (TRBAM-25-04771) - A224
Saviz Saei/Mississippi State University, Kash Barker/Mississippi State University, Nazanin Morshedlou/Mississippi State University, Alireza Ermagun/Mississippi State University
Enhancing Urban Resilience through Shared Autonomous Electric Vehicles: A Multi-Objective Optimization Approach for Resilient Mobility and Energy Systems (TRBAM-25-01787) - A231
Jônatas Augusto Manzolli/McGill University, Jiangbo Yu/McGill University, Luis Miranda-Moreno/McGill University
Enhancing Disaster Resilience and Authentic Public Partnership in Transportation: Capability Maturity Model for Integrating Negotiated Resilience Principles in Disaster Preparedness (TRBAM-25-00221) - A213
Maya Orthous Inchauste/Georgia Institute of Technology, Adair Garrett/Georgia Institute of Technology, Adjo Amekudzi-Kennedy/Georgia Institute of Technology, Collin Yarbrough/Georgia Institute of Technology, Brian Woodall/Georgia Institute of Technology
Influence of Decision-Maker Risk Preferences on Interdependent Infrastructure Resilience Pathways (TRBAM-25-01827) - A232
Srijith Balakrishnan/No Organization, Lawrence Jin/No Organization, Beatrice Cassottana/No Organization, Alberto Costa/No Organization, Giovanni Sansavini/No Organization
Greenways for Disaster Recovery and Resilience (TRBAM-25-05373) - A211
Cuong Tran/National Disaster Preparedness Training Center, Ethan Santiago/National Disaster Preparedness Training Center, Eric Yamashita/National Disaster Preparedness Training Center, Karl Kim/National Disaster Preparedness Training Center
Operational Resilience Evaluation of Comprehensive Transportation Hub System Based on SEM-AEWM-Extension Cloud Model (TRBAM-25-05569) - A233
Penghao Kang/Chang'an University, Daniel Jian Sun/Chang'an University, Gaole Wan/Chang'an University
Vulnerability Assessment of Large-Scale Urban Road Network Under Emerging Disinformation Attacks (TRBAM-25-02243) - A234
Yangyang Meng/Hong Kong Polytechnic University, Xiaofei Zhao/Hong Kong Polytechnic University, Xiaotong Xu/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University
Enhancing Infrastructure Resilience and Risk Assessment: A Probabilistic Approach to RAMCAP in Transportation Networks (TRBAM-25-03793) - A223
Ruqaya Alfaris/Rowan University, Seyed Hooman Ghasemi/Rowan University, Mohammad Jalayer/Rowan University
Enhancing Resilience in Urban Transit: A Comprehensive Study of the New York City Subway System (TRBAM-25-03030) - A235
Huiying Fan/Georgia Institute of Technology, Le Changivy/Georgia Institute of Technology, Christin Salley/Georgia Institute of Technology, Maggie Ely/Georgia Institute of Technology, Geyu Lyu/Georgia Institute of Technology, Jingran Sun/Georgia Institute of Technology, Ruili Yao/Georgia Institute of Technology
Advancing Multi-Hazard Risk Assessment for Transportation Systems: A Comprehensive Bibliometric Review (TRBAM-25-05235) - A236
Anand Praveena/Vellore Institute of Technology, Marimuthu Venkadavarahan/Vellore Institute of Technology
Identifying Critical Transportation Links for Hurricane Search and Rescue Operations (TRBAM-25-05875) - A237
Mehrdad Arabi/University of Texas, Arlington, Kate Hyun/University of Texas, Arlington
Strategically Developing Citizen Scientists Who Can Effectively Utilize Sustainable and Resilient Infrastructure Engineering Concepts in the Design and Management of Transportation Infrastructure Systems (TRBAM-25-05667) - A238
Oludare Owolabi/Morgan State University, Grace Balogun/Morgan State University, Micheal Okegbola/Morgan State University, Pelumi Abiodun/Morgan State University, Olushola Emiola-Owolabi/Morgan State University
Evaluating Advance Refunding Strategies in Response to the Covid-19 Pandemic in U.S. Transportation Infrastructure Projects (TRBAM-25-04097) - A240
Muhammet Sever/George Mason University, Jonathan Gifford/George Mason University, Carter Casady/George Mason University
Spatial Equity in Accessing Critical Facilities during Hurricanes (TRBAM-25-01082) - A241
Pooya Komeilian/University of North Florida, Ramin Shabanpour/University of North Florida

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Network-Based Resilience Assessment of Metro Stations: The Relation of Infrastructures and Passengers (TRBAM-25-01976) - A242
Peng-Cheng Xu/Chang'an University, Qing-Chang Lu/Chang'an University, Tao Feng/Chang'an University, Jing Li/Chang'an University, Adil Hussain/Chang'an University, Rundong Wang/Chang'an University
Twelve Recommendations for Resilience Building Using a Resilience Mindset: Reflections Following the Francis Scott Key Bridge Disaster (TRBAM-25-03197) - A214
Adjo Amekudzi-Kennedy/Georgia Institute of Technology
Tracking Wildfire Risk to California Railroads: Integrating Environmental Data and Railway Operations (TRBAM-25-01349) - A212
Karl Kim/University of Hawaii, Daniele Spirandelli/University of Hawaii, David Rother/University of Hawaii, Eric Yamashita/University of Hawaii, Michelle Toner/University of Hawaii
Key Requirements for Implementing Resilience into Practice: Findings of the U.S. DOT Resilience Coalition (TRBAM-25-05237) - A243
Aimee Flannery/Jacobs, Seth Brown/Jacobs, Barry Liner/Jacobs

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Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Connected and Automated Vehicles: Cybersecurity and Threat Detection
Mizan Rahman, University of Alabama, Tuscaloosa, presiding
Sponsored By Standing Committee on Systems, Enterprise, and Cyber Resilience, Joint Subommittee on Cybersecurity (with AED30 and AMR10)

Detecting, preventing, and warning of cyberattacks for connected, automated vehicles are being researched through multiple vectors. Whether it's the navigation systems, adversarial simulations and networks, deepfake attacks on traffic sign classifications, or deep learning-based approaches, the latest research in these poster sessions provide insights into how vehicle systems will be affected and respond from these types of attacks.

Online Routing for a Connected Vehicle Against Stealthy Cyberattacks (TRBAM-25-00121) - A250
Minghui Wu/University of Michigan, Yafeng Yin/University of Michigan, Jerome Lynch/University of Michigan
VCAT: Vulnerability-Aware and Curiosity-Driving Adversarial Training for Autonomous Vehicle (TRBAM-25-01085) - A251
Xuan Cai/Beihang University, Zhiyong Cui/Beihang University, Xuesong Bai/Beihang University, Ruimin Ke/Beihang University, Haiyang Yu/Beihang University, Yilong Ren/Beihang University
A Hybrid Quantum-Classical AI-Based Detection Strategy for Generative Adversarial Network-Based Deepfake Attacks on an Autonomous Vehicle Traffic Sign Classification System (TRBAM-25-05354) - A253
M Sabbir Salek/National Center for Transportation Cybersecurity and Resiliency (TraCR), Shaozhi Li/National Center for Transportation Cybersecurity and Resiliency (TraCR), Mashrur Chowdhury/National Center for Transportation Cybersecurity and Resiliency (TraCR)
Safety Warning System for Connected Vehicles Under Spoofing Cyberattacks at a Connected Signalized Intersection: A Deep Learning-based Approach (TRBAM-25-05011) - A252
Yingfan Gu/University of Cincinnati, Zhixia Li/University of Cincinnati, Heng Wei/University of Cincinnati, Guohui Zhang/University of Cincinnati, Yifan Xu/University of Cincinnati

2223

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Infrastructure Cybersecurity: Integrated Hardware, Electric Vehicle Chargers, and Intelligent Transportation Systems

John Contestabile, Skyline Technology Solutions, presiding

Sponsored By Standing Committee on Systems, Enterprise, and Cyber Resilience, Joint Subommittee on Cybersecurity (with AED30 and AMR10)

Every device and infrastructure needs to be hardened in a digital environment. With the emphasis and increases in EV charging infrastructure that is being implemented, understanding the cybersecurity environment for communication protocols and power electronics is important to understand. Managed lanes and variable speed limit deployments are common throughout the US and the safety risks and vulnerabilities of these systems to cyber intrusions have been researched. Consideration and understanding of analytical frameworks that can consider traffic flow in a network-level analysis and what affect that can have under route guidance attacks merits attention. With infrastructure expanding, our cyber understanding needs to expand with it.

Electronic Vehicle Level-3 Charging: Cybersecurity Mitigations for Communication Protocols and Power Electronics (TRBAM-25-01674) - A260

Marco Vincenzi/Arizona State University, Ayan Mallik/Arizona State University, Fabio Fabio Martinelli/Arizona State University, Ilaria Matteucci/Arizona State University, Dajiang Suo/Arizona State University

Assessing Safety Risks and Vulnerabilities of Variable Speed Limits to Cyber Intrusions (TRBAM-25-04090) - A261

Maryam Samaei/University Gustave Eiffel, Mostafa Ameli/University Gustave Eiffel, Samaneh Yazdanipour/University Gustave Eiffel, Reza Arani/University Gustave Eiffel

Analytical Framework for Network-Level Traffic Flow under Route Guidance Attacks: An Extension of the Generalized Bathtub Model (TRBAM-25-05065) - A262

Eunhan Ka/Purdue University, Satish Ukkusuri/Purdue University

A Side Channel Power Analysis Based Stealthy Hardware Trojan Detection Method for Securing the Integrated Circuits in Transportation Hardware (TRBAM-25-05802) - A254

Sefatun-Noor Puspa/Clemson University, Abyad Enan/Clemson University, Reek Majumder/Clemson University, M Sabbir Salek/Clemson University, Gurcan Comert/Clemson University, Mashrur Chowdhury/Clemson University

2224

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Transit from the Rider Perspective: Satisfaction and Equity

Xavier Harmony, Northern Virginia Transportation Commission, presiding

Frances Fisher, San Francisco Bay Area Rapid Transit, presiding

Sponsored By Standing Committee on Transit Management and Performance

Papers focusing on rider satisfaction and the equity of service provided.

Tracking Public Transit Satisfaction Trajectories With Longitudinal Multilevel Models (TRBAM-25-05149) - B474

Spencer Aeschliman/Northwestern University, Amanda Stathopoulos/Northwestern University

Concerning the Bus Transit Usage Centeric Perception of Urban Travellers for the Development of Type-2 Fuzzy Scale (TRBAM-25-01616) - B483

Rohit Rathod/Sardar Vallabhbhai National Institute of Technology, Gaurang Joshi/Sardar Vallabhbhai National Institute of Technology, Shriniwas Arkatkar/Sardar Vallabhbhai National Institute of Technology

Interpretation of Equity in a Market of Transit Services in Urban Areas based on Microeconomics (TRBAM-25-01818) - B482

Filippos Alogdianakis/University of Cyprus, Loukas Dimitriou/University of Cyprus

Examining Transit Fairness Perceptions Among CTA Passengers through Error Component Logit Model (TRBAM-25-03499) - B473

Zhuangcun Chen/Northwestern University, Amanda Stathopoulos/Northwestern University

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Disentangling Dissatisfied Riders: A Latent Class Analysis on Post-Pandemic Transit Rider Satisfaction in Chicago (TRBAM-25-02471) - B472
Shuqing Kang/Northwestern University, Amanda Stathopoulos/Northwestern University
A Study on Maryland Transit Administration (MTA) Bus Service's Stop-Level Reliability From an Equity Perspective Using Archived GTFS-RT Data (TRBAM-25-06326) - B492
Mohammad Ridwan Tanvir/Morgan State University, Joseph Aina/Morgan State University, Celeste Chavis/Morgan State University, Vanessa Frias-Martinez/Morgan State University, Gregory Newmark/Morgan State University, Shawn Campbell/Morgan State University
Factors Affecting Public Transport Use Amongst Adolescents in Melbourne (TRBAM-25-00023) - B493
Maryam Jafari/Monash University, Alexa Delbosc/Monash University, Graham Currie/Monash University
What Hampers Transit Agencies from Supplying Appropriate Bus-Stop Amenities? (TRBAM-25-04185) - B494
Sneha Tallavajjula/University of Colorado, Denver, Manish Shirgaokar/University of Colorado, Denver, Aditi Misra/University of Colorado, Denver, Wesley Marshall/University of Colorado, Denver
From Lockdown to Recovery: Modeling the Long-term Effects of COVID-19 on Xi'an's Metro Ridership (TRBAM-25-03248) - B500
Chen Ma/Chang'an University, Baixi Shi/Chang'an University, Yanqiu Cheng/Chang'an University, Lexing Zhang/Chang'an University, Kuanmin Chen/Chang'an University
The Impact of Transit Service Frequency and On-time Performance on Ridership: An Analysis of the Pre-Covid and Recovery Periods in Miami-Dade County (TRBAM-25-04883) - B501
Duanya Lyu/University of Florida, Xiang Yan/University of Florida
Optimising Bus Transit Operations Considering the Behavioural Differences of Urban Travellers (TRBAM-25-06177) - B484
Nirav Soni/Sardar Vallabhbhai National Institute of Technology, Rohit Rathod/Sardar Vallabhbhai National Institute of Technology, Shriniwas Arkatkar/Sardar Vallabhbhai National Institute of Technology

2225

Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Optimizing Public Transportation Service
Konstantinos Gkiotsalitis, National Technical University of Athens (NTUA), presiding
Frances Fisher, San Francisco Bay Area Rapid Transit, presiding
Sponsored By Standing Committee on Transit Management and Performance

Includes research on network optimization including transit signal priority; and analyses of asset failure and prevention

A Synchronized Optimization of Inspection Timetable and Working Schedule for UAV-Assisted Urban Subway Inspection Services (TRBAM-25-00166) - B510
Bolong Zhou/Hong Kong Polytechnic University, Wenjia Zeng/Hong Kong Polytechnic University, Wei Liu/Hong Kong Polytechnic University, Hai Yang/Hong Kong Polytechnic University
Assessing Public Transport Efficiency: A Spatial Analysis of Network Performance in Athens, Greece (TRBAM-25-00560) - B511
Parmenion Delialis/National Technical University of Athens (NTUA), Orfeas Karountzos/National Technical University of Athens (NTUA), Konstantinos Kepaptsoglou/National Technical University of Athens (NTUA)
Evaluation Method of Node Importance of Urban Rail Transit Based on Signaling System Failure (TRBAM-25-01660) - B512
Mingshu Yang/Nanjing University, Junhong Hu/Nanjing University, Yunzhu Zhen/Nanjing University
Linking Incidents to Customers (Linc): Inferring Rail Vehicle Delay Causes From Track Circuit Data (TRBAM-25-02972) - B513
Michael Levin/Arcadis, Rubén Morgan/Arcadis, Gabriel Pincus/Arcadis, Xin Zhou/Arcadis, Ilana Sadholz/Arcadis, Raymond Chan/Arcadis
Customized Bus Routing Problem for Commuting Travel Demand Considering Route Similarity (TRBAM-25-03516) - B514
Ziyu Liu/Southeast University, Di Huang/Southeast University, Zhiyuan Liu/Southeast University, Ronghui Liu/Southeast University
Joint Optimization of Pattern, Headway, and Fleet Size of Multiple Urban Transit Lines with Perceived Headway Consideration and Passenger Flow Allocation (TRBAM-25-04981) - B515
Max Ng/Northwestern University, Draco Tong/Northwestern University, Hani Mahmassani/Northwestern University, Omer Verbas/Northwestern University, Taner Cokyasar/Northwestern University

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Strategic Approaches to Overcoming Implementation Barriers in Innovative Transportation System Solutions: A Case Study of Transit Signal Priority (TRBAM-25-05666) - B506
Sajad Askari/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago, Mohammad Miralinaghi/University of Illinois, Chicago, Alireza Talebpour/University of Illinois, Chicago, Sanaz Kazemzadehazad/University of Illinois, Chicago
Real-Time Bus Travel Time Prediction and Reliability Quantification: A Hybrid Non-Stationary Markov Model (TRBAM-25-05524) - B507
Yuran Sun/University of Florida, James Spall/University of Florida, Wai Wong/University of Florida, Xilei Zhao/University of Florida
Assessing the Impact of Transit Right-of-Way on Service Reliability via Segment-Level Data Integration and Ensemble Learning (TRBAM-25-05525) - B508
Xiaohuan Zeng/University of Minnesota, Twin Cities, Ying Song/University of Minnesota, Twin Cities, Alireza Khani/University of Minnesota, Twin Cities, Joseph Reid/University of Minnesota, Twin Cities, Sahas Sok/University of Minnesota, Twin Cities

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Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Managing Public Transportation Wisely
Steven Polzin, Arizona State University, Tempe, presiding
Sponsored By Standing Committee on Transit Management and Performance

This session includes posters focusing on directly operated vs contracted service and impacts of public private partnerships. Other studies include optimizing the operator extraboard and evaluations of balancing transit resources provided to urban cores vs less dense areas.

Performance Trends of Directly Operated Versus Contracted Bus Transit Services: A National Comparative Study (TRBAM-25-02433) - B502
Mayumi Mato/Florida International University, Albert Gan/Florida International University
Public Private Partnerships & Fragmentation of Public Transit Services: Lessons on Governance Challenges & Solutions to Implementing Integration Mechanisms (TRBAM-25-03217) - B503
David Weinreich/University of Bergen, Karel Martens/University of Bergen
Extraboard Transit Operator Scheduling Considering Driver Absenteeism (TRBAM-25-03634) - B504
Jilin Song/University of Toronto, Amer Shalaby/University of Toronto, Merve Bodur/University of Toronto
Optimal Subsidy Policies for Urban-Rural Equity in Public Transit Design (TRBAM-25-06313) - B505
Yiling Luo/University of Hong Kong, Manlian Pan/University of Hong Kong, Xiaotong Sun/University of Hong Kong

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Monday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Current Issues in Aviation
Stephanie Atallah, WSP, presiding
Michael Hanowsky, Woolpert, Inc., presiding
Sponsored By Aviation Group, Standing Committee on Aviation Administration and Policy, Standing Committee on Aviation System Planning, Standing Committee on Aviation Economics and Forecasting, Standing Committee on Airport Terminals and Ground Access, Standing Committee on Airfield and Airspace Performance, Standing Committee on New Users of Shared Airspace, Standing Committee on Aircraft/Airport Compatibility

Labor Market Analysis of Aviation Mechanics and Service Technicians in the United States (TRBAM-25-00456) - B400
Bethany Paris/Kentucky Transportation Cabinet, Pamela Marks/Kentucky Transportation Cabinet, Bryan Gibson/Kentucky Transportation Cabinet
Effects of Airport Servicescape, Utilitarian and Hedonic Value on Passengers' Satisfaction: A Case of Taoyuan International Airport (TRBAM-25-00008) - B401
KAI CHIEH HU/Soochow University, Hsiang-Yun Chen/Soochow University, Kai-Chieh Chia/Soochow University, Mingying Lu/Soochow University

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Selection of Air-rail Intermodal Transfer Hubs Using Integrated Ticket Data (TRBAM-25-01010) - B454
Jiayuan Zhong/Southeast University, Min Yang/Southeast University, Ke Ma/Southeast University, Shantao Chen/Southeast University, Renjie Zhang/Southeast University
A Deep Reinforcement Learning-Based Approach for Online Airport Shuttle Bus Timetabling (TRBAM-25-01068) - B402
hongxia dong/Chang'an University, Jiao Zhao/Chang'an University, Yanjun Hao/Chang'an University, Dengke Fan/Chang'an University, Chaoyi Zheng/Chang'an University, Ning Wang/Chang'an University
Factors Affecting Passengers' Resistance to Using Self-Service Technologies in Airports: A Review and Future Research Direction (TRBAM-25-01942) - B463
Charukit Chaiwan/De Montfort University, Lucy Budd/De Montfort University, Stephen Ison/De Montfort University
Design and Configuration Optimisation of Dedicated Air-Rail Transfer Facilities Based on Transfer Impedance A Case Study in Hongqiao integrated passenger transportation hub in Shanghai, China (TRBAM-25-02922) - B403
Wei Wang/Southeast University, Lin Xu/Southeast University, Yang Li/Southeast University, Yunjiang Xiao/Southeast University, Liya Wang/Southeast University, Jun Chen/Southeast University
Examining Airport Access Mode Choice Behavior from the Perspective of Entire Access Trip: Evidence from Beijing Daxing International Airport (TRBAM-25-03639) - B452
Bozhan Qin/Southeast University, Min Yang/Southeast University, Long Cheng/Southeast University, Yucheng Wang/Southeast University, Fan Jiang/Southeast University
Mitigating Airport Curbside Congestion through Strategic Management of Variable Message Signs Management with Model Predictive Control Algorithms (TRBAM-25-04068) - B404
Jorge Diaz-Gutierrez/Pennsylvania State University, Nawaf Nazir/Pennsylvania State University, Nicola Longo/Pennsylvania State University, Andisheh Ranjbari/Pennsylvania State University
From Ground to Air: Data Integration for a Human-Centric Multimodal Transportation Study (TRBAM-25-04343) - B414
Sungho Lim/University of Michigan, Ann Arbor, Max Li/University of Michigan, Ann Arbor, Atiyya Shaw/University of Michigan, Ann Arbor
Stochastic Models for Airport Terminal Capacity Expansion Planning (TRBAM-25-05153) - B413
Ziyue Li/Florida A&M University-Florida State University, Qianwen Guo/Florida A&M University-Florida State University, Paul Schonfeld/Florida A&M University-Florida State University
EVI-Rental: A Discrete-Event Simulation Tool for Rental Car Electrification (TRBAM-25-06032) - B412
Yanbo Ge/National Renewable Energy Laboratory (NREL), Monte Lunacek/National Renewable Energy Laboratory (NREL), Roberto Vercellino/National Renewable Energy Laboratory (NREL), Gustavo Campos/National Renewable Energy Laboratory (NREL), Devon Sigler/National Renewable Energy Laboratory (NREL), Juliette Ugirumurera/National Renewable Energy Laboratory (NREL), Margaret Mann/National Renewable Energy Laboratory (NREL)
Toward More Resilient Service: Using Interpretable Machine Learning to Explore Airport Passengers' Behavioral Patterns under Flight Delays through a Joint RP-SP Survey in Beijing, China (TRBAM-25-06450) - B453
Yucheng Wang/Southeast University, Min Yang/Southeast University, Bozhan Qin/Southeast University
The impact of market entry on airline performance and efficiency – a case study of Taiwan (TRBAM-25-02027) - B464
Barbara Yen/National Yang Ming Chiao Tung University, Esther Huang/National Yang Ming Chiao Tung University, Lucy Budd/National Yang Ming Chiao Tung University, Stephen Ison/National Yang Ming Chiao Tung University, Yao-Feng Liu/National Yang Ming Chiao Tung University
Benefits of Slot Substitutions for Airlines during Ground Delay Programs (TRBAM-25-05074) - B411
Jing Xu/University of California, Berkeley, Mark Hansen/University of California, Berkeley
Determining Factors in Domestic Air Cargo: A Quantitative Analysis of Socioeconomic and Logistical Factors (TRBAM-25-05710) - B410
Andrea Cristina Gómez-Quezada/No Organization, Nelson Andres Salinas Zapata/No Organization, Juan Esteban Ramirez Arias/No Organization, Claudia Muñoz-Hoyos/No Organization, Carlos A. Gonzalez-Calderon/No Organization
Joint Autonomous Decision-Making for Conflict Resolution and Aircraft Scheduling Using Enhanced Multi-Agent Reinforcement Learning (TRBAM-25-01006) - B420
Xiao Huang/Nanjing University of Aeronautics and Astronautics, Yong Tian/Nanjing University of Aeronautics and Astronautics, Jiangchen Li/Nanjing University of Aeronautics and Astronautics, Naizhong Zhang/Nanjing University of Aeronautics and Astronautics, Tingting Zhang/Nanjing University of Aeronautics and Astronautics, Linyanran Dai/Nanjing University of Aeronautics and Astronautics, Zhixiong Li/Nanjing University of Aeronautics and Astronautics

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Understanding the capacity of airport runway systems (TRBAM-25-03521) - B421
Kailin Chen/Imperial College London, Daniel Graham/Imperial College London, Anupriya -/Imperial College London, Prateek Bansal/Imperial College London, Richard Anderson/Imperial College London
Enhancement of Runway Capacity with Time Based Separation (TBS) (TRBAM-25-04879) - B422
Sangwoo Kim/Korea Aerospace University, Hyeonjin Lee/Korea Aerospace University, Eunji Kim/Korea Aerospace University, Hojong Baik/Korea Aerospace University
The Scope for Integrating Uncrewed Aerial Vehicles into Healthcare Logistics Systems (TRBAM-25-00089) - B423
Matt Grote/University of Southampton, Andy Oakey/University of Southampton, Aliaksei Pilko/University of Southampton, Jakub Krol/University of Southampton, Alex Blakesley/University of Southampton, Tom Cherrett/University of Southampton, James Scanlan/University of Southampton, Bani Anvari/University of Southampton, Antonio Martinez-Sykora/University of Southampton
Online decision-making for separation assurance of UAM aircraft in Off-nominal Situations (TRBAM-25-00509) - B424
Negasa Yahi/North Carolina A&T State University, Jose Matute/North Carolina A&T State University, Ali Karimoddini/North Carolina A&T State University
Transforming Travel: Strategic Integration of Advanced Air Mobility in Germany (TRBAM-25-00828) - B434
Katrin Lippoldt/TU Munich, Yunfei Zhang/TU Munich, Florian Allroggen/TU Munich, Lukas Preis/TU Munich, Klaus Bogenberger/TU Munich
A Hitchhiker's Guide to Drone Delivery: Comparing Speed and Emissions of Drones on Transit Buses for Direct Rapid Delivery (TRBAM-25-02024) - B433
Aaron Burns/Carnegie Mellon University, Jeremy Michalek/Carnegie Mellon University, Constantine Samaras/Carnegie Mellon University
Integrating Urban Air Mobility with Highway Infrastructure: A Strategic Approach for Vertiport Location Selection in the Seoul Metropolitan Area (TRBAM-25-02117) - B432
Donghyun Yoon/Korea Advanced Institute of Science and Technology, Minwoo Jeong/Korea Advanced Institute of Science and Technology, Jinyong Lee/Korea Advanced Institute of Science and Technology, Seyun Kim/Korea Advanced Institute of Science and Technology, Yoonjin Yoon/Korea Advanced Institute of Science and Technology
A Two-Echelon Bidirectional Energy Supply Problem with Uncrewed Electric Aerial and Ground Vehicles for Emergency Response Logistics (TRBAM-25-02787) - B431
Hyunhwa Kim/University of Illinois, Urbana-Champaign, Denissa Purba/University of Illinois, Urbana-Champaign, Eleftheria Kontou/University of Illinois, Urbana-Champaign
An Innovative Method of Shared Autonomous Electric Vehicles System Optimization Considering Electric Vertical Take-Off and Landing Aircraft Technology (TRBAM-25-03437) - B451
Hongyue Zhou/Southeast University, Kai Huang/Southeast University, Zhiyuan Liu/Southeast University
Advanced Air Mobility: A Landscape Overview and Future Research Direction for Passenger Perception and User Experience in Australia (TRBAM-25-03583) - B462
Elise Hillier/UNSW Sydney, Divya Jayakumar Nair/UNSW Sydney, Chence Niu/UNSW Sydney, Julius Secadiningrat/UNSW Sydney, Vinayak Dixit/UNSW Sydney
Feasibility Assessment of a Multimodal Urban Air Mobility System in Small and Medium-Sized Urban Areas: Integrating Shared Autonomous Vehicles and Vertical Take-Off and Landing Aircraft (TRBAM-25-05167) - B430
Zihe Zhang/University of Alabama, Cheuxuan Yang/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
Graph-Powered Defense: Controller Area Network Intrusion Detection for Unmanned Aerial Vehicles (TRBAM-25-05317) - B450
Reek Majumder/Clemson University, Gurcan Comert/Clemson University, Dr. David Werth/Clemson University, Dr. Adrian Gale/Clemson University, Mashrur Chowdhury/Clemson University, Dr. M Sabbir Salek/Clemson University
A survey of the treatment of urban air mobility in travel demand research (TRBAM-25-05907) - B440
Chenyang Wu/Northwestern Polytechnical University, Yuchen Jin/Northwestern Polytechnical University, Scott Le Vine/Northwestern Polytechnical University, Aruna Sivakumar/Northwestern Polytechnical University
Insights in Diversity: A Latent Profile Cluster Analysis of Regional Airports (TRBAM-25-00324) - B441
Jolien Pauwels/University of Antwerp, Sven Buyle/University of Antwerp, Wouter Dewulf/University of Antwerp
Prediction Models for Airport Pavement Serviceability Level Index (TRBAM-25-01305) - B442
Ali Ashtiani/Applied Research Associates, Inc., adam amos-binks/Applied Research Associates, Inc., Scott Murrell/Applied Research Associates, Inc., David Brill/Applied Research Associates, Inc.
ACRP Graduate Research Award: Exploring the Use of Geothermal Energy to Deice and Anti-ice Airport Aprons (TRBAM-25-04331) - B443
Jackson C. Stewart/No Organization, Amin Mohammadzadeh/No Organization, Omid Ghasemi-Fare/No Organization

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ACRP Graduate Research Award: Characterization of Asphalt Binder Modified with Nonrecyclable Waste Plastics and Additives (TRBAM-25-04936) - B444

Yusra Alhadidi/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign

2228

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Ballroom A

Thomas B. Deen Distinguished Lecture

Victoria Sheehan, Transportation Research Board, presiding

Sponsored By Technical Activities Council

Thomas B. Deen Distinguished Lecture and Presentation of AwardsVictoria Sheehan, Executive Director, Transportation Research Board, presidingSponsored by the Technical Activities Council Dr. Sandra Rosenbloom, Research Professor and Fellow of Hampton K. and Margaret Frye Snell Endowed Chair in Transportation, School of Architecture, University of Texas at Austin, is the 2025 recipient of the Thomas B. Deen Distinguished Lectureship. Dr. Rosenbloom, who is also Director of the University of Texas Austin's Lab for Safe and Healthy Aging, is recognized for her pioneering research that has advanced our understanding of urban mobility and transportation equity. The Deen Lectureship recognizes the career contributions and achievements of an individual in one of the areas covered by TRB's Technical Activities Division. The award is named in honor of the eighth TRB Executive Director, Thomas B. Deen. Honorees are invited to present overviews of their technical area of expertise, including evolution, present status, and prospects for the future. TRB also publishes each lecture in the Transportation Research Record. Dr. Rosenbloom's work is characterized by its interdisciplinary approach, combining insights from sociology, urban planning, and public policy to address the multifaceted nature of transportation issues. In doing so, her research addresses pressing transportation issues, provides innovative solutions, and influences theory and practice. Dr. Rosenbloom is an established leading authority in understanding and addressing the complex transportation needs of diverse populations, including older adults. As a result, her work has significantly influenced both academic discourse and practical applications in transportation systems worldwide. Dr. Rosenbloom's service to the Transportation Research Board over the last fifty years is significant. She has served as Chair and Vice Chair of the Executive Committee, Chair of the TRB Division Committee and Chair of the Standing Committee on Paratransit. She has served as a member of multiple TRB committees and numerous NCHRP and TCRP project panels. Currently, she is an Emeritus member of the Standing Committee on Women and Gender in Transportation (formerly Women's Issues in Transportation). Dr. Rosenbloom is the author/co-author of over 180 peer-reviewed scholarly articles and major research reports. In 2004, she was awarded the TRB Roy W. Crum Distinguished Achievement Award for outstanding achievements in transportation research. Also in 2004, Dr. Rosenbloom was named a National Associate of the National Academy of Sciences in honor of her contributions to the National Research Council. Dr. Rosenbloom earned a Bachelor's degree, a Master's degree in public policy, and a Ph.D. in political science, all from the University of California, Los Angeles. Introduction of the Deen Lecturer: Carol Lewis, Texas Southern University, and Chair, TRB Executive Committee Deen Lecture Presentation: How Little We Really Know: The Unrecognized Centrality of Marginal Groups in Transportation Planning and Policy Sandra Rosenbloom Presentation of Awards for Outstanding Papers for 2024: Avery Grimes, Independent Researcher, and Chair, TRB Technical Activities Council · Pyke Johnson Award (Transportation Planning) Thermal Cameras and their Safety Implications for Pedestrian Protection: A Mixed Empirical and Simulation-Based CharacterizationRiccardo Donà, Konstantinos Mattas, Sandor Vass, and Biagio Ciuffo, European Commission Joint Research Centre Ispra, and Guillaume Delubac, Jessy Matias, and Sebastien Tinnes, Lynred Grenoble INP · D. Grant Mickle Award (Operations)Learning Driver Models for Automated Vehicles via Knowledge Sharing and PersonalizationWissam Kontar, Xinzhi Zhong, and Soyoung Ahn, University of Wisconsin Madison · William W. Millar Award (Public Transportation)Mobility Energy Productivity Evaluation of On-Demand Transit: A Case Study in Arlington, Texas Bonnie Powell, Ruqayya Zakaria, Sailesh Acharya, Rick Grahn, Alejandro Henao, and Stanley E Young, National Renewable Energy Laboratory · K.B. Woods Award (Transportation Infrastructure)Splice Length of Large Diameter Reinforcing Bars in Ultra-High Performance ConcreteChristina Janet Freeman and William Potter, Florida Department of Transportation · Charley V. Wootan Award (Transportation Policy)Framework for the Development of a Diverse Transportation Workforce in the Southeast RegionSteven M. Click, Tennessee Tech University, Mehri Mohebbi and Ruth Steiner, University of Florida, Virginia Sisiopiku and Muhammed Sherif, University of Alabama at Birmingham, Mohammed Hadi, Florida International University, Dimitra Michalaka, The Citadel, James Martin, North Carolina State University, and Jeremy Griffith, Kimley-Horn Fred Burggraf Awards (Papers by Young Researchers)· On Aviation:Blue Unmanned Aerial Systems Explained: The Current Drone Market, Flight Regulations, and Debunking Common MisconceptionsJose Capa Salinas, Purdue University, and Tyler Lewandowski, Indiana Department of Transportation · On Data, Planning, and Analysis:Where The Borders Lie: Mapping Cross-Border Communities in Ten Western European CountriesAurore Sallard, Swiss Federal Institute of Technology in Zurich, and François Hublet, Geopolitical Studies Group · On Transportation Infrastructure:Using Color Measurements to Quantify Aggregate and Asphalt Emulsion CompatibilityGabriel Macêdo Duarte, North Carolina State University, Shivpal Yadav, Thurber Engineering Ltd., and Cassie Castorena, North Carolina State University

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How Little We Really Know: The Unrecognized Centrality of Marginal Groups in Transportation Planning and Policy (P25-20037)
Sandra Rosenbloom/University of Texas, Austin
Introduction of Deen Lecturer (P25-21228)
Carol Lewis/Texas Southern University
Welcome and Opening Remarks (P25-21230)
Victoria Sheehan/Transportation Research Board
Presentation of Awards for Outstanding Papers of 2024 (P25-21229)
George Grimes/Independent Researcher

2229

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Salon A
Enhancements in Signalized Intersection and Arterial Operations and Capacity Analysis
Gustavo Riente de Andrade, Infraplan Consultoria Ltda, presiding
Sponsored By Standing Committee on Highway Capacity and Quality of Service

This session, sponsored by the TRB Committee on Highway Capacity and Quality of Service (ACP40), presents a series of papers focusing on enhancements to signalized intersection and arterial street operational and capacity analysis.

Impact of Short Turning Lanes on the Approach Capacity at Signalized Intersections – a Revised Model (TRBAM-25-00739)
Julian Schmitz/Ruhr University, Bochum, Ning Wu/Ruhr University, Bochum, Justin Geistefeldt/Ruhr University, Bochum
Short Auxiliary and Right Turn Lanes: Intersection Capacity and Negative Lost Time (TRBAM-25-03856)
Peter Furth/Northeastern University, Fatemeh Tabatabaei/Northeastern University
Enhancing Alternative Intersection Simulation: A Comparative Analysis of Macroscopic and Microscopic Models Using Drone-Collected Data (TRBAM-25-05263)
Shoaib Samandar/North Carolina State University, Guangchuan Yang/North Carolina State University, Gyounghoon Chun/North Carolina State University, Nagui Rouphail/North Carolina State University, George List/North Carolina State University
On the Level of Service Criteria of Urban Arterial for Heterogeneous and Undisciplined Traffic Streams: A Case Study from Karachi (TRBAM-25-00881)
Afzal Ahmed/University of Leeds, Farah Khan/University of Leeds, Syed Abbas Rizvi/University of Leeds, Muhammad Adnan/University of Leeds, Muhammad Ahmed/University of Leeds

2230

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Salon B
Asphalt Materials Doctoral Student Research Forum
Amir Golalipour, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Binders for Flexible Pavement, Standing Committee on Production and Use of Asphalt, Standing Committee on Asphalt Materials Selection and Mix Design, Standing Committee on Asphalt Mixture Evaluation and Performance

This event is comprised of doctoral student research on asphalt materials. The format consists of several 3-5 minute podium presentations from the students, followed by a poster session where the audience can interact with the researchers.

Impacts of Aggregate Gradation on the Volumetric and Performance Test Results of Airfield (P-401) Asphalt Mixtures (P25-21434)
Trung Tran/Auburn University
Effects of Reducing Production Temperatures Using Warm Mix Technologies on Burner Fuel Consumption and Performance Properties (P25-21435)
Mohammad Sadeghi/Auburn University
Development and Validation of Chip Seal Design and Testing for Usage with Reclaimed Asphalt Pavement (RAP) (P25-21436)
Brooke Earls/Auburn University

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Simplified Wedge Splitting Test for Asphalt Mixtures (P25-21437)
Sadek Tormos/University of New Hampshire
Performance investigation and strain behavior of asphalt pavements with and without stabilized foundations (P25-21438)
Amir Rahimzadeh Mottahed/Auburn University
Assessing Superpave5 Implementation in Massachusetts: Evaluating the Impact on the Compactability and Performance of MassDOT mixtures (P25-21439)
Mazen Kandil/University of Massachusetts, Dartmouth
The Search for a Method to Determine Recycled Binder Availability (RBA) (P25-21440)
Rawan Alshamayleh/Texas A&M University
A Pilot Application of Machine Learning Techniques for Predicting Macrotexture of Pavement (P25-21441)
Behrokh Bazmara/Virginia Polytechnic Institute and State University
Investigate the Aging Behavior of Asphalt Binders at Different Production Stages and During the Service Life of the Pavement (P25-21442)
Sina Mousavi Rad/Oklahoma State University

2231

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Human Factors of Vehicles: Road User Behavior
Josh Domeyer, Toyota Motor North America, presiding
Nichole Morris, University of Minnesota, presiding
Sponsored By Standing Committee on Human Factors of Vehicles

A Parametric Duration Model to Quantify the Effect of HMI System Information Conditions on Drivers' Response Performance during Navigating an Unsignalized Intersection (TRBAM-25-00644) - B533
Yunjie Ju/Tongji University, Feng Chen/Tongji University, Xiaonan Li/Tongji University
An Empirical Study for Investigating Human Drivers' Heterogeneity in Lane-changing Maneuvers from Naturalistic Trajectory Datasets (TRBAM-25-00842) - B534
Qiruo Yan/Southwest Jiaotong University, Zhanbo Sun/Southwest Jiaotong University, Ang Ji/Southwest Jiaotong University, Yafei Liu/Southwest Jiaotong University, Hongliang Ding/Southwest Jiaotong University
Evaluating Lane Change Dynamics: A Study of Camera-Based vs. Mirror-Based Systems in Traffic Safety (TRBAM-25-01387) - B527
Rohit Chakraborty/Texas State University, Mahmuda Mimi/Texas State University, Swastika Barua/Texas State University, Subasish Das/Texas State University
Road Distractions Due to the Presence of Hawkers' Encroachment in Pakistan (TRBAM-25-01429) - B532
Humaira Munir/Central South University, Farrukh Baig/Central South University, Amjad Pervez/Central South University, Jaeyoung Lee/Central South University, Sunghoon Jang/Central South University
Identification and Interpretation of Aggressive Driving Behavior under Time Pressure (TRBAM-25-01642) - B535
Tianyang Cui/Southeast University, Shuyan Chen/Southeast University, Yongfeng Ma/Southeast University, Ghim Ping Ong/Southeast University
Two Wheels, Many Hazards: Assessing Risky Riding Practices and Self-Reported Safety Incidents Among Pakistani Motorcyclists (TRBAM-25-01872) - B531
Amjad Pervez/Central South University, Jaeyoung Lee/Central South University
Investigating Driver Reactions and Behavioral Differences in Ramp-related Takeover Situations: Insights from Survey and Driving Simulation (TRBAM-25-01950) - B536
Yichang Shao/Southeast University, Yuhan Zhang/Southeast University, Wei Ye/Southeast University, Yueru Xu/Southeast University, Xiaomeng Shi/Southeast University, Zhirui Ye/Southeast University
Exploring the Relationship between Traffic Congestion, Driver Stress and Driving Behavior: A Simulated Driving Study (TRBAM-25-02236) - B537
Liu Yang/Wuhan University, Rouzi Cheng/Wuhan University, Jiahan Cheng/Wuhan University, Zihao Du/Wuhan University
Turn In Path Same Crashes- Driver Behavior and Perception Response Time from the SHRP-2 Naturalistic Database (TRBAM-25-02388) - B520
Swaroop Dinakar/Driver Research Institute, Jeff Muttart/Driver Research Institute, Timothy Maloney/Driver Research Institute, Suntasy Gernhard-Macha/Driver Research Institute
The Impact of Frequent and Repetitive Mobile Phone Use on Driving Safety (TRBAM-25-02856) - B524
Rohith Panchineni/University of South Florida, Maheshwari Reddy Chowdarigari/University of South Florida, Sisinnio Concas/University of South Florida, Vishal Kummetha/University of South Florida

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The Impact of Multisensory Information Processing on Lane Change Decisions: An Exploration of Visual and Auditory (TRBAM-25-03020) - B538
Wenhao Li/Southeast University, Tianyu Li/Southeast University, Qinhe An/Southeast University, Yanjie JI/Southeast University, Tao Wang/Southeast University
Study on Takeover Failure Prediction Model Based on Extreme Value Theory and Copula Function (TRBAM-25-03251) - B539
Haolin Chen/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Haijian Li/Beijing University of Technology, Qiuyang Tang/Beijing University of Technology, Mengjin Zeng/Beijing University of Technology
Drivers' Rear-end Conflict Risk Avoidance Behaviors Prediction Based on Natural Driving Data (TRBAM-25-03369) - B540
Fou Nie/Tongji University, Ling Wang/Tongji University, Wanjing Ma/Tongji University, Juneyoung Park/Tongji University, Mohamed Abdel-Aty/Tongji University
Investigating Dynamic Evolutionary Modes of Car-following Behavior: Insights from Vehicle Trajectory Data and Random Parameters Multinomial Model with Heterogeneity in Means (TRBAM-25-03436) - B541
Xueao Li/Tongji University, Ting Fu/Tongji University, Junhua Wang/Tongji University, Shou'en Fang/Tongji University, Qiangqiang Shangguan/Tongji University, Qiangqiang Shangguan/Tongji University
Loudness Level of In-Vehicle Auditory Fatigue Warnings to Counteract Task Related Driver Fatigue Based on Survival Analysis (TRBAM-25-03463) - B542
Mengjiao Wu/Tongji University, Xuesong Wang/Tongji University, Ashleigh Filtness/Tongji University, Ziyuan Huang/Tongji University, Yujun Jiao/Tongji University
Mitigating Aggressive Driving in Mixed Traffic: The Role of Driving Styles of Automated Vehicles and Human-Driven Vehicles (TRBAM-25-03658) - B521
Book Chen/Pennsylvania State University, University Park, Yiqi Zhang/Pennsylvania State University, University Park
Mediating Effect of driving behavior and psychology characteristics at moving bottleneck (TRBAM-25-03778) - B543
Siyang Zhang/Tongji University, Chi Zhao/Tongji University, Yongqi Deng/Tongji University, Zili Tian/Tongji University
Expectancy×Value Models of the Reasons for Associations Between Individual Differences and Speeding Behavior (TRBAM-25-03984) - B522
Dustin Wood/University of Alabama, Kofi Adanu/University of Alabama, P.D. Harms/University of Alabama
Using Physiological Data to Understand Drivers' Performance and Workload under Warning Uncertainty: A Driving Simulation Study at Roundabouts (TRBAM-25-04523) - B523
Chi Tian/University of Texas, Tyler, Cong Zhang/University of Texas, Tyler, Tianfang Han/University of Texas, Tyler, Yiheng Feng/University of Texas, Tyler, Yunfeng (Cindy) Chen/University of Texas, Tyler, Jiansong Zhang/University of Texas, Tyler
Modeling Dynamic Vehicle-Driver Complex Behaviors at Signalized Intersections Under Cyberattacks (TRBAM-25-05130) - B525
Yifan Xu/University of Cincinnati, Zhixia Li/University of Cincinnati, Heng Wei/University of Cincinnati, Guohui Zhang/University of Cincinnati, Yingfan Gu/University of Cincinnati
Exploring the Effectiveness of Connected Vehicle Technology in Enhancing Driver Behavior and Safety During Hurricane Evacuation (TRBAM-25-05365) - B526
Taniya Sultana/Louisiana State University, Hany Hassan/Louisiana State University
Predicting Driver's Response to Emergencies Based on Situation Awareness (TRBAM-25-05658) - B544
Vladimir Maksimenko/National University of Singapore, Wenhui Yang/National University of Singapore, Yan Feng/National University of Singapore, Prateek Bansal/National University of Singapore
Understanding Driver Risk Cognition and Proactive Decision-Making Behaviors in High-Risk Scenarios (TRBAM-25-05691) - B545
Zheng Li/University of Wisconsin, Madison, Heye Huang/University of Wisconsin, Madison, Hao Cheng/University of Wisconsin, Madison, Junkai Jiang/University of Wisconsin, Madison, Xiaopeng Li/University of Wisconsin, Madison, Arkady Zgonnikov/University of Wisconsin, Madison
Identifying Aggressive Driving Behaviors Using A Naturalistic Driving Study: A Fuzzy Modeling Approach (TRBAM-25-05719) - B528
Pratyush Kumar/Indian Institute of Technology, Bombay, Tom Mathew/Indian Institute of Technology, Bombay, Nagendra Velaga/Indian Institute of Technology, Bombay
Classification of Driving Styles based on Longitudinal and Lateral Behavior at Exit Ramp Terminals (TRBAM-25-05887) - B529
Gayathri Aluwala/Indian Institute of Technology, Hyderabad, Lahari Kommalapati/Indian Institute of Technology, Hyderabad, Sarika Pothukuchi/Indian Institute of Technology, Hyderabad, Digvijay Pawar/Indian Institute of Technology, Hyderabad

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A Behavioral Change Intervention for Mobile Phone Use While Driving: Targeting Both Intentional and Habitual Use (TRBAM-25-06464) - B530
Sila Demir/University of Toronto, Başar Demir/University of Toronto, Birsen Donmez/University of Toronto, Christine Wickens/University of Toronto

2232

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A

Human Factors of Vehicles: Connected and Automated Vehicles and Intelligent Systems
Chien-Lun Lan, Virginia Transportation Research Council, presiding
Huei-Yen (Winnie) Chen, University at Buffalo, SUNY, presiding
Sponsored By Standing Committee on Human Factors of Vehicles, Joint Subcommittee on Human Factors in Road Vehicle Automation (with ACH40)

Effects of Drivers' Age on Acceptance of ADAS (TRBAM-25-00527) - B550
Yujie Tang/Kunming University, Fengxiang Guo/Kunming University, Farrukh Baig/Kunming University, Xuefei Xiong/Kunming University, Jing Cai/Kunming University, Jaeyoung Lee/Kunming University
Influence of Foggy Weather on Drivers' Situation Awareness in The Takeover Process of Level 3 Automated Vehicles: An fMRI Study (TRBAM-25-00695) - B551
Zijian Lin/Tongji University, Feng Chen/Tongji University, Dong Lin/Tongji University, Sheng Dong/Tongji University, Chen Li/Tongji University, Guimin Su/Tongji University
Driver Takeover Behaviour in Conditional Automation: Insights from Immersive Virtual Reality Experiments (TRBAM-25-01081) - B552
Muhammad Sajjad Ansar/Toronto Metropolitan University, Bilal Farooq/Toronto Metropolitan University
Rethinking the Measure of Takeover Time: Insights from Drivers' Eye Movements (TRBAM-25-01170) - B554
Kexin Liang/Delft University of Technology, Simeon Calvert/Delft University of Technology, Hans van Lint/Delft University of Technology
Time-Dependent Effect of Advanced Driver Assistance Systems on Driver Behavior Based on Connected Vehicle Data (TRBAM-25-01252) - B555
Yuzhi Chen/Southeast University, Yuanchang Xie/Southeast University, Chen Wang/Southeast University, Liguo Yang/Southeast University, Nan Zheng/Southeast University, Lan Wu/Southeast University
Impact of Level 2 Automation on Driver Behavior: A Study Using Association Rules Mining (TRBAM-25-01383) - B556
Rohit Chakraborty/Texas State University, Syed Javed/Texas State University, Subasish Das/Texas State University, Boni Kutela/Texas State University, Md Nasim Khan/Texas State University
Investigating Acceptance of Fully Autonomous Shared Mobility (TRBAM-25-01446) - B557
Deema Almaskati/University of Texas, Arlington, Apurva Pamidimukkala/University of Texas, Arlington, Sharareh (Sherri) Kermanshachi/University of Texas, Arlington, Jay Rosenberger/University of Texas, Arlington, Greg Hladik/University of Texas, Arlington, Ann Foss/University of Texas, Arlington
Effect of eHMI-equipped Automated Vehicles on Pedestrian Crossing Behaviors and Safety: A Focus on Blind Spot Scenarios (TRBAM-25-01566) - B558
Xu Chen/Southeast University, Wenzhang Yang/Southeast University, Chen Wang/Southeast University, Hao Wang/Southeast University
Analysis of Driver and Pedestrian Gesture Use in the Boston Area. Automated Vehicles May Need More Than Kinematics in Ambiguous Situations (TRBAM-25-01595) - B559
Hatice Şahin Ippoliti/OFFIS - Institute for Information Technology, Alexander Weibert/OFFIS - Institute for Information Technology, Dietrich Manstetten/OFFIS - Institute for Information Technology, Bryan Reimer/OFFIS - Institute for Information Technology, Pnina Gershon/OFFIS - Institute for Information Technology, Bruce Mehler/OFFIS - Institute for Information Technology, Larbi Abdenebaoui/OFFIS - Institute for Information Technology
Examining the Impact of Take-Over Control Mechanisms on Merging Behavior and Performance in Conditionally Automated Driving Systems (TRBAM-25-01801) - B562
Arastoo Karimi/Politecnico di Torino, Abrar Hazoor/Politecnico di Torino, Arash Hassani Barbin/Politecnico di Torino, Giuseppe Marinelli/Politecnico di Torino, Marco Bassani/Politecnico di Torino
Human-Autonomy Teams in Automated Driving System Operations: The Case of Drivers and Remote Operators (TRBAM-25-02326) - B563
Camila Correa-Jullian/University of California, Los Angeles, Marilia Ramos/University of California, Los Angeles, Ali Mosleh/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles

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Safety Performance of Drivers in Connected and Automated Vehicles During Safety-Critical Events: A Networked Driving Simulation Study (TRBAM-25-02695) - B564
Abdalziz Alruwaili/Old Dominion University, Kun Xie/Old Dominion University, Yusuke Yamani/Old Dominion University, Jeffery Glassman/Old Dominion University, Sherif Ishak/Old Dominion University, Hong Yang/Old Dominion University
Adaptive Systems Based on Drivers' Workload: A Literature Review and Meta-Analysis (TRBAM-25-02572) - B565
Jia Deng/Texas A&M University, College Station, Maryam Zahabi/Texas A&M University, College Station
Accurate and Sample Efficient Driver Takeover Time Prediction in Autonomous Driving with Privacy Preservation: A Federated Meta Attentive Interpretable Tabular Earning Approach (TRBAM-25-03117) - B567
Weida Yang/Tongji University, Zhizhou Wu/Tongji University, Yinhai Wang/Tongji University, Yunyi Liang/Tongji University
Can External Human-Machine Interfaces Promote Prosocial Intentions of Human Drivers Toward Automated Vehicles in Mixed Traffic? (TRBAM-25-03450) - B568
Yueying Chu/Zhejiang University, Jinglei Chen/Zhejiang University, Yunhao Cai/Zhejiang University, Zhigang Xu/Zhejiang University, Peng Liu/Zhejiang University
Analyzing Driver Characteristics and Takeover Behaviors in L2 Automated Vehicles Using Vehicle Kinematic Data and Clustering Algorithms (TRBAM-25-03522) - B569
Meng Wang/University of Massachusetts, Amherst, Shashank Mehrotra/University of Massachusetts, Amherst, Shannon Roberts/University of Massachusetts, Amherst
Exploring the Interplay between Trust in Human Drivers and Autonomous Vehicles: A Machine Learning-Supported Path Analysis (TRBAM-25-04553) - B572
Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Mizan Rahman/University of Alabama, Yangming Shi/University of Alabama, Steven Jones/University of Alabama
The Impact of Connected and Automated Vehicle Platoons on the Cut-in Decision of Human-Driven Vehicles: A VR-Enabled Approach and Empirical Insights (TRBAM-25-04878) - B573
Bowen Liu/Southeast University, Meng Li/Southeast University, Ru Ling/Southeast University, Si Zheng/Southeast University, Zhibin Li/Southeast University
Assessing Driver Reactions to Various CAV Warnings Using an Advanced Driving Simulator (TRBAM-25-05571) - B574
Eazaz Sadeghvaziri/Mercer University, Ramina Javid/Mercer University, Mansoureh Jeihani/Mercer University
Integrating Human Factors in Evaluating Safety and Operational Efficiency of Automated Vehicles: Insights for Global Robotaxi Services (TRBAM-25-05787) - B575
Song Wang/University of Cincinnati, Zhixia Li/University of Cincinnati, Wenjing Zhao/University of Cincinnati, Wanqiong Wang/University of Cincinnati
Coexistence in Motion: Unveiling the Behavioral Dynamics of Humans and Highly Automated Vehicles in Naturalistic Mixed Traffic (TRBAM-25-05831) - B577
Yanlin Zhang/University of Illinois, Urbana-Champaign, Dana Monzer/University of Illinois, Urbana-Champaign, Nachuan Li/University of Illinois, Urbana-Champaign, Victor Okoth/University of Illinois, Urbana-Champaign, Zhuangcun Chen/University of Illinois, Urbana-Champaign, Chun-Chien Hsiao/University of Illinois, Urbana-Champaign, Tina Radvand/University of Illinois, Urbana-Champaign, Hani Mahmassani/University of Illinois, Urbana-Champaign, Samer H. Hamdar/University of Illinois, Urbana-Champaign, Alireza Talebpour/University of Illinois, Urbana-Champaign
Effectiveness of Lane Departure Warning Systems Under Varying Driving Scenarios Among Young Drivers – Insights from Field Operation Tests. (TRBAM-25-05848) - B578
Ankit Singh/Indian Institute of Technology, Hyderabad, Anna Charly/Indian Institute of Technology, Hyderabad, Digvijay Pawar/Indian Institute of Technology, Hyderabad
The Effect of Information Overload on Self-Driving Tourists' Travel Intention: A Moderated Chain Mediation Model (TRBAM-25-06156) - B546
Jing Li/Kunming University, Xiaofeng Ji/Kunming University, Fang Chen/Kunming University
Over-trust Identification in Conditionally Autonomous Vehicle Using Transformer-LSTM Based on Low-interference Indicators (TRBAM-25-06190) - B547
Yurou Sun/Tongji University, Lishengsha Yue/Tongji University, Zeyang Cheng/Tongji University
The Roles of Perceived Safety and Trust in the Choice of Fully Automated Taxis (TRBAM-25-06248) - B553
Hao Yin/Newcastle University, Elisabetta Cherchi/Newcastle University, Mohsen Nazemi/Newcastle University, Thomas Zhao/Newcastle University, Bilal Farooq/Newcastle University
A Driver Model for Intelligent Vehicle Human-Machine Interaction Scenarios Driven by Cognitive Theory (TRBAM-25-06194) - B548
Yixin Zhu/Tongji University, Lishengsha Yue/Tongji University, Dengbo He/Tongji University
What Factors Contribute to Aberrant Driving Behavior: A Case Study in Maharashtra Region (TRBAM-25-06251) - B549
Ashutosh Pandey/Indian Institute of Technology, Bombay, Avijit Maji/Indian Institute of Technology, Bombay

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Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A

Mobility and Crash Risk Across the Lifespan

Elizabeth Walshe, Children's Hospital of Philadelphia, presiding

Sponsored By Standing Committee on Vehicle User Education, Training, and Licensing, Subcommittee on Young Drivers, Subcommittee on Older Drivers

From Driver Education to Mobility Education: A Pilot Survey of Practitioners (TRBAM-25-01236) - B514

Johnathon Ehsani/Johns Hopkins University, Michelle Duren/Johns Hopkins University, Nae Won/Johns Hopkins University

Transportation Modal Choices Among Teenagers in the United States (TRBAM-25-01346) - B515

Michelle Duren/Johns Hopkins University, Johnathon Ehsani/Johns Hopkins University

Investigating Training Program Interactions That Predict Hazard Anticipation Skills for Novice Teen Drivers (TRBAM-25-02427) - B516

Meng Wang/University of Massachusetts, Amherst, Manoj Paari/University of Massachusetts, Amherst, Jaji Pamarthi/University of Massachusetts, Amherst, Apoorva Hungund/University of Massachusetts, Amherst, Zhaonan Sun/University of Massachusetts, Amherst, Jason Hallman/University of Massachusetts, Amherst, Shannon Roberts/University of Massachusetts, Amherst, Anuj Pradhan/University of Massachusetts, Amherst

Driver Age and Its Effect on Key Driving Metrics: Insights from Dynamic Vehicle Data (TRBAM-25-03186) - B510

Aparna Joshi/Iowa State University, Kojo Adugyamfi/Iowa State University, Jennifer Merickel/Iowa State University, Pujitha Gunaratne/Iowa State University, Anuj Sharma/Iowa State University

Modeling Older Drivers' Satisfaction with Pavement Markings Using Ordinal Regression Analysis (TRBAM-25-03627) - B511

Maryam Shirinzad/Texas A&M Transportation Institute, Adam Pike, P.E./Texas A&M Transportation Institute

Analysis of Older Driver Crash Patterns at Signalized, Stop-Controlled, and Yield-Controlled Intersections (TRBAM-25-04565) - B518

Farooq Azam Khanzada/University of Louisiana, Lafayette, Xiaoduan Sun/University of Louisiana, Lafayette, Elisabeta Mitran/University of Louisiana, Lafayette, Rohit Chakraborty/University of Louisiana, Lafayette, Subasish Das/University of Louisiana, Lafayette, Julius Codjoe/University of Louisiana, Lafayette

Roadway Crashes Involving 15-Year-Old Novice Drivers: Identifying Key Factors Using Correspondence Analysis (TRBAM-25-04818) - B519

Siam Junaed/Louisiana Transportation Research Center (LTRC), M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Nazmus Sakib/Louisiana Transportation Research Center (LTRC), Milhan Moomen/Louisiana Transportation Research Center (LTRC), Subasish Das/Louisiana Transportation Research Center (LTRC), Elisabeta Mitran/Louisiana Transportation Research Center (LTRC), Julius Codjoe/Louisiana Transportation Research Center (LTRC)

Evaluating a Driving Simulator Training Program Based on Self-Determination Theory in Older Drivers using the Kirkpatrick's Four-level Model (TRBAM-25-05197) - B512

Bingshuo Chen/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Wei Ye/Beijing University of Technology, Gaoqiang Zhang/Beijing University of Technology, Tao Wen/Beijing University of Technology, Xiaoming Liu/Beijing University of Technology

Understanding the Association between Learning Methods and Knowledge & Confidence in Adaptive Cruise Control (ACC) (TRBAM-25-05484) - B517

Apoorva Hungund/University of Massachusetts, Amherst, Jorge-Andrés Ubiñas/University of Massachusetts, Amherst, John Lenneman/University of Massachusetts, Amherst, Anuj Pradhan/University of Massachusetts, Amherst

Comparing Statistical and Machine Learning Models for Predicting Crash Injury Severity among Aging Drivers on Florida Freeways (TRBAM-25-05842) - B513

Odilo Mdimi/Florida International University, Francisca Kasubi/Florida International University, HM Nayem/Florida International University, Sarah Kasomi/Florida International University, Priyanka Alluri/Florida International University

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Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A

Traffic Flow Modeling, Monitoring, and Control

Roberta Di Pace, University of Salerno, presiding

Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

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Capturing Traffic Flow State Variation Process: An Analytical Modeling Approach (TRBAM-25-01899) - A100
Qiyuan Song/Southeast University, Qixiu Cheng/Southeast University, Zhiyuan Liu/Southeast University
Dynamic Lane Configuration for Balancing Demand and Capacity in Motorways (TRBAM-25-01878) - A101
Majid Rostami-Shahrbabaki/Technische Universitat Munchen, Mehdi Keyvan-Ekbatani/Technische Universitat Munchen, Klaus Bogenberger/Technische Universitat Munchen, Markos Papageorgiou/Technische Universitat Munchen
Developing and Solving a Stochastic Second-order Traffic Flow Model based on Adaptive Multi-element Probability Collocation Method (TRBAM-25-01740) - A102
Xi Chen/University of Hong Kong, Sze Chun Wong/University of Hong Kong, Liangze Yang/University of Hong Kong
Analysis of Throughput Properties of a Max-pressure-based Ramp Metering Control (TRBAM-25-04441) - A103
Simanta Barman/University of Minnesota, Abdullah Farabi/University of Minnesota, Michael Levin/University of Minnesota, Ali Hajbabaie/University of Minnesota
Coordinated Hierarchical Control Method based on VSL and RM for Port Motorway (TRBAM-25-01157) - A104
Weiqi Yue/Ningbo University, Hang Yang/Ningbo University, Zhengfeng Huang/Ningbo University, Yibing Wang/Ningbo University, Pengjun Zheng/Ningbo University
Dynamic Network Capacity Allocation Via Sparse Identification of Nonlinear Dynamics with Model Predictive Control (TRBAM-25-06227) - A105
Qinglong Lu/Technical University of Munich, Raphael Stern/Technical University of Munich, Mohammad Sadrani/Technical University of Munich, Constantinos Antoniou/Technical University of Munich
Evidence of Non-Equilibrium Critical Phenomena in a Simple Model of Traffic (TRBAM-25-06220) - A106
Aryaman Jha/Georgia Institute of Technology, Kurt Wiesenfeld/Georgia Institute of Technology, Garyoung Lee/Georgia Institute of Technology, Jorge Laval/Georgia Institute of Technology
Bounded-METANET: A New Bounded Discrete-time Second-order Macroscopic Traffic Flow Model (TRBAM-25-06031) - A107
Weiming Zhao/University of Queensland, Claudio Roncoli/University of Queensland, Mehmet Yildirimoglu/University of Queensland
There is Something more Fundamental than Fundamental Diagram (TRBAM-25-00215) - A108
Daiheng Ni/University of Massachusetts, Amherst
Fundamental Diagram- Consistent Fluid Queue Model for Hyper-Congestion and Dynamic Traffic Flow Characterization (TRBAM-25-06138) - A118
Yuyan Pan/Pennsylvania State University, Xianbiao Hu/Pennsylvania State University, Mohammad Abbasi/Pennsylvania State University, Xuesong Zhou/Pennsylvania State University
Dynamics of Traffic Jam Formation and Dissipation (TRBAM-25-05042) - A117
Yanlin Zhang/University of Illinois, Urbana-Champaign, Tina Radvand/University of Illinois, Urbana-Champaign, Alireza Talebpour/University of Illinois, Urbana-Champaign, Samer H. Hamdar/University of Illinois, Urbana-Champaign
Optimal Measurement of Traffic Hysteresis under Traffic Oscillations: A Binary Integer Programming Approach (TRBAM-25-02413) - A116
Fan Pu/Texas A&M University, Yang Zhou/Texas A&M University, Soyoung Ahn/Texas A&M University, Sixu Li/Texas A&M University, Wissam Kontar/Texas A&M University, Xiubin Wang/Texas A&M University
An Anisotropic Traffic Flow Model with Look-ahead Effect for Mixed Autonomy Traffic (TRBAM-25-04570) - A115
Shouwei Hui/University of California, Davis, H. Zhang/University of California, Davis
Modeling Disorder in Traffic Flow with Differential Velocity Entropy (TRBAM-25-01764) - A114
Wei Ye/Southeast University, Yueru Xu/Southeast University, Jingwen Wang/Southeast University, Yichang Shao/Southeast University, Zhirui Ye/Southeast University
Interpreting Traffic Breakdown Probability at Freeway Merge Segments: Impact of Time-Lagged and Lane-Specific Traffic States (TRBAM-25-01123) - A113
Hye-young Tak/Korea Advanced Institute of Science and Technology, Hwasoo Yeo/Korea Advanced Institute of Science and Technology
Capacity Drop Accounting for Wave-void Interaction: An Analytical Study (TRBAM-25-01800) - A112
Yu Han/Southeast University, Pan Liu/Southeast University, Ludovic Leclercq/Southeast University
Influence of Motorbike and Pedestrian Non-Compliance Behavior on Traffic Flow at Signalized Intersections: A Case from Dhaka City, Bangladesh (TRBAM-25-04900) - A111
Md Reza E Rabbi/Hiroshima University, Muttahirul Islam/Hiroshima University, Varun Varghese/Hiroshima University, Makoto Chikaraishi/Hiroshima University
Effects of Rubbernecking and Potential Countermeasures on Traffic Congestion (TRBAM-25-02746) - A110
Shubhankar Shindgikar/University of South Florida, Achilleas Kourtellis/University of South Florida, Pei-Sung Lin/University of South Florida, Yaye Keita/University of South Florida

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A Ramp Merging Control Method Based on Virtual Risk Progressive Mapping (TRBAM-25-01681) - A120
Haozhan Ma/Southeast University, Chen Qian/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University

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Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A

Network Modeling and On-Demand Mobility
Eleni Christofa, University of Massachusetts, Amherst, presiding
Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

Short-term Traffic Flow Prediction Based on Improved Quantum Particle Swarm Optimization Algorithm (TRBAM-25-00195) - A122
Zhuangbin Shi/No Organization, Xueyan Shen/No Organization, Haicheng Xiao/No Organization
A Simulation-Based Framework for Quantifying Potential AMoD Demand Loss due to Operational Constraints in Mobility Services (TRBAM-25-03485) - A123
Serio Angelo Maria Agriesti/Aalto University, Claudio Roncoli/Aalto University, Bat-hen Nahmias-Biran/Aalto University
Investigating the Impact of Low Speed Autonomous Environmental Services Vehicle in Urban Traffic Flow (TRBAM-25-03409) - A124
Juyeong KIM/Ajou University, Jihye You/Ajou University, Hyungsang You/Ajou University, Jia Hu/Ajou University, Jaehyun So/Ajou University
An Enhanced Parallel Block Coordinate Descent Algorithm for Solving Large-Scale User Equilibrium Problem with Shared Memory (TRBAM-25-01550) - A125
Yicheng Zhang/Southeast University, Honggang Zhang/Southeast University, Zhiyuan Liu/Southeast University, Xiaobo Qu/Southeast University
Impact of On-Street Parking on Traffic Flow Considering Parking Maneuver Time Influence by Vehicle Length (TRBAM-25-00921) - A126
Wentao Liu/Fuzhou University, Qishan, Dianchao Lin/Fuzhou University, Qishan, Li Li/Fuzhou University, Qishan
Empirical Verification that Traffic Flow is on the KPZ Universality Class: Implications for Traffic Congestion (TRBAM-25-04535) - A127
Garyoung Lee/Georgia Institute of Technology, Jorge Laval/Georgia Institute of Technology, Aryaman Jha/Georgia Institute of Technology, Kurt Wiesenfeld/Georgia Institute of Technology
A Drift Diffusion Model of Ped-Crossing Interactions with AVs on Two-lane Complete Streets (TRBAM-25-04849) - A128
Amirmohammad Khakpour/Northwestern University, Sharika Hegde/Northwestern University, Nachuan Li/Northwestern University, Hani Mahmassani/Northwestern University
A Bayesian Global Optimization Method for Discrete Optimization via Simulation Problems (TRBAM-25-03988) - A138
Jinbiao Huo/Southeast University, Ziyuan Gu/Southeast University, Zhiyuan Liu/Southeast University
Assessing Resilience in Urban Road Networks: A Simulation-Based Approach Using Macroscopic Fundamental Diagrams (TRBAM-25-03492) - A137
Charis Chalkiadakis/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)
Event-triggered Dynamic Perimeter Control for Urban Road Networks (TRBAM-25-03315) - A136
Yian Li/Tongji University, Can Chen/Tongji University, Zicheng Su/Tongji University, Chunhui Yu/Tongji University, Wanjing Ma/Tongji University
A Cooperative Flow Control for Multiple Urban Regions Coupled with an Expressway Network (TRBAM-25-02620) - A135
Yunran Di/University of Wisconsin, Madison, Weihua Zhang/University of Wisconsin, Madison, Junwei You/University of Wisconsin, Madison, Haotian Shi/University of Wisconsin, Madison, Hangyu Li/University of Wisconsin, Madison, Heng Ding/University of Wisconsin, Madison, Bin Ran/University of Wisconsin, Madison
A Unified Road Network Partitioning Framework For Traffic Management (TRBAM-25-01060) - A134
Cheng Hu/Central South University, Jinjun Tang/Central South University, Zhitao Li/Central South University, Yaopeng Wang/Central South University, Guowen Dai/Central South University
Perimeter Control for Urban Traffic System using Explicit Model Predictive Control (TRBAM-25-01024) - A133
Hui Fu/Guangdong University of Techonology, HongPeng Li/Guangdong University of Techonology, Saifei Chen/Guangdong University of Techonology

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Macroscopic modeling and distribution estimation for typical merging networks (TRBAM-25-06378) - A132
Ruiping Zheng/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhen Yang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhe Gong/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Yani Qi/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
MESO-U: A Mesoscopic Urban Traffic Model Incorporating Link-level Interrupted Flow Dynamics (TRBAM-25-02128) - A131
Ying-Chuan Ni/ETH Zurich, Anastasios Kouvelas/ETH Zurich, Michail Makridis/ETH Zurich
Investigating the Resilience of Ride-hailing Fleet Management Strategies for Seamless Multi-modal Transportation Systems (TRBAM-25-05962) - A130
Euntak Lee/University Gustave Eiffel, Ludovic Leclercq/University Gustave Eiffel
GST-MADDPG-Driven Coordination of Variable Speed Limits and Ramp Metering for Traffic Congestion Alleviation in Expressway Merging Bottlenecks (TRBAM-25-03834) - A140
Chenxin Wei/Southeast University, Zhibin Li/Southeast University, Shunchao Wang/Southeast University
Comprehensive Evaluation with Dynamic Traffic Flow on Applying Variable Speed Limit System in Adverse Weather Condition (TRBAM-25-03716) - A141
Songha Lee/Hanyang University, Juneyoung Park/Hanyang University, Chunho Yeom/Hanyang University, Hyunjin Park/Hanyang University
Impact of Extended Red Clearance Intervals on Left-Turn Red-Light Violations: A Time Series Analysis (TRBAM-25-01256) - A142
Pouya Jalali Khalilabadi/University of Arizona, Abolfazl Karimpour/University of Arizona, Yao-Jan Wu/University of Arizona, Simon Ramos/University of Arizona
Reaching Consensus Between Transport Stakeholders: A Comprehensive Modelling Framework from Opinion Elicitation to Arbitration (TRBAM-25-03779) - A143
Marios Giouroukelis/National Technical University of Athens (NTUA), Eleni Mantouka/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)

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Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Connected and Autonomous Vehicles
Irene Martinez, Technische Universiteit Delft, presiding
Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

Optimal Connected Automated Vehicle Control in Freeway Merge Segments through Distributed Coordination (TRBAM-25-04953) - A144
Fahim Kafashan/North Carolina State University, Ramin Niroumand/North Carolina State University, Ali Hajbabaie/North Carolina State University
Autonomous Vehicle Control on Lane-free Roads: A Level-k Game Approach (TRBAM-25-04735) - A145
Zhaohan Wang/University of Sydney, Mohsen Ramezani/University of Sydney, David Levinson/University of Sydney
A Real-time Greedy Heuristic for CAV Trajectory Optimization through Signal Free Intersections (TRBAM-25-04146) - A146
Ramin Niroumand/North Carolina State University, Fahim Kafashan/North Carolina State University, Leila Hajibabai/North Carolina State University, Ali Hajbabaie/North Carolina State University, Claudio Roncoli/North Carolina State University
CV-MMP: Max-Pressure Control for Multi-Modal Traffic in Partially Connected Vehicle Environments (TRBAM-25-01166) - A147
Chaopeng Tan/Delft University of Technology, Marco Rinaldi/Delft University of Technology, Hans van Lint/Delft University of Technology
A Trajectory Planning Method for Autonomous Vehicles in Conflict Scenarios with Non-motorized Vehicles (TRBAM-25-05513) - A148
Yang Zhou/Tongji University, Xuesong Wang/Tongji University, Ruolin Shi/Tongji University, Meixin Zhu/Tongji University, Shaowei Yan/Tongji University, Daiheng Ni/Tongji University
A Dynamic Platoon Formation Model for Network-Wide Cooperative Driving Automation on Signalized Arterials (TRBAM-25-05241) - A158
Yingtong Tan/Michigan Technological University, Kuilin Zhang/Michigan Technological University

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Vehicle Trajectory Reconstruction by Integrating Car-Following Model and Gated Recurrent Unit under Connected and Automated Vehicle Environment (TRBAM-25-03454) - A157
Ruiyu Wang/Southeast University, Gang Ren/Southeast University, Jingfeng Ma/Southeast University, Jianhua Song/Southeast University, Changjian Wu/Southeast University, Yue Deng/Southeast University, Wenxie Lin/Southeast University
Optimal Management of Two Dedicated Lane Types for Mixed Traffic with Connected and Autonomous Vehicles (TRBAM-25-03309) - A156
Seungmin Oh/Korea Advanced Institute of Science and Technology, Jeongin Yun/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology
Impact of Human-Driven Vehicle Drivers' Trust attitude in Intelligent Connected Vehicle on Mixed Traffic Flow: Capacity and Stability Analysis (TRBAM-25-02769) - A155
Yingda Chen/Tongji University, Keping Li/Tongji University, Lun Zhang/Tongji University, Xiang Liu/Tongji University, Xue Xiao/Tongji University
Using Connected and Automated Vehicles to Expunge Freeway Stopwaves (TRBAM-25-02505) - A154
Benjamin Coifman/Ohio State University, Yuan Liu/Ohio State University
Enhancing Vehicle Platoons in Connected and Automated Environments with Spectral Clustering-based Pinning Control Strategy (TRBAM-25-01262) - A153
Can Wang/Southeast University, Yan Zhao/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University
Modeling Freeway Merging Area Capacity with CAV Dedicated Lanes (TRBAM-25-01090) - A152
Hui Zhang/Hebei University of Technology, Xia Li/Hebei University of Technology, Eryong Chuo/Hebei University of Technology
Remote Driving: Latency Effects on Speed Selection, Gap Acceptance, and Lane Positioning (TRBAM-25-04559) - A151
Didier Valdes Diaz/University of Puerto Rico, Mayaguez, Alberto Figueroa Medina/University of Puerto Rico, Mayaguez, Ivette Cruzado/University of Puerto Rico, Mayaguez, David Noyce/University of Puerto Rico, Mayaguez, Carol Perello De jesus/University of Puerto Rico, Mayaguez
Cooperative merging Strategy for Highway Merging Area in Intelligent and Connected Vehicles Environment (TRBAM-25-05939) - A150
Wenxin Jiang/Tongji University, Zhizhou Wu/Tongji University, Yunyi Liang/Tongji University
Impact of Lane Management Strategies of Connected Autonomous Vehicle Platoons on Traffic Flow: A Simulation Study (TRBAM-25-03784) - A160
Bryce Chao/Universitat Politecnica de Catalunya, Seshadri Naik Moode/Universitat Politecnica de Catalunya, Margarita Martinez-Diaz/Universitat Politecnica de Catalunya, Francesc Soriguera/Universitat Politecnica de Catalunya
Can Existing Lane-changing Models Reproduce Decisions of Autonomous Vehicles? A Comparative Analysis using Waymo Data (TRBAM-25-00829) - A161
Yasir Ali/Loughborough University, Danjue Chen/Loughborough University
A DRL-Based Lane Change Decision Model for Connected and Automated Trucks to Reduce Congestion in Freeway Merging Areas (TRBAM-25-03543) - A162
Xiaoyu He/Beijing Jiaotong University, Xumei Chen/Beijing Jiaotong University, Li Peikun/Beijing Jiaotong University, Lei Yu/Beijing Jiaotong University
Modeling Headway in Heterogeneous and Mixed Traffic Flow: A Statistical Distribution Based on a General Exponential Function (TRBAM-25-02258) - A166
Natchaphon Leungbootnak/Texas A&M University, Zihao Li/Texas A&M University, Zihang Wei/Texas A&M University, Dominique Lord/Texas A&M University, Yunlong Zhang/Texas A&M University
Research on Traffic Oscillation Suppression Strategies for Traffic Flow Mixed with Heavy Vehicles (TRBAM-25-05185) - A167
Yuxuan Xie/Wuhan University of Technology, Yi He/Wuhan University of Technology, Changxin Sun/Wuhan University of Technology

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Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Lane Changing and Microscopic Modeling
Silvia Varotto, École nationale des travaux publics de l'État, presiding
Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

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Analysis of Car-following Behaviours in Different Road Geometric Conditions using Machine Learning and Meta-Learner (TRBAM-25-04785) - A168
Ayobami Adewale/University of Windsor, Chris Lee/University of Windsor
Verification of Data-Driven Car-Following Models on Freeways (TRBAM-25-01273) - A178
Masahiro Kinoshita/No Organization, Shiomi Yasuhiro/No Organization
A Car-following Model with Behavioral Adaptation to Road Geometry (TRBAM-25-03626) - A177
Fabrizio Pelella/University of Naples Federico II, Gaetano Zaccaria/University of Naples Federico II, Vincenzo Punzo/University of Naples Federico II, Marcello Montanino/University of Naples Federico II
Comparison of Different Models for Analysis of Conflict risk in the Urban Inter-tunnel Weaving Sections based on Vehicle Trajectory (TRBAM-25-02226) - A176
Jiayi Zhou/Southeast University, Jiulonghu, Qian Chen/Southeast University, Jiulonghu, Xiaojian Hu/Southeast University, Jiulonghu
Unifying Car-Following Dynamics and Traffic Dynamics (TRBAM-25-06314) - A172
Xinzhi Zhong/University of Wisconsin, Madison, Yongju Kim/University of Wisconsin, Madison, Wissam Kontar/University of Wisconsin, Madison, Yang Zhou/University of Wisconsin, Madison, Soyoung Ahn/University of Wisconsin, Madison
Exploiting Vehicle Dynamics Transmission for Trajectory Reconstruction with A Newell Model and DTW-based Approach in Connected and Automated Vehicles Environment (TRBAM-25-06145) - A171
Juyuan Yin/No Organization, Pinqing Zhao/No Organization, Bing Li/No Organization, Hongzhi Yang/No Organization, Boyang Li/No Organization
Incorporating Human Factors in Car-following Models: Quantitative Assessment of 640 Competing Model Formulations (TRBAM-25-03712) - A170
Vincenzo Punzo/University of Naples Federico II, Davide Iannelli/University of Naples Federico II, Andrea Saltelli/University of Naples Federico II, Marcello Montanino/University of Naples Federico II
Predicting the Calibration Potential of Short Individual Vehicle Trajectories in Car-Following Models (TRBAM-25-01220) - A180
Renata Espinosa Rudolff/Universidad de los Andes, Chile, Rafael Delpiano/Universidad de los Andes, Chile
Dismantling One-size-fits-all: A Dynamic Differentiated Car-following Guidance System by a Machine Learing-based Human Factor-in-loop Control with Filed Tests (TRBAM-25-03210) - A181
Siyuan Gong/Chang'an University, Zeng Lu/Chang'an University, Fenglin Liu/Chang'an University, Wenjing Zhao/Chang'an University, Yukun Ding/Chang'an University
High-fidelity Human Driver Modeling: Integrating Heuristic, Data-driven, and Analytical Approaches (TRBAM-25-06004) - A182
Jihun Han/Argonne National Laboratory, Eunjeong Hyeon/Argonne National Laboratory, Dominik Karbowski/Argonne National Laboratory, Aymeric Rousseau/Argonne National Laboratory
Hierarchical Lane-Changing Gaming Decision Model for Heterogeneous Traffic on Two-Lane Highway (TRBAM-25-06065) - A186
Tianyi Wang/University of Texas, Austin, Chong He/University of Texas, Austin, Hao Li/University of Texas, Austin, Yixuan Li/University of Texas, Austin, Yiming Xu/University of Texas, Austin, Yangyang Wang/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin
Empirical Study of Lane-Changing Patterns with Dynamic Discharge Flow in a Weaving Area (TRBAM-25-04501) - A187
Jiali Peng/Beijing Jiaotong University, Wei Shangguan/Beijing Jiaotong University, Ali Arman Mohammad/Beijing Jiaotong University, Tampère Chris M.J./Beijing Jiaotong University
Exploration of Lane-changing Interaction Patterns Using Hierarchical Clustering Approach (TRBAM-25-03282) - A188
Bo Yao/Tongji University, Junhua Wang/Tongji University, Ting Fu/Tongji University, Hao Song/Tongji University, Qiangqiang Shangguan/Tongji University
A Game Theory-based Approach Considering Car-following Behavior for Modeling Merging Behavior at Expressway On-ramp Sections (TRBAM-25-03246) - A198
Chunyi Wei/Nagoya University, Toshiyuki Yamamoto/Nagoya University
On the Precise Quantification of the Impact of a Single Discretionary Lane Change on Surrounding Traffic (TRBAM-25-02933) - A197
Kangning Hou/Southwest Jiaotong University, Jia Zou/Southwest Jiaotong University, Fangfang Zheng/Southwest Jiaotong University, Xiaobo Liu/Southwest Jiaotong University, Zhengbing He/Southwest Jiaotong University
Vehicle Lane Change Risk Discrimination with Improved Intrusion Time Models (TRBAM-25-01815) - A196
Yuanling Zhao/No Organization, Yaqin Qin/No Organization

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Lane-Occupying Overtaking Trajectory Prediction Model for Two-Lane Mountainous Highways (TRBAM-25-01590) - A192
Dongliang Peng/Kunming University, Wenwen Qin/Kunming University, Wu Li/Kunming University
Vehicle Trajectory Reconstruction by Integrating Lane-Changing Behaviours on Urban Expressways (TRBAM-25-01234) - A191
Jingfeng Ma/Southeast University, Gang Ren/Southeast University, Qi Cao/Southeast University, Jianhua Song/Southeast University, Yue Deng/Southeast University, Ruiyu Wang/Southeast University, Wenxie Lin/Southeast University
Examining Variability in Car-following Behavior Based on Vehicle Trajectory Data (TRBAM-25-01781) - A190
Marvin Baumann/Karlsruhe Institute of Technology (KIT), Claude Weyland/Karlsruhe Institute of Technology (KIT), Josephine Grau/Karlsruhe Institute of Technology (KIT), Peter Vortisch/Karlsruhe Institute of Technology (KIT)
Understanding the Lateral Propagation of Traffic Shockwaves: A Case Study of I-395 Freeway (TRBAM-25-05521) - A200
Nachuan Li/Northwestern University, Hani Mahmassani/Northwestern University
Using Drift Diffusion Model to Analyze Cars' Lane Change Decisions behind Heavy Vehicles (TRBAM-25-04536) - A201
Nachuan Li/Northwestern University, Hani Mahmassani/Northwestern University, Soyoung Ahn/Northwestern University, Anupam Srivastava/Northwestern University

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Artificial Intelligence–Based Solutions for Traffic Modeling and Control
Marco Rinaldi, AMS Institute, presiding
Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

A Novel Approach to Real-Time Short-Term Traffic Prediction based on Distributed Fiber-Optic Sensing and Data Assimilation with a Stochastic Cell-Automata Model (TRBAM-25-01491) - A202
Yoshiyuki Yajima/NEC Corporation, Hemant Prasad/NEC Corporation, Daisuke Ikefuji/NEC Corporation, Takemasa Suzuki/NEC Corporation, Shin Tominaga/NEC Corporation, Hitoshi Sakurai/NEC Corporation, Manabu Otani/NEC Corporation
A Hybrid Learning Approach for Intersection Queue Prediction (TRBAM-25-04213) - A203
Zhao Zhang/Aramco Research Center, Hao Yang/Aramco Research Center, Xiaoyan Sun/Aramco Research Center, Jinghui Wang/Aramco Research Center
Street Function Representation Learning on Long-Term Traffic Flow Prediction (TRBAM-25-03223) - A204
Huihai Wang/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Yiming Xu/University of Texas, Austin
A Federated Learning-based Traffic Prediction Approach for Short-term Traffic Flow Prediction (TRBAM-25-02645) - A205
Xiamei Wen/Delft University of Technology, Megha Khosla/Delft University of Technology, Serge Hoogendoorn/Delft University of Technology
Real-time Short-term Traffic Flow Uncertainty Quantification Using Gradient Descent Based Interval Type-II Fuzzy Inference System (TRBAM-25-01956) - A206
Xiaobin Zhong/Southeast University, Jianhua Guo/Southeast University, Meiye Li/Southeast University
Distributed Fiber-Optic Sensing based Single-Lane Abnormal Event Detection in Low-Density Traffic Flow (TRBAM-25-01486) - A207
Hemant Prasad/NEC Corporation, Yoshiyuki Yajima/NEC Corporation, Daisuke Ikefuji/NEC Corporation, Takemasa Suzuki/NEC Corporation, Shin Tominaga/NEC Corporation, Hitoshi Sakurai/NEC Corporation, Manabu Otani/NEC Corporation
Efficient Large-Scale Traffic Forecasting via Multi-Subgraph Spatio-Temporal Graph Convolutional Networks (TRBAM-25-01251) - A208
Bocheng An/Southeast University, Chuang Cui/Southeast University, RUI GAN/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University
Hybrid Traffic Speed Prediction Method Combining Macroscopic Simulation and Graph Convolutional Neural Networks with Incident Detection (TRBAM-25-02115) - A218
De Zhao/Southeast University, Kelong Liu/Southeast University, Weijie Yu/Southeast University, Wei Wang/Southeast University, Hui Deng/Southeast University
Long-term Traffic Flow Prediction with Spatiotemporal Sequence Reconstruction (TRBAM-25-01935) - A217
Jingyi Wang/Southeast University, Fan Ding/Southeast University, Zhao Liu/Southeast University, Yunqi Dai/Southeast University, Huachun Tan/Southeast University

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Limei Liu/Monash University, Zhuo Chen/Monash University, Leizhen Wang/Monash University, Peibo Duan/Monash University
ChatSUMO: Large Language Model for Automating Traffic Scenario Generation in Simulation of Urban MObility (SUMO) (TRBAM-25-04228) - A214
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Yu Qian/Southeast University, Jian Zhang/Southeast University, Haiyan Zhang/Southeast University, Zhanyu Feng/Southeast University, Bo Wang/Southeast University, Yutong Wei/Southeast University
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Tianyang Cui/Southeast University, Weihan Chen/Southeast University
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Xinkai Ji/Southeast University, Yu Han/Southeast University, Yuan Zheng/Southeast University, Pan Liu/Southeast University
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Nuo Xu/Southeast University, Shuang Li/Southeast University, Xiaoxi Liang/Southeast University, Cong Qi/Southeast University, Xiucheng Guo/Southeast University
Highway Decongestion with Variable Speed Limit Control - A Decentralized, Model-Free Approach (TRBAM-25-00140) - A221
Kevin Riehl/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Davide Pusino/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Anastasios Kouvelas/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Michail Makridis/ETH Zurich: Eidgenossische Technische Hochschule Zurich

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Traffic Simulation
George List, North Carolina State University, presiding
Sponsored By Standing Committee on Traffic Simulation

A Time Series Risk Field-Based Model for Discretionary Lane-Change Decision-Making (TRBAM-25-00106) - A222
Yang Feng/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhen Yang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
Impact of Lane Unbalance on Capacity Drop in Expressway Merging Areas: A Simulation Study (TRBAM-25-00112) - A223
kai zhang/Beijing University of Technology, Jian Rong/Beijing University of Technology, Yacong Gao/Beijing University of Technology, Yue Chen/Beijing University of Technology
A Vehicle Size-Based Dynamic Model of Artificial Driving Risk Potential Fields and Vehicle Interaction Analysis for Highway Driving (TRBAM-25-00135) - A224
Ru Ling/Southeast University, Meng Li/Southeast University, Bowen Liu/Southeast University, Si Zheng/Southeast University, Zhibin Li/Southeast University, Hong Guo/Southeast University
Driving and traffic simulation analysis of high-speed driving behavior and its impact on traffic flow safety performance (TRBAM-25-00158) - A225
Yeseo Gu/Hanyang University, Aram Jung/Hanyang University, Cheol Oh/Hanyang University

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Fengxiang Guo/Kunming University, xu luo/Kunming University, Jingyang Li/Kunming University
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Donggyu Min/Seoul National University, Hyunsoo Yun/Seoul National University, Seung Woo Ham/Seoul National University, Dong-Kyu Kim/Seoul National University
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Kui Xia/Southwest Jiaotong University, Zipeng Man/Southwest Jiaotong University, Haoran Jiang/Southwest Jiaotong University, Zhihong Yao/Southwest Jiaotong University, Yangsheng Jiang/Southwest Jiaotong University
Can Link-based Variable Speed Limits Improve Urban Traffic Operation? A Deep Reinforcement Learning-based Method and Case Study in Stockholm City (TRBAM-25-00855) - A231
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Hongcheng Ge/Tongji University, Difei Jing/Tongji University, Zhongxiang Luo/Tongji University, Wei Li/Tongji University, Cancan Song/Tongji University, Zhongyin Guo/Tongji University
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Tarek Chouaki/IRT SystemX, Sebastian Hörl/IRT SystemX
Learning and Imitating Car Following Behaviors: A Generative Adversarial and Long Short-Term Memory Network-Based Model Using UAV Data (TRBAM-25-06155) - B587
Zizheng Li/Nagoya University, Hong Zhu/Nagoya University, Xiaolong Xie/Nagoya University, Keshuang Tang/Nagoya University, Zixuan Huang/Nagoya University
Diffusion Model Based on Motion Perception for Non-motorized Left-turn Scenarios (TRBAM-25-06169) - B586
Yucheng Zhang/NanJing University of Science and Technology, Zhuping Zhou/NanJing University of Science and Technology
A Macro-micro Dual-layer Approach for Congestion Mitigation in Mixed Traffic (TRBAM-25-06176) - B585
Yuanxiang Yang/Aalto University, Yu Liu/Aalto University, Claudio Roncoli/Aalto University
Autonomous Vehicles as Sensors: Traffic State Estimation (TRBAM-25-06186) - B584
Yunfei Zhang/Technical University of Munich, Jeremias Gerner/Technical University of Munich, Mario Ilic/Technical University of Munich, Stefanie Schmidtner/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Hybrid Optimization of Wiedemann 99 Car-Following Parameters for Accurate Calibration of Microsimulation Model for Tennessee's Peak-Hour Freeway Traffic (TRBAM-25-06269) - B583
Pranab Kar/University of Memphis, Jaya Praksh Narayana Raavi/University of Memphis, Sabyasachee Mishra/University of Memphis, Kakan Dey/University of Memphis, Mihalis Golias/University of Memphis, Michelle Hunt/University of Memphis

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Transformer Encoder-based Model For Detecting Overtaking Maneuvers (TRBAM-25-06311) - B582
Pushkraj Pathak/Indian Institute of Technology, Bombay, Raja Rizwan Madni/Indian Institute of Technology, Bombay, Avijit Maji/Indian Institute of Technology, Bombay, Siddharth Tallur/Indian Institute of Technology, Bombay
The Impact of Connected and Automated Vehicles on Urban Road Traffic - Test Site Munich, Germany (TRBAM-25-06385) - B581
Philipp Stueger/Technical University of Munich, Tanja Niels/Technical University of Munich, Martin Margreiter/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Utilizing Scenario-Based Simulation Analysis for Evaluating Geometric Improvements and Active Traffic Management Alternatives (TRBAM-25-05342) - B580
Yasmine Al-Moghrabi/Florida International University, Kamar Amine/Florida International University, Mohammed Hadi/Florida International University, David Hale/Florida International University, Burak Cesme/Florida International University, Paul Morris/Florida International University

2240

Monday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Safety Performance and Analysis for Safe Roads
Alfonso Montella, University of Naples Federico II, presiding
George Yannis, National Technical University of Athens (NTUA), presiding
Sponsored By Standing Committee on Safety Performance and Analysis

Join the TRB Committee on Safety Performance and Analysis for a selection of papers related to safer roads, including intersections and roadsides.

Crash Injury Severity Investigation along Interstate-64 in Kentucky (TRBAM-25-00049) - B400
Kirolos Haleem/Western Kentucky University, Bharat Pathivada/Western Kentucky University, Arunabha Banerjee/Western Kentucky University
Identification and Characterization of Wrong Way Driving Crashes on Virginia's Interstate Highways (TRBAM-25-00148) - B401
Hyun Cho/Virginia Transportation Research Council, Erin Robartes/Virginia Transportation Research Council, Benjamin Cottrell/Virginia Transportation Research Council
Insights into Texas Barrier Crashes: A Cluster Correspondence Approach (TRBAM-25-00170) - B441
Rohit Chakraborty/Texas State University, Subasish Das/Texas State University, Mahmuda Mimi/Texas State University, Boni Kutela/Texas State University
Evaluating the Impact of Pavement Conditions on Road Safety by Analyzing Crash Frequency and Severity (TRBAM-25-02613) - B402
Prathyush Kumar Reddy Lebaku/University of Texas, Austin, Lu Gao/University of Texas, Austin, Jingran Sun/University of Texas, Austin, Xingju Wang/University of Texas, Austin, Xuejian Kang/University of Texas, Austin
Analysis of Highway Traffic Crashes Risk Considering Traffic States in Merging and Diverging Areas (TRBAM-25-03138) - B403
Jihu Kim/Korea Advanced Institute of Science and Technology, Yeeun Kim/Korea Advanced Institute of Science and Technology, Hwasoo Yeo/Korea Advanced Institute of Science and Technology
Crash Modification Factors and Functions for Management of Pavement Friction for Safety for Roadway Segments (TRBAM-25-04300) - B404
Ross McCarthy/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University, Edgar de León Izeppi/Virginia Polytechnic Institute and State University, Bhagwant Persaud/Virginia Polytechnic Institute and State University, Samer Katicha/Virginia Polytechnic Institute and State University, Alejandra Medina-Flintsch/Virginia Polytechnic Institute and State University
Safety Effectiveness of Rumble Strips on Indiana Rural Roads (TRBAM-25-04389) - B432
Mario Barahona Beyer/Purdue University, Qiming Guo/Purdue University, Mario Romero/Purdue University, Andrew Tarko/Purdue University
Safety-focused Median Treatment Selection For A Suburban Arterial (TRBAM-25-04393) - B433
Qiming Guo/Purdue University, Priya Narayanan/Purdue University, Vamsi Krishna Bandaru/Purdue University, Mario Romero/Purdue University, Andrew Tarko/Purdue University
Mash Crashworthiness of Breakaway Luminaire Poles Supported By TRANSFORMERBASE (TRBAM-25-04510) - B410
Mojdeh Asadollahi Pajouh/No Organization, Qusai A. Alomari/No Organization, Chen Fang/No Organization, Robert Bielenberg/No Organization, Ronald Faller/No Organization, Dhafer Marzougui/No Organization
(continued)

Performance Evaluation of Equivalent Property Damage Only (EPDO) Weight Sets: A Case Study Using Traffic Crash Data from Korean Expressways (TRBAM-25-04668) - B412
Jeongin Yun/Korea Advanced Institute of Science and Technology, Sanggyu Kim/Korea Advanced Institute of Science and Technology, Ducknyung Kim/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology
Effect of Roadway Lighting on Safety in Utah (TRBAM-25-04741) - B411
Samuel Runyan/Brigham Young University, Grant Schultz/Brigham Young University, David Bassett/Brigham Young University, Brad Brimley/Brigham Young University, Gregory Snow/Brigham Young University, Adam Simpson/Brigham Young University, Benjamin Dahl/Brigham Young University
Examining the Impact of Centerline Rumble Strips on Reducing Rural Two-Lane Head-On Collisions in Maine (TRBAM-25-04787) - B413
Jhan Kevin Gil-Marin/University of Oklahoma, Norman, Alainie Sawtelle/University of Oklahoma, Norman, Per Garder/University of Oklahoma, Norman, Mohammadali Shirazi/University of Oklahoma, Norman
Injury Severity Analysis of Workzone Crashes in North Carolina (TRBAM-25-04856) - B414
Shubha Bamney/University of Mississippi, Srinivas Pulugurtha/University of Mississippi, Dil Samina Diba/University of Mississippi
From Pandemic to Present: A Data-Driven Examination of Factors Influencing Deer-Vehicle Crashes (TRBAM-25-05031) - B420
Deepa Kalauni/University of Connecticut, Abolfazl Karimpour/University of Connecticut, Niloufar Shirani/University of Connecticut, Eric Jackson/University of Connecticut
Analyze Impacts of Lane-change on Highway Safety Risk with Safety Risk Potential Field and Multi-State Survival Analysis (TRBAM-25-05277) - B421
Dachuan Zuo/New York University, Zilin Bian/New York University, Fan Zuo/New York University, Kaan Ozbay/New York University
Interactive Crash Risk Mechanism of Vehicle-Group and Road Segment for the Expressway (TRBAM-25-05301) - B424
Jiajin He/Tongji University, Ling Wang/Tongji University, Fou Nie/Tongji University, Yidan Li/Tongji University, Wanjing Ma/Tongji University
Analyzing Head-On Crash Severity on Rural Two-Lane Roads (TRBAM-25-05589) - B442
Sai Sriharsha Gattupalli Venkata/Florida International University, Enock Mwambeleko/Florida International University, Hellen Shita/Florida International University, HM Nayem/Florida International University, Francisca Kasubi/Florida International University, Odilo Mdimi/Florida International University, Priyanka Alluri/Florida International University
Evaluating the Safety Effects of Right-Turn Yielding Measures for Large Vehicles: Evidence from Suzhou, China (TRBAM-25-05600) - B493
Xueyu Zhang/Tongji University, Xuesong Wang/Tongji University, Yixiao Lei/Tongji University, Yu Jiang/Tongji University
Safety Impact Assessment of Median Cable Barriers on Four and Six-Lane Interstates: Utilizing Safety Performance Functions and the Empirical Bayes Method (TRBAM-25-05914) - B450
M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Safkat Ahmed/Louisiana Transportation Research Center (LTRC), Elisabeta Mitran/Louisiana Transportation Research Center (LTRC), Xiaoduan Sun/Louisiana Transportation Research Center (LTRC), Julius Codjoe/Louisiana Transportation Research Center (LTRC)
Comparative Analysis of Single Vehicle Run-off Crashes in Rural vs. Urban Freeways (TRBAM-25-06211) - B443
Enock Mwambeleko/Florida International University, Hellen Shita/Florida International University, HM Nayem/Florida International University, Dorcas Machimu/Florida International University, Tumlumbe Juliana Chengula/Florida International University, Priyanka Alluri/Florida International University
Identification of Hazardous Locations Based on Unsafe Driving Event Detection Using Telematics Data (TRBAM-25-05753) - B454
Aathira K. Das/Indian Institute of Technology, Bombay, Tom Mathew/Indian Institute of Technology, Bombay
Understanding GPS-related Crashes Using A Matched Case-Control Approach (TRBAM-25-05859) - B444
Boni Kutela/Texas A&M Transportation Institute, Tumlumbe Juliana Chengula/Texas A&M Transportation Institute, Clement Lippu/Texas A&M Transportation Institute, Emmanuel Kidando/Texas A&M Transportation Institute, Jinli Liu/Texas A&M Transportation Institute, Subasish Das/Texas A&M Transportation Institute
A Hybrid Data Mining Framework to Investigate Roadway Departure Crashes on Rural Two-lane Highways: Applying Fast and Frugal Tree with Association Rules Mining (TRBAM-25-03039) - B440
Ahmed Hossain/Texas State University, Subasish Das/Texas State University, Xiaoduan Sun/Texas State University, Ahmed Sajid Hasan/Texas State University, Mohammad Jalayer/Texas State University

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Heterogeneous and Differential Treatment Effect Analysis of Freeway Exit Ramp Improvements Using Causal Inference (TRBAM-25-03536) - B494
Syed Zaier Zaidi/Tongji University, Xuesong Wang/Tongji University, Yesihati Azati/Tongji University, Jiaqi Li/Tongji University, Mohammed Quddus/Tongji University, Tianxiang Fan/Tongji University
Analyzing Contributing Factors to Crashes Involving Mobile and Stationary Work Zones (TRBAM-25-04696) - B462
Isaac Baah/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
Framework for Applying Highway Safety Manual Methods During Project Alternatives Analysis (TRBAM-25-02956) - B472
Scott Himes/VHB, Frank Gross/VHB, Jeffrey Gooch/VHB, Samantha Arnold/VHB
Developing Combined Crash Modification Factors (CMFs): Challenges, Lessons Learned and Recommendations (TRBAM-25-01365) - B451
Thanh Le/VHB, Taha Saleem/VHB, Raghavan Srinivasan/VHB, Sarah Weissman Pascual/VHB, Matt Hinshaw/VHB
Impact of Access Management on Arterial Road Crashes: A Case Study of Albuquerque, New Mexico (TRBAM-25-00155) - B464
Yully Chaves Lasso/University of New Mexico, William Simon/University of New Mexico, Sagert Sheets/University of New Mexico, Nicholas Ferenchak/University of New Mexico, Lisa Losada-Rojas/University of New Mexico
Analysis of Factors Influencing the Severity of Lateral and Longitudinal Conflicts in Diverging Areas: A Correlated Mixed Logit Approach with Heterogeneity in Means (TRBAM-25-00157) - B484
Jiaqiang Wen/Wuhan University, Jianatihan Jinsihan/Wuhan University, Yanyong Guo/Wuhan University, Nengchao Lyu/Wuhan University
Intersection Crash Frequency Analysis Considering Drivers' Visual Environment Features (TRBAM-25-01386) - B452
Lei Han/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Yang-Jun Joo/University of Central Florida, Shaoyan Zhai/University of Central Florida, Dongdong Wang/University of Central Florida
A Comprehensive Multi-Criteria Decision Analysis Tool for Assessing Traffic Danger at Urban Intersections (TRBAM-25-02358) - B492
Shabnam Abdollahi/Ecole Polytechnique de Montreal, Owen Waygood/Ecole Polytechnique de Montreal, Marie-Soleil Cloutier/Ecole Polytechnique de Montreal, Irene Abi-Zeid/Ecole Polytechnique de Montreal
A Transformer-GAN framework for Advanced Crash Likelihood Prediction at Intersections (TRBAM-25-02415) - B453
B M Tazbiul Hassan Anik/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Zubayer Islam/University of Central Florida
Deriving Minimum Dynamic Time-To-Collision Between Vehicles Key Conflicting Points at Signalized Intersections (TRBAM-25-03684) - B463
Ahmed Mohamed/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
That Was Close: A Video-Based Safety Assessment of Signalized Traffic Intersections along a High-Speed Corridor (TRBAM-25-04897) - B500
Jacques Fleischer/University of Florida, Heriberto Lopez/University of Florida, Kenneth Krause/University of Florida, Tania Banerjee/University of Florida, Min-Tang Li/University of Florida, Anand Rangarajan/University of Florida, Sanjay Ranka/University of Florida
Leveraging Naturalistic Trajectory Data for Safety Analysis of All-Way Stop Control Intersections: Exploration Speed Limit and Stop Violations Patterns (TRBAM-25-05015) - B501
Deng Pan/George Washington University, Pedram Beigi/George Washington University, Samer H. Hamdar/George Washington University, Wei Zhang/George Washington University, Wissam Sleiman/George Washington University
Safety Evaluation of Dilemma Zone Protection System for Rural, High-Speed Signalized Intersections Using Empirical Bayes Method (TRBAM-25-05030) - B502
Md Rezwan Hossain/University of South Alabama, Min-Wook Kang/University of South Alabama, Nafiur Rahman/University of South Alabama, Pranesh Biswas/University of South Alabama, Moynur Rahman/University of South Alabama
Segmentation of Risk Factors for Fatal Crashes at Urban Signalized Intersections: A Hybrid Approach (TRBAM-25-03617) - B503
Siddardha Koramati/Birla Institute of Technology and Science, Pilani, Bandhan Majumdar/Birla Institute of Technology and Science, Pilani, Prasanta Sahu/Birla Institute of Technology and Science, Pilani, Surojit Das/Birla Institute of Technology and Science, Pilani, Aritro Ghosh/Birla Institute of Technology and Science, Pilani, Sabyasachi Biswas/Birla Institute of Technology and Science, Pilani

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Analysis of the Safety Influence Areas for Signalized Intersections: An Integrated Spatial-Statistical Analysis (TRBAM-25-01324) - B504
Mulugeta Amare/University of North Dakota, Daba Gedafa/University of North Dakota, Sherif Gaweesh/University of North Dakota, Demisew Degefu/University of North Dakota
Smar Road Testing Risk Evaluation Method Based on Surrogate Safety Measures and Fuzzy Comprehensive Evaluation (TRBAM-25-05309) - B505
Tiandong Xu/Northeast Forestry University
A Spatial Typology Analysis of Crash Characteristics across 2480 Census Tracts (TRBAM-25-05661) - B506
Mohammed Mohammed/University of Massachusetts, Amherst, Jimi Oke/University of Massachusetts, Amherst
The Existence and Impacts of Sequential Traffic Conflicts: Investigation of Traffic Conflict in Sequences encountered by Left-turning Vehicles at Signalized Intersections (TRBAM-25-02890) - B507
Shuke Xie/Tongji University, Zhenyu Zhao/Tongji University, Ting Fu/Tongji University, Qiangqiang Shangguan/Tongji University, Junhua Wang/Tongji University
Interactions among Road, Vehicle and Driver Risk Factors for the Identification of Safety Tolerance Zone (TRBAM-25-02536) - B422
Eva Michelaraki/National Technical University of Athens (NTUA), Thodoris Garefalakis/National Technical University of Athens (NTUA), Muhammad Wisal Khattak/National Technical University of Athens (NTUA), Muhammad Adnan/National Technical University of Athens (NTUA), Evita Papazikou/National Technical University of Athens (NTUA), Rachel Talbot/National Technical University of Athens (NTUA), Amir Pooyan Afghari/National Technical University of Athens (NTUA), Christelle Al Haddad/National Technical University of Athens (NTUA), Eleonora Papadimitriou/National Technical University of Athens (NTUA), Constantinos Antoniou/National Technical University of Athens (NTUA), Tom Brijs/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Crash Modification Factors for Arterials Operated with Automated Traffic Signal Performance Measures (TRBAM-25-03411) - B430
Burak Cesme/Kittelson & Associates, Inc., James Bonneson/Kittelson & Associates, Inc., Laura Zhao/Kittelson & Associates, Inc., Nemanja Dobrota/Kittelson & Associates, Inc., Jonathan Wood/Kittelson & Associates, Inc., Christopher Day/Kittelson & Associates, Inc.
Unsafe Traffic Events and Crash Occurrences: The Importance of Exploring Their Relationship Using Smartphone App Data (TRBAM-25-03425) - B423
Paraskevi Koliou/National Technical University of Athens (NTUA), Virginia Petraki/National Technical University of Athens (NTUA), Apostolos Ziakopoulos/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Safety Evaluation of Freeway Shoulder Rumble Strips for the Highway Safety Manual (TRBAM-25-04034) - B473
Scott Himes/VHB, Vikash Gayah/VHB, Samantha Arnold/VHB
The Improvement of Surrogate Safety Measures for Highway Merging Scenarios Based on Buffer Areas (TRBAM-25-02179) - B431
Yanxuan Wang/Tongji University, Linbo Li/Tongji University
Determination of the Impact of Roadside Infrastructure on Fatal Crash Occurrence: An Empirical Analysis Using Power Spectral Segment Length. (TRBAM-25-02421) - B482
Parveen Kumar/Indian Institute of Technology, Delhi, Geetam Tiwari/Indian Institute of Technology, Delhi, Sourabh Bikas Paul/Indian Institute of Technology, Delhi
Traffic Gaps and Trail Gaps near "The Gap": Examining a Trail Crossing that Did Not Register as a Need in Statewide Screening Processes (TRBAM-25-03915) - B434
Peter Ohlms/Virginia Department of Transportation, Lance Dougald/Virginia Department of Transportation
Surrogate safety measure with consideration of maximum stopping distance based onempirical vehicle trajectories prior to crashes (TRBAM-25-05008) - B508
Xudong Ren/Southeast University, Lu Bai/Southeast University, Pan Liu/Southeast University, Wai Wong/Southeast University, Bicheng Xu/Southeast University, Shuo Kong/Southeast University, Jin Liu/Southeast University
Safety Performance of Passing Zone Segments on Two-lane Rural Highways in Pennsylvania: Comparing Crash Modification Factors using Causal Inference and Unobserved Heterogeneity Models (TRBAM-25-06342) - B474
Prakash Poudel/Pennsylvania State University, Eric Donnell/Pennsylvania State University, Vikash Gayah/Pennsylvania State University
Evaluation of Traffic Conflicts at Approaching Section of Toll Plaza using Extreme Value Theory (TRBAM-25-02431) - B483
Parveen Kumar/Indian Institute of Technology, Delhi, Debashis Ray Sarkar/Indian Institute of Technology, Delhi

Tuesday, January 07 (Sessions 2095, 3001 - 3201, 3203 - 3213, 4026)

3001

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 102B

Preventing Crashes Through Policy, Training, and Education

Neale Kinnear, Aon Risk Solutions, presiding

Sponsored By Standing Committee on Vehicle User Education, Training, and Licensing

Driver License Renewal Laws and Older Driver Crash Rates by Rurality, 2000 – 2019 (TRBAM-25-02100)

Cara Hamann/University of Iowa, Jon Davis/University of Iowa, Gilsu Pae/University of Iowa, Motao Zhu/University of Iowa, Gregory Shill/University of Iowa, Brian Tefft/University of Iowa, Joseph Cavanaugh/University of Iowa

Can Targeting Messages to High-Risk Drivers Prevent Future Citations and Crashes? Evidence from a Randomized Pilot in Washington, DC (TRBAM-25-02407)

Danielle Moore/District Department of Transportation, Alyssa Huberts/District Department of Transportation, Felix Owusu/District Department of Transportation, Amelie Hecht/District Department of Transportation, Sam Quinney/District Department of Transportation

Understanding Links Between Young New Drivers' Skills and Driver Training, Economic Conditions, and Home Neighborhood Urbanicity: Evidence from the State of Ohio (TRBAM-25-04893)

Jasmine Siyu Wu/University of Pennsylvania, Xiaoxia Dong/University of Pennsylvania, Elizabeth Walshe/University of Pennsylvania, Flaura Winston/University of Pennsylvania, Megan Ryerson/University of Pennsylvania

Reviewing the Impact of Behavior Change Interventions on Young Drivers' Crash Risk (TRBAM-25-00206)

Jessica Hafetz/University of Edinburgh, Jackson Felkins/University of Edinburgh, Ayden Allston/University of Edinburgh, Helen Mann/University of Edinburgh, D. Leann Long/University of Edinburgh, Carol Ford/University of Edinburgh, Kate McDonald/University of Edinburgh

Mental Health and Crashes: Investigating the Role of Mindfulness and Purpose as Protective Factors (TRBAM-25-02328)

Johnathon Ehsani/Johns Hopkins University, Hardit Singh Bhutani/Johns Hopkins University, Brydon Grant/Johns Hopkins University, Michelle Duren/Johns Hopkins University

3002

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon A

Managed Lanes Operational Improvements Through the Use of Technology

Md Sakoat Hossan, WSP, presiding

Dan Lamers, North Central Texas Council of Governments, presiding

Michael Davis, RS&H, Inc., presiding

Sponsored By Standing Committee on Managed Lanes

This session will focus on how managed lane corridors and systems can improve operations through the use of cutting edge technology.

Pilot of Biometric Vehicle Occupancy Detection Technology on Managed Lanes (TRBAM-25-02556)

Sara Hendricks/University of South Florida, Philip Winters/University of South Florida

Sensitivity Congestion Mitigation Exploration of Converting HOV to HOT Lanes in Reducing Travel Time (TRBAM-25-04537)

Deo Chimba/Tennessee State University, Hellen Shita/Tennessee State University

Emerging Transportation Technologies in Managed Lanes Space (P25-20979)

Raj Ponnaluri/CONSOR Engineers

3003

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon C

Innovations in Capacity and Operations Analysis for Pedestrians and Bicyclists

Ernest Tufuor, Auburn University, presiding

Sponsored By Standing Committee on Highway Capacity and Quality of Service

This presentations session, sponsored by the TRB Committee on Highway Capacity and Quality of Service (ACP40), presents papers focusing on innovations in operations and quality of service analysis for pedestrians and bicyclists.

Propagation of Density Across the Width of a Bicycle Path (TRBAM-25-00295)

Heather Kaths/University of Wuppertal, Aboozar Roosta/University of Wuppertal, Jan Fischer/University of Wuppertal, Thorsten Kathmann/University of Wuppertal, Aleksandra Pušica/University of Wuppertal

Effects of the Plan Vélo I and II on Vehicular Flow in Paris - An Empirical Analysis (TRBAM-25-05818)

Elena Natterer/No Organization, Allister Loder/No Organization, Klaus Bogenberger/No Organization

Analyzing Cycling Behavior and Traffic State Interactions at Unsignalized Intersections Using Bird's-Eye View Video Data (TRBAM-25-06058)

Anna Takayasu/Technische Universitat Munchen, Patrick Malcolm/Technische Universitat Munchen, Ana Moreno/Technische Universitat Munchen, Klaus Bogenberger/Technische Universitat Munchen

Ped LOS and Delay Evaluation at Uncontrolled Crossing with Multimodal All-traffic Trajectory Data (TRBAM-25-04461)

Fei Guan/University of Nevada, Reno, Hao Xu/University of Nevada, Reno, Trevor Whitley/University of Nevada, Reno, Ziru Wang/University of Nevada, Reno, Zhihui Chen/University of Nevada, Reno, Tianwen Hui/University of Nevada, Reno

3004

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon B

Advancing Impaired Driving Systems

Tara Casanova Powell, Association of Transportation Safety Information Professionals, presiding

Ryan Smith, National Transportation Safety Board (NTSB), presiding

Sponsored By Standing Committee on Impairment in Transportation

Improving Crash Data Accuracy: An Approach to Identifying Alcohol-Related Underreporting Through Inconsistent Crash Reports (TRBAM-25-06079)

Sudesh Bhagat/Iowa State University, Raghupathi Kandiboina/Iowa State University, Ibne Farabi Shihad/Iowa State University, Skylar Knickerbocker/Iowa State University, Neal Hawkins/Iowa State University, Anuj Sharma/Iowa State University

Examination of Implementation of Place of Last Drink (POLD) Using a Framework of Implementation Components (TRBAM-25-00046)

Linda Bosma/Bosma Consulting, LLC, Carrie Christofes/Bosma Consulting, LLC

Exploring the Effectiveness of Driver Monitoring Systems on the Progression of Driver Fatigue (TRBAM-25-01549)

Jiageng Niu/Southwest Jiaotong University, Xinguo Jiang/Southwest Jiaotong University, Xianghong Li/Southwest Jiaotong University, Qiong Yu/Southwest Jiaotong University

3005

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 103A

Identification of Risky Driving Behavior from Multi-Data Sources

Brenda Lantz, North Dakota State University, presiding

Sponsored By Standing Committee on Truck and Bus Safety

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Analysis of Distracted Driving Crashes among At-Fault Commercial Motor Vehicles in Kentucky Using Multiple Techniques (TRBAM-25-00298)
Arunabha Banerjee/Western Kentucky University, Tathagatha Khan/Western Kentucky University, Dylan Justice/Western Kentucky University, Mustafa Abdekhalek/Western Kentucky University, Salim Al Adawi/Western Kentucky University, Noelle Buhay/Western Kentucky University, Shamar Crump/Western Kentucky University, Kirolos Haleem/Western Kentucky University
A Hybrid Framework of Latent Class Clustering and Binary Logistic Regression for Modeling Traffic Penalties of Long-Haul Truck Drivers Circulating in India (TRBAM-25-01044)
Balamurugan Shandhana Rashmi/National Institute of Technology, Tiruchirappalli, Dr Sankaran Marisamynathan/National Institute of Technology, Tiruchirappalli
Analysis of Truck Driver Behavior using Factor Analysis – A Study of Drivers from Bihar, India (TRBAM-25-03551)
Ankit Kumar Kushwaha/Indian Institute of Technology Patna, Krishanu Prakash/Indian Institute of Technology Patna, B. Anil Kumar/Indian Institute of Technology Patna
Development and Real-World Application of Commercial Motor Vehicle Safety Enforcement Dashboards (TRBAM-25-04350)
Dhairya Parekh/CATT Laboratory, Mark Franz/CATT Laboratory, Sara Zahedian/CATT Laboratory, Narjes Shayesteh/CATT Laboratory, Michael Pack/CATT Laboratory

3006

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 150A
Toward Trustworthy Machine Learning Systems: Tackling Traffic Perception Challenges with Data-Resilient Solutions
Hao Frank Yang, Johns Hopkins University, presiding
Sponsored By Standing Committee on Information Systems and Technology, Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session delves into innovative traffic information technologies aimed at enhancing machine learning system trustworthiness for diverse traffic applications. Topics will include automated vehicle detection in low-illumination environments, data bias and poising attacks on intelligent transportation systems, adaptive surveillance techniques using predictive correlated online learning, and the application of high-resolution connected vehicle data for incident detection and management. Each topic is designed to address the challenges of ensuring reliability and accuracy of machine learning transportation applications from source data, providing attendees with insights into the latest advancements and practical solutions.

Camera Image Enhanced Vehicle Detection in Extremely Low-Illumination Environment By an Advanced CLAHE-Based Algorithm (TRBAM-25-00120)
Igor Lashkov/University of Hawai'i, Manoa, Runze Yuan/University of Hawai'i, Manoa, Shanglian Zhou/University of Hawai'i, Manoa, Guohui Zhang/University of Hawai'i, Manoa
A Review of Data Poisoning Attacks in Intelligent Transportation Systems (TRBAM-25-02432)
Xin Wang/University of Washington, Xuegang Ban/University of Washington, Feilong Wang/University of Washington
Multi-Level Traffic-Responsive Tilt Camera Surveillance through Predictive Correlated Online Learning (TRBAM-25-05547)
Tao Li/New York University, Zilin Bian/New York University, Haozhe Lei/New York University, Fan Zuo/New York University, Ya-Ting Yang/New York University, Quanyan Zhu/New York University, Zhenning Li/New York University, Kaan Ozbay/New York University
Leveraging High-Resolution Connected Vehicle Data for Incident Detection, Management and Analysis: An Exploratory Study (TRBAM-25-03806)
Yunpeng Shi/University at Buffalo, SUNY, Wen Zhang/University at Buffalo, SUNY, Chunming Qiao/University at Buffalo, SUNY, Adel Sadek/University at Buffalo, SUNY

3007

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 150B

Autonomous and Connected Trucks: Opportunities, Challenges, and Implications for Freight Data Generation
Sarah Hernandez, University of Arkansas, Fayetteville, presiding
Sponsored By Standing Committee on Freight Transportation Data

Autonomous and connected trucks promise to revolutionize the freight industry. This session explores their transformative potential. AV/CV trucks generate vast amounts of real-time data on vehicle performance, routing, fuel efficiency, and traffic patterns; this data may improve supply chain visibility and enhance safety. However, integrating these data streams also poses significant challenges. Experts will discuss implications for transportation planning, policy development, and the broader freight ecosystem. Attendees will gain insights into how freight data generated by AV/CV trucks can improve decision-making and operational efficiency while addressing issues such as cybersecurity, data standardization, and the regulatory environment.

Data Provider Perspective (P25-20658)
Shweta Shah/Altitude by Geotab
AV Truck Developer (P25-20660)
Cesar Yahia/Aurora Innovation
AV Truck Developer (P25-20963)
Randy Starr/Kodiak Robotics
Research Perspective (P25-20662)
Aditi Manke/Virginia Polytechnic Institute and State University
Public Agency Perspective (P25-20663)
Zeke Reyna/Texas Department of Transportation

3008 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 151B

Completing the Street: Advancing Multimodal Mobility Analysis Tools, Data, and Policy Analysis
Sarah Binkowski, AECOM, presiding
Sponsored By Standing Committee on Transportation Planning Analysis and Application, Standing Committee on Information Systems and Technology, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Public Transportation Planning and Development

Attendees will learn about analysis methods, tools, data-driven approaches, and policy analyses that can shape the future of urban mobility and multimodal transportation planning. Topics include: Prioritizing active transportation connectivity. Factors influencing the integration of public transit and shared mobility services. Impacts of reconfiguring city streets on system functionality and Evaluating regional equitable accessibility.

Leveraging LINKs: An Interactive Tool to Prioritize Bicycle and Pedestrian Connections (TRBAM-25-00116)
Mark Morley/Delaware Valley Regional Planning Commission, Sarah Moran/Delaware Valley Regional Planning Commission
Big data, big bias? On Factors Influencing Public Transit and Shared Micromobility Integration (TRBAM-25-05199)
Yiheng Qian/University of Florida, Luyu Liu/University of Florida, Xiang Yan/University of Florida
Can Repurposing City Streets Relieve Congestion? A System Dynamics Policy Analysis of Seattle, WA (TRBAM-25-04630)
Jeremy Chan/University of Washington, Seattle, Kaitlyn Ng/University of Washington, Seattle, Cynthia Chen/University of Washington, Seattle
Access in Appalachia: A Planning Framework for Evaluating Multimodal Access in North Carolina (TRBAM-25-02650)
Ian Hamilton/VHB, Connor Klassen/VHB, Naomi Stein/VHB, Dilara Sisman/VHB, Lyuba Zuyeva/VHB, Michael Stafford/VHB

3009

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 151A

Progress in Accounting for Induced Vehicle Travel

Elizabeth Sall, UrbanLabs LLC, presiding
Alex Bettinardi, Oregon Department of Transportation, presiding
Katherine Asmussen, University of Tennessee, Knoxville, presiding
Sponsored By Standing Committee on Transportation Demand Forecasting

Appropriately accounting for induced demand in transportation forecasting and planning is a common challenge in transportation policy and infrastructure investment decisions, with significant implications for congestion, safety, and emissions. This session aims to advance a dialogue on current research and updates from the U.S. Department of Transportation leadership on travel demand modeling, accurately accounting for induced demand, and associated reforms on land use as a decarbonization strategy.

Challenges in Assessing Induced Travel (P25-20298)
Jamey Volker/University of California, Davis, Susan Handy/University of California, Davis
Do Travel Models Accurately Capture Induced Vehicle Travel? (P25-20299)
Gregory Erhardt/University of Kentucky
USDOT Updates and Releases (P25-20300)
Gretchen Goldman/OST-R/Office of Research, Development & Technology, Liya Rechtman/U.S. Department of Transportation Office of the Under Secretary for Policy
Panel (P25-20301)
Christopher Berrens/Minnesota Department of Transportation, Matthew Turner/Brown University, Like Liu/Kittelson & Associates, Inc., Chris McCahill/University of Wisconsin, Madison

3010

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 152A

Workforce Recruitment Solutions

Pei-Sung Lin, University of South Florida, presiding
Sponsored By Standing Committee on Workforce Development and Organizational Excellence, International Coordinating Council, Section - Executive Management Issues, Standing Committee on Research Innovation Implementation Management, Standing Committee on Information and Knowledge Management

Need new staff members? Attrition got you down with a stack of work and no one to complete it? Join fellow transportation professionals to learn how they have tackled the current workforce development crisis. Learn from practitioners and researchers who have collaborated on real-world solutions for recruitment which you can take back and deploy at your agency.

Developing a Competency Model for State DOTs (TRBAM-25-00162)
Garrett Wheat/Louisiana Department of Transportation and Development, Mary Leah Coco/Louisiana Department of Transportation and Development
Building a Successful Freight Railroad, Passenger Railway, and Transit Internship Program (TRBAM-25-00516)
Komal Kaur Sandhu/California State University, Fresno, John Green/California State University, Fresno, Ching Chiaw Choo/California State University, Fresno
Motivating Underrepresented Emerging Transportation Professionals Through Diverse, Equitable and Inclusive High Impact Pedagogy Approach (TRBAM-25-06240)
Oludare Owolabi/Morgan State University, Pelumi Abiodun/Morgan State University, Oyinkansola Aladeokin/Morgan State University, Hannah Abedoh/Morgan State University, Temileye Ibirinde/Morgan State University, Adekemisola Asahiah/Morgan State University, Olushola Emiola-Owolabi/Morgan State University

3011

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 152B

Emerging Topics in Asset Management

Ister Morales, Gannett Fleming, Inc., presiding

Sponsored By Standing Committee on Transportation Asset Management

Asset management practices and philosophy continue to push the envelope towards an integrated approach that balances environmental, social and financial factors. Many agencies are working towards embedding the principles of equity, resilience and addressing workforce development challenges to deliver their performance and strategic goals. This session will provide examples of ongoing research, implementation and consideration of these emerging topics into asset management practice.

Integrating Climate Change and Flooding Considerations into Pavement Management Models (P25-20593)
Pedro Serigos/Cambridge Systematics, Inc.
Using Mobile Location Data to Understand Travel Patterns During and After Extreme Events (P25-20594)
Cristina Torres-Machi/University of Colorado, Boulder
Workforce Development: Best Practice Considerations for Asset Management Practitioners (P25-20595)
Eric Rensel/Rensel Consulting, LLC
Equity in Asset Management: An Example from Maricopa Association of Governments (P25-21545)
Brian Rubin/Maricopa Association of Governments

3012

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 204AB

Automated Defect Detection and Assessment Technologies for Highway Infrastructure

Hoda Azari, Federal Highway Administration (FHWA), presiding
Arezoo Imani, BDI, presiding

Sponsored By Standing Committee on Testing and Evaluation of Transportation Structures, Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session will focus on the latest advancements in automated technologies for bridge and infrastructure inspection. Presentations will explore the use of artificial intelligence (AI), along with other technologies like drones and NDE technologies for detecting structural defects.

Automated Defect Detection for Railway Bridge Steel Trusses Using UAV Aerial Photography (TRBAM-25-00537)
Xue Yang/Kunming University, Tao Xu/Kunming University, Feng Guo/Kunming University, Tong Yang/Kunming University, Wenwen Qin/Kunming University, Li Ai/Kunming University, Yunpeng Wu/Kunming University
Deep Learning-Based Automated Cover Depth Estimation for Concrete Bridge Decks Using GPR (TRBAM-25-01508)
Nour Fares/Hong Kong Polytechnic University, Tarek Zayed/Hong Kong Polytechnic University, Ali Fares/Hong Kong Polytechnic University, Kyrillos Ebrahim/Hong Kong Polytechnic University, Sherif Abdelkhalek/Hong Kong Polytechnic University
Benchmarking YOLOv8 for Optimal Crack Detection in Civil Infrastructure (TRBAM-25-06447)
Woubishet Taffese/Missouri University of Science and Technology, Ritesh Sharma/Missouri University of Science and Technology, Mohammad Hossein Afsharmovahed/Missouri University of Science and Technology, Guna Manogaran/Missouri University of Science and Technology, Genda Chen/Missouri University of Science and Technology
Mixed-Reality Analysis of the Corrosion Damage in Reinforced Concrete Structures (TRBAM-25-04381)
Logan Pearce/Texas A&M University, Congjie Wei/Texas A&M University, Chenglin Wu/Texas A&M University

3013

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 101

Potential Improvements to Road Design Criteria

Mohammad Amin, Jacobs, presiding

Sponsored By Standing Committee on Performance Effects of Geometric Design

(continued)

Revisiting the Design Parameters Related to Stopping Sight Distance and Vertical Curve Length using Probabilistic Analyses (TRBAM-25-04223)
Megat-Usamah Megat-Johari/Michigan State University, Nischal Gupta/Michigan State University, Md Shakir Mahmud/Michigan State University, Anshu Bamney/Michigan State University, Hisham Jashami/Michigan State University, Peter Savolainen/Michigan State University, Timothy Gates/Michigan State University
Speed Impact on Interchange Ramps (TRBAM-25-00397)
Antonios Trakakis/National Technical University of Athens (NTUA), Konstantinos Apostoleris/National Technical University of Athens (NTUA), Stergios Mavromatis/National Technical University of Athens (NTUA), Basil Psarianos/National Technical University of Athens (NTUA)
Handling-Based Stopping Sight Distance Reliability Analysis (TRBAM-25-00260)
Troy Kim/MathWorks, John Ferris/MathWorks
Intersection Sight Distance Standards: A Comprehensive Study of State and Local Practices (TRBAM-25-04904)
Sharad Lamsal/Virginia Department of Transportation, Lance Dougald/Virginia Department of Transportation, T. Donna Chen/Virginia Department of Transportation

3014

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 207A
Advancing Topics in Roadside Safety
Wade Odell, Texas Department of Transportation, presiding
Sponsored By Standing Committee on Roadside Safety Design

EVALUATION OF THE COMPATIBILITY OF BATTERY ELECTRC VEHICLES WITH ROADSIDE HARDWARE (TRBAM-25-00412)
Robert Bielenberg/University of Nebraska, Lincoln, Cody Stolle/University of Nebraska, Lincoln, Ronald Faller/University of Nebraska, Lincoln, Scott Rosenbaugh/University of Nebraska, Lincoln, Genevieve Pezzola/University of Nebraska, Lincoln, Jessica Vankirk/University of Nebraska, Lincoln
Impact Behavior of Alaska Breakaway Luminaire Poles with Frangible Couplings to Foundations in Weak Soils (TRBAM-25-04663)
Joshua Steelman/University of Nebraska, Lincoln, Mojdeh Asadollahi Pajouh/University of Nebraska, Lincoln, Chen Fang/University of Nebraska, Lincoln, Tewodros Yosef/University of Nebraska, Lincoln, Cody Stolle/University of Nebraska, Lincoln, Ronald Faller/University of Nebraska, Lincoln
Enhancing Road Safety on US Highways: Implementing Advanced Computer Vision for Automated Guardrail Damage Identification and Assessment (TRBAM-25-05410)
Alfarooq Al Oide/University of Cincinnati, Mohammad Karasneh/University of Cincinnati, Mohammad Melhem/University of Cincinnati, Dmitry Manasreh/University of Cincinnati, Munir Nazzal/University of Cincinnati
AN UNSUPERVISED REAL-TIME CRASH BARRIER ANOMALY DETECTION SYSTEM USING DEEP LEARNING NETWORKS (TRBAM-25-05918)
Divya Varshney/Indian Institute of Technology, Roorkee, Avnish Panwar/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee
Autonomous Warning Triangle System (aWTS) Development for Commercial Motor Vehicles (TRBAM-25-04524)
Enes Karaaslan/Connected Wise LLC, Ece Mutlu/Connected Wise LLC, Haluk Laman/Connected Wise LLC, Tolga Ercan/Connected Wise LLC, Gustavo Diaz/Connected Wise LLC

3015

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 102A
Unlock Insights Through Remote Sensing
Kyle Ince, Ohio Department of Transportation, presiding
Sponsored By Standing Committee on Geospatial Data Acquisition Technologies

A Site Classification System for the Implementation of Multi-Temporal SAR for Geohazard Initiation Potential on the Railway Right of Way (TRBAM-25-04277)
Sumanth Byrraju/University of South Carolina, Dimitris Rizos/University of South Carolina, Michael Sutton/University of South Carolina, Ning Li/University of South Carolina

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Evaluation of Lane Marking Occlusion and Geometric Design for Autonomous Vehicles using Light Detection and Ranging (LiDAR) Data (TRBAM-25-02909)
Maged Gouda/University of Alberta, Karim El-Basyouny/University of Alberta
Thermal Imaging Applications for Highway and Bridge Inspection by Departments of Transportation (DOTs): A Michigan DOT (MDOT) Review (TRBAM-25-03483)
Reihaneh Samsami/University of New Haven, Colin Brooks/University of New Haven, Abby Jenkins/University of New Haven
Ethical Considerations in UAV Deployment in Construction: Insights from the Industry 1 Practices and Perspectives (TRBAM-25-05173)
Mostafa Namian/East Carolina University, Mohammad Khalid/East Carolina University, Yelda Turkan/East Carolina University, Michael Behm/East Carolina University

3016

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 207B
Applied Geotechnical Modeling: Means, Methods, and More
Derrick Dasenbrock, Federal Highway Administration (FHWA), presiding
Mary Nodine, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Geotechnical Instrumentation and Modeling, Standing Committee on Engineering Geology

This non-paper session focuses on the practical applications of geotechnical modeling, including a comparison between 2D and 3D rockfall models and an atypical thermodynamic model used to design a system to promote the longevity of permafrost for a bridge foundation. Three additional presentations focus on the use of multiple sensors for site characterization.

Thermal Modeling in Denali NP- Helping a New Bridge Keep Its Cool (P25-20477)
Evan Garich/Federal Highway Administration (FHWA), Scott Anderson/BGC Engineering Inc
A Comparison of 2D vs. 3D Rockfall Modeling (P25-20479)
Nicholas Farny/Federal Highway Administration (FHWA)
Many Sensors Help Inform Decisions at Many Glacier (P25-20482)
Evan Garich/Federal Highway Administration (FHWA), Brian Collins/BGC Engineering Inc
A Field Day in Kansas- Deploy Everything! Multiple Site Characterization Methods at the 2024 HGS (P25-20485)
Jeffrey Reid/Hager-Richter Geoscience, Inc.
GeoDataOne and MIDAS: Transitioning an entire government organization's geotechnical and instrumentation data to enterprise cloud based systems (P25-20757)
Georgette Hlepas/U.S. Army Corps of Engineers (USACE), Vanessa Bateman/U.S. Army Corps of Engineers (USACE)

3017

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 201
Current Practices and Guidelines for Full-Depth Reclamation
Chud Lundgreen, Washington State Department of Transportation, presiding
Jami Rushing, U.S. Army Engineer Research and Development Center, presiding
Sponsored By Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Low-Volume Roads, Standing Committee on Aggregates

Findings from the newly published synthesis report NCHRP Project 20-05, Topic 55-04, titled Current Practices and Guidelines for Full-Depth Reclamation (FDR). Several case example states will present their experiences with FDR and a panel will be held at the end.

Synthesis Study Introduction, Background, and Survey (P25-20150)
Jo Sias/University of New Hampshire, Eshan Dave/University of New Hampshire, Ebubechukwu Al-Ihekwaba/University of New Hampshire
Case Example State: Virginia (P25-20188)
Brian Diefenderfer/Virginia Transportation Research Council

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Case Example State: Minnesota (P25-20191)
Raul Velasquez/Minnesota Department of Transportation
Case Example State: California (P25-20189)
Cathrina Barros/California Department of Transportation, Hadi Nabizadeh/California Department of Transportation
Panel Discussion (P25-20152)
Chud Lundgreen/Washington State Department of Transportation

3018

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 202A
Sustainable Technologies for Low-Carbon Flexible Pavements
Punit Singhvi, Crafco, Inc., presiding
Kamilla Vasconcelos, Universidade de Sao Paulo, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement, Standing Committee on Asphalt Materials Selection and Mix Design

This session will explore the sustainable efforts in a cradle-to-gate system for a variety of flexible pavement applications. Experts will engage in discussions regarding environmental product declaration (EPD) and product category rules (PCR) and potential technologies to mitigate environmental impacts in flexible pavement construction. Attendees will learn about cradle-to-gate life cycle assessment (LCA) for technologies like warm mix, cold recycling, and bio-based asphalts. The session will demonstrate the techniques addressing environmental emissions during the early phases of construction via non-conventional construction methodologies.

Sustainability - An Introduction to EPDs and PCR for Pavements (P25-20046)
Richard Steger/Ingevity
Potential Carbon Reduction and Performance of Bio-asphalt from Hydrothermal Liquefaction (P25-20504)
Ramez Hajj/University of Illinois, Urbana-Champaign
Warm Mix Asphalt: Building Sustainable Pavements through Reduced Temperatures (P25-20047)
Jenna Bowers/Ingevity
No Heat, Low Carbon: Progress Towards Circularity with Cold Recycling (P25-20048)
Benjamin Bowers/Auburn University

3019

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 202B
Experiences Using Novel Recycled Materials in Concrete Mixtures
Nicole Dufalla, University of Virginia, presiding
Sponsored By Standing Committee on Properties of Concrete and Constituent Materials

This lectern session will include experiences from using novel recycled materials such as recycled steel fires from waste tires and brine water, in the production of concrete.

Using Brine Reject Water As Mixing Water for Portland Cement Concrete and Concrete Blocks (TRBAM-25-00452)
Youssef Emarah/The American University in Cairo, Ahmed El-Tamawy/The American University in Cairo, Ahmed Saleh/The American University in Cairo, Hussein Tawfik/The American University in Cairo, Omar Barakat/The American University in Cairo, Aly Mohamed/The American University in Cairo, Zenah Helmy/The American University in Cairo, Raz Haydar/The American University in Cairo, Ahmed El-Gendy/The American University in Cairo, Mohamed Abou-Zeid/The American University in Cairo
A Comparative Study on the Utilization of Calcined Clay, Reclaimed Fly Ash, and Slag as Supplementary Cementitious Materials (TRBAM-25-05029)
Zhangfan Jiang/Virginia Department of Transportation, Gabriel Arce/Virginia Department of Transportation, Amir Behravan/Virginia Department of Transportation, Erin Stewartson/Virginia Department of Transportation, Michelle Cooper/Virginia Department of Transportation, Lisa Colosi/Virginia Department of Transportation, Osman Ozbulut/Virginia Department of Transportation

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Development and Performance Analysis of PVA-Polyester Fiber Reinforcement in M-Sand-based Cementitious Composites (TRBAM-25-03929)
Chintada Chandrasekhar/Indian Institute of Technology, Roorkee, Gondaimei Rongmei Naga/Indian Institute of Technology, Roorkee, Galipelli Rajkumar/Indian Institute of Technology, Roorkee
Utilization of Steel Slag Aggregates in Pervious Concrete Pavements to Alleviate Surface Temperatures: A Resource-Efficient Strategy (TRBAM-25-06327)
Srinivas Jadala/Indian Institute of Technology, Tirupati, Krishna Prapoorna Biligiri/Indian Institute of Technology, Tirupati, Fatma Abdulrahman/Indian Institute of Technology, Tirupati, Waleed Zeiada/Indian Institute of Technology, Tirupati

3020

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 209AB
Creative Applications of Recycled Aggregates in Pavement Design
Erol Tutumluer, University of Illinois, Urbana-Champaign, presiding
Sponsored By Standing Committee on Aggregates, Standing Committee on Stabilization of Geomaterials and Recycled Materials, Joint Subcommittee on Unbound Granular Materials (with AKG00)

Join us for an insightful event exploring groundbreaking research on sustainable materials in infrastructure. Key topics include the development of plastic-modified rubberized asphalt for pavements, cold-bonded lightweight aggregates for silt treatment, mechanical properties of tire-derived aggregates for construction applications, and the long-term performance of recycled concrete aggregate in flexible pavements. Discover how these innovative approaches enhance material performance, promote waste recycling, and contribute to resilient infrastructure solutions.

Tire-Derived Aggregates Modified Using Postconsumer Recycled Plastics for Subsurface Pavement Applications: A Study on Absorption and Swelling Effects (TRBAM-25-06293)
Neetu G Kumar/Indian Institute of Technology, Tirupati, Krishna Prapoorna Biligiri/Indian Institute of Technology, Tirupati
Road-used Cold-Bonded Lightweight Aggregates (RCLA) and Its Application in Subgrade Soil Treatment (TRBAM-25-03906)
Zhenzhen He/Chang'an University, Yu Liu/Chang'an University, Zhanping You/Chang'an University, Mohan Zhao/Chang'an University, Yang Zeng/Chang'an University
Laboratory Characterizations of Tire Derived Aggregate (TDA) for Highway Applications (TRBAM-25-00362)
Belay Nerea/University of Wyoming, Sandra Metz/University of Wyoming, Ehsan Dabbaghi/University of Wyoming, Kam Weng Ng/University of Wyoming
Long-term Performance Evaluation of Recycled Concrete Aggregate as a Base Material in Flexible Pavements (TRBAM-25-04158)
M.Reza Pouranian/Fugro, Ylan Beaudoin de Roca/Fugro, Junsu Jeong/Fugro, Ohhoon Kwon/Fugro, Charles Holzschuher/Fugro

3021

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 156
Alternatives to Traditional High-Friction Surface Treatments, Texture Patterns of Rigid Pavements, and Lidar for Ride Quality
Paul Rogers, KPR Engineering, presiding
Priscilla Tobias, Arora and Associates, P.C., presiding
Sponsored By Standing Committee on Pavement Surface Properties and Vehicle Interaction, Standing Committee on Binders for Flexible Pavement, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Aggregates

This session invites a discussion of four selected papers beginning with alternative binders for use in High Friction Surface Treatments (HFSTs) and alternative aggregates in HFSTs to potentially reduces costs, improve performance, and/or increase use as opposed to traditional calcined bauxite bound by epoxy HFSTs. Next, a look at rigid pavement textures and unsupervised learning to improve predictions of functional pavement surface properties, followed by the potential of airborne-LiDAR data in lieu of traditional inertial profile data for International Roughness Index (IRI) computation.

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Evaluation of Asphalt-Based Binders as Alternatives to Epoxy-Based High Friction Surface Treatments (TRBAM-25-04853)
Alireza roshan/Missouri University of Science and Technology, Magdy Abdelrahman/Missouri University of Science and Technology
Ultra-High Performance Concrete (UHPC) Based High Friction Surface Treatment (HFST) for Pavements and Bridge Decks (TRBAM-25-04618)
Kyle Maeger/U.S. Air Force IMSC, Adam Biehl/U.S. Air Force IMSC, Prasad Rangaraju/U.S. Air Force IMSC
Pavement Patterns: An Unsupervised Learning Approach to Texture Analysis in Rigid Pavements (TRBAM-25-00967)
Christian Sabillon-Orellana/University of Texas, Austin, Danilo Inoue/University of Texas, Austin, Joaquin Hernandez/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin
Computing International Roughness Index (IRI) from Airborne-LiDAR based Point Cloud Data for In-service State Roads (TRBAM-25-01404)
Zia Uddin Ahmed Zihan/Iowa State University, Farhad Aghasi/Iowa State University, Omar Smadi/Iowa State University, Alireza Sassani/Iowa State University, Inya Nlenanya/Iowa State University

3022

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 103B
Tactical Planning for Electric Vehicles in Maintenance and Construction: Training, Shop, and Tool Needs
Melissa Boyer, New Jersey Department of Transportation, presiding
Sponsored By Standing Committee on Maintenance Fleet and Equipment, Standing Committee on Maintenance and Operations Management

The introduction and use of electric vehicles pose unique challenges in highway maintenance and construction. This session will explore issues that need to be addressed for practical applications in the areas of training, shop and tool needs.

Zero Emission Bus (ZEB) Thermal Event Response (P25-21020)

3023

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 206
Life-Cycle Assessment in Pavement Management
Phillip Clements, South Dakota Department of Transportation, presiding
Sponsored By Standing Committee on Pavement Management Systems

Life cycle assessment of pavement assets is becoming increasingly common. This session will review recent work that utilizes this approach in pavement management and to assess relative impacts of pavement design and management decisions.

Benchmarking and Reducing Life Cycle Greenhouse Gas Emissions in Pavement Networks (TRBAM-25-05250)
Miaomiao Zhang/Massachusetts Institute of Technology, Haoran Li/Massachusetts Institute of Technology, Hessam Azarijafari/Massachusetts Institute of Technology, Randolph Kirchain/Massachusetts Institute of Technology
Development of Life Cycle Assessment Framework for Pavement Drainage Systems (TRBAM-25-01302)
Lara Diab/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Stakeholders' Perception on Pavement Life Cycle Assessment (LCA) in Canada (TRBAM-25-04416)
Showaib Ahmed Chowdhury/Carleton University, Kamal Hossain/Carleton University, Jalal Barzegaran/Carleton University
Life Cycle Assessment of Inverted Pavement Case Studies in the United States (TRBAM-25-02999)
Ester Tseng/TEST, Inc., Hasan Ozer/TEST, Inc., Imad Al-Qadi/TEST, Inc., Erol Tutumluer/TEST, Inc., Issam Qamhia/TEST, Inc.

3024 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146B

Transportation History and Transportation Practice: How the Past Speaks Through the Future

David Ballard, No Organization, presiding

Daniel Rust, University of Wisconsin, Superior, presiding

Sponsored By Subcommittee on Transportation History, Section - Transportation and Society, Young Members Coordinating Council

Transportation infrastructure and working transportation systems are long lived, easily thought of as having histories and lasting social impacts that both reflect past decisions and influence future choices for planners and system users. This panel session will investigate ways in which historical perspectives and examples may contribute (or not -- sceptical views are also welcome) to on-going transportation policy, planning, and practice. The panel will look at these influences and contributions across as complete a range of transportation practice area as possible. The session will also make full use of the wide scope of professional expertise that is represented in TRB's Technical Activities Division. It will do this by bringing together younger transportation professionals -- researchers, policy makers, and practitioners -- and distinguished TRB veterans. They will engage in a moderated but open ended discussion of several overarching questions about how transportation's history can enhance (or inhibit) transportation's future development and progress.Time will be reserved for audience Q&A and comment.

Contribution of History in Research: Panelist One (P25-20994)

Sandra Rosenbloom/University of Texas, Austin

Contribution of History in Research: Panelist Two (P25-20995)

Rolf Schmitt/OST-R/Bureau of Transportation Statistics

Panelist 1 (P25-21213)

Trayce Hockstad/Alabama Transportation Institute

Panelist 2 (P25-21214)

Stephen Wong/University of Alberta

Panelist 3 (P25-21215)

A. Gabrielle Westcott/Metro Analytics

Panelist 4 (P25-21216)

Alden Copley/Metro Analytics

3025 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146C

Recent Trends in Science and Operations of Infrastructure Resilience and Applications to Airports

Maria Pena, Gannett Fleming, Inc., presiding

Sponsored By Standing Committee on Critical Transportation Infrastructure Protection, Standing Committee on Airport Terminals and Ground Access

The contemporary world presents an increasingly complex and interconnected threat landscape, especially for large infrastructure systems like airports. These airport systems, integral to the global economy and societal functioning, face a myriad of unpredictable hazards ranging from natural disasters to human-induced threats. Multiple resilience frameworks have been created, but the application of these frameworks in practice is rare. This session will discuss state of science and practice in resilience management to identify and assess the critical functions of airports, alongside their vulnerability to various stressors, and potential consequences from those events including resilience benchmarking and disaster risk reduction strategies.

Resilience Recent Developments in Science and Policy (P25-20688)

Igor Linkov/U.S. Army Corps of Engineers (USACE)

Resilience at Dallas Fort Worth International Airport (DFW) (P25-20689)

Robert Horton/Dallas-Fort Worth International Airport

NASA Aviation Systems Resilience Project (P25-20690)

Megan Ryerson/University of Pennsylvania

3026 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146A

International Collaborations to Address Transportation Challenges in Disaster Management

Nicole Boothman-Shepard, AECOM, presiding

Ruijie Bian, University of Maine, presiding

Sponsored By Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity, International Coordinating Council

Climate change, natural disasters, and geopolitical events significantly affect transportation networks, restrict human mobility, and disrupt logistics. What are the common issues that we are facing in dealing with transportation challenges during those events? What are the challenges that might be unique to a place but could be solved by learning from others? This session involves scholars from different countries to exchange experiences. More importantly, this session will also interactively involve session attendees to help expand international collaborations to address transportation challenges together.

A Bayesian Network and DEMATEL-based Framework for Port Resilience Assessment: An Inland Waterway Case Study (P25-20291)

Gina Galindo/Universidad del Norte

Forecasting Supply Chain Performance During Disruptions: A Bayesian Model Averaging Approach Using News-Based Metrics (TRBAM-25-03962)

Juan López/University of California, Davis, Miguel Jaller/University of California, Davis

Roadway Characteristics and Post-Disaster Highway Recovery (TRBAM-25-04225)

Paula Cid Ornelas/University of British Columbia, Amy Kim/University of British Columbia

Large-Scale Evacuation With Vehicular Communication: Navigating Through Dark Zones (TRBAM-25-03761)

Hassan Idoudi/University Gustave Eiffel, Mostafa Ameli/University Gustave Eiffel, Negin Alisoltani/University Gustave Eiffel, Mahdi Zargayouna/University Gustave Eiffel

3027 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 140

Smart Charging Solutions: Optimizing Electric Vehicle Load Management for Sustainable Energy Integration

Hanif Tayarani, University of California, Davis, presiding

Sponsored By Standing Committee on Transportation Energy

The Smart Charging Solutions session delves into strategies for managing electric vehicle (EV) charging demand, emphasizing the integration of renewable energy and the optimization of charging for individual vehicles and shared mobility services. Participants will explore advanced methodologies such as predictive control management, vehicle-to-home (V2H) charging, and developing shared charging hubs powered by solar photovoltaic systems. Attendees will learn how these innovative approaches can effectively balance EV load with residential and grid demand, reduce operational costs, enhance grid sustainability, and support the widespread adoption of electric vehicles.

Joint Charging-Energy Infrastructure Optimization for Shared Charging Hubs of Electric Buses and Shared Micromobility with Solar Photovoltaic Adoption (TRBAM-25-01664)

Xiaohan Liu/Chalmers University of Technology, Kun Gao/Chalmers University of Technology, Arsalan Najafi/Chalmers University of Technology

Optimal Charging Schedules for EV Charging Stations Considering Hybrid Smart and Traditional Charging: A Scalable Framework (TRBAM-25-01667)

Xizhen Zhou/Southeast University, Yanjie JI/Southeast University

Advanced Charging Strategies for EVs: Integrating Power-Sharing at Public Stations (TRBAM-25-02961)

Xiaowei Chen/Purdue University, Zhengzhuo Wang/Purdue University, Tian Lei/Purdue University, Satish Ukkusuri/Purdue University

Reducing the Intersection of EV Charging Demand and Residential Load with Predictive Control Management Strategy Integrated Renewable Energy (TRBAM-25-03719)

Yiqun Li/Southeast University, Ziyuan Pu/Southeast University, Pei Liu/Southeast University, Junyi Zhang/Southeast University, Yinhai Wang/Southeast University

(continued)

Vehicle to Home Charging Cuts Drivers' Charging Costs and Greenhouse Gas Emissions across the US Without Reducing Battery life Relative to Uncontrolled Charging (TRBAM-25-03944)
Jiahui Chen/University of Michigan, Gregory Keoleian/University of Michigan, Parth Vaishnav/University of Michigan

3028 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 145A
Beyond Ridership: Expanding the Definitions of Transit Success
Xavier Harmony, Northern Virginia Transportation Commission, presiding
Sponsored By Standing Committee on Transit Management and Performance

Ridership measures are necessary but by themselves insufficient to capture and convey the value and success of transit. How can/have transit agencies/entities expand the conceptualization of value/success beyond ridership? What concepts or other types of measures are useful? This session will explore this topic using four speakers crossing four perspectives: Benefits to current and potential riders (e.g., access to opportunity, ease of travel) Internal benefits to those involved in the organization (e.g., internal efficiency, recruiting and retention of bus operators) Positive externalities to regions transit is located in (e.g., congestion mitigation, environmental, safety) Overview/cross cutting to focus more on the state of the industry

Traveler-Centric Mobility Performance Metrics (P25-20186)
Natalie Covill-Fontaine/Federal Transit Administration (FTA)
Transit Service as a Reflection of Our Values (P25-20185)
Joseph Reid/Metro Transit, Minneapolis-St. Paul
Bus Operator Work Preferences: A Mixed Methods Case Study of The Chicago Transit Authority (TRBAM-25-04354)
Amelia Baum/Massachusetts Institute of Technology, Jackie Johnston/Massachusetts Institute of Technology, John Attanucci/Massachusetts Institute of Technology, Haris Koutsopoulos/Massachusetts Institute of Technology
Exploring the congestion relief benefits of urban transit (P25-20184)
Graham Currie/Monash University

3029 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 147A
Fare-Free Public Transit: Experiments, Evaluations, and Equity Considerations
Matthew Palm, UNC Chapel Hill, presiding
Sponsored By Standing Committee on Public Transportation Marketing and Fare Policy

Many transit operators in the US and abroad have implemented fare-free policies, and this session will provide an overview of evaluation results and equity considerations for fare-free or “nearly” fare-free policies. The first presentation will report on a travel behavior analysis using GPS-data to assess Germany’s “nearly” fare-free program, known as the 9-Euro-Ticket. The second talk will report on recent case studies of fare-free transit in the US, including Los Angeles, Kansas City, and Boston. Third, we will hear early results from the City of Philadelphia’s Zero Fare benefit program for low-income residents. Last, we consider fare-free transit through the lens of distributive justice using a case study with data from Chicago.

Analyzing the 9-Euro-Ticket Mode Choice Impact Using GPS Panel Data and Discrete Choice Models: First Insights (TRBAM-25-02529)
Friederike Beck/Technical University Munich, Santiago Álvarez-Ossorio Martínez/Technical University Munich, Klaus Bogenberger/Technical University Munich, Allister Loder/Technical University Munich
Zero Fare: Implementing Automatic Enrollment to Reduce Administrative Burdens in Accessing Transit Benefits for Low-Income Residents in Philadelphia (TRBAM-25-02517)
Nicola Mammes/City of Philadelphia
Is Fare Free Transit Just? Quantifying the Impact of Moral Principles on Transit Design and Finance (TRBAM-25-00670)
Tianxing Dai/Northwestern University, Hongyu Zheng/Northwestern University, Yu Nie/Northwestern University
Sustaining Zero-Fare Public Transit in a Post COVID-19 World: A Guide for State DOTs (P25-21525)
James Cline, Jr./Texas A&M Transportation Institute

3030 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 145B

Emerging Behaviors of Urban Rail Transit Passengers: A Global Scan

Yanshuo Sun, FAMU-FSU College of Engineering, presiding

Sponsored By Standing Committee on Urban Rail Transit Systems

This podium session features five outstanding studies from around the world, utilizing advanced learning methods, agent-based simulations, and other statistical approaches. Attendees will learn about recent research in Denmark, Sweden, and China. The research findings offer valuable insights into how large-scale rail transit networks can evolve in response to emerging passenger travel patterns.

Predicting Urban Rail Transit Station Ridership Considering Network Characteristics (TRBAM-25-04272)

Hongliang Wan/Tongji University, Yicong Yao/Tongji University, Tengfei Yuan/Tongji University, Xiaohong Chen/Tongji University

Large-scale Demand Prediction in Urban Rail Using Multi-Graph Inductive Representation Learning (TRBAM-25-03453)

Dang Viet Anh Nguyen/Technical University of Denmark, J. Victor Flensburg/Technical University of Denmark, Fabrizio Cerreto/Technical University of Denmark, Bianca Pascariu/Technical University of Denmark, Paola Pellegrini/Technical University of Denmark, Carlos Lima Azevedo/Technical University of Denmark, Filipe Rodrigues/Technical University of Denmark

A Smart-card Based Analysis of During and Post-Disruption Impacts on Public Transport Passengers' Travel Patterns. (TRBAM-25-01953)

Nutta Sittirash/KTH Royal Institute of Technology, Anastasios Skoufas/KTH Royal Institute of Technology, Matej Cebacauer/KTH Royal Institute of Technology, Wilco Burghout/KTH Royal Institute of Technology

Agent-Based Simulation for Passenger Flow Visualization and Control Strategies Analysis in Rail Transit (TRBAM-25-01847)

Qianhui Jiao/Peking University, Xuewu Chen/Peking University, Long Cheng/Peking University, Qing Yu/Peking University

3031

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 144C

On Track for the Future: Research on Moving Blocks, Microscopic Simulations, Run Time Allowances, and Travel Time Estimation

Jeffrey Schultz, David Evans and Associates, Inc., presiding

Sponsored By Standing Committee on Railroad Operating Technologies

In this lectern session we will explore some of the latest research papers on rail operations from around the world. These papers include interesting and cutting edge analysis of urban transit systems to heavy haul freight trains.

Run Time Allowances in Rail Planning and Travel Time Estimation: International Perspectives and Practices (TRBAM-25-00434)

Marco Innao/WSP

Characterizing the Performance of Fixed-Block and Moving-Block Signal Systems in Urban Rail Transit: A Microscopic Simulation Approach (TRBAM-25-05110)

Mojtaba Yousefi/Northeastern University

3032

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 144AB

Curbside Allocation and Electric Vehicle Needs: Challenges in Infrastructure Management

Johanna Amaya, Pennsylvania State University, University Park, presiding

Kazuya Kawamura, University of Illinois, Chicago, presiding

Sponsored By Standing Committee on Urban Freight Transportation, Standing Committee on Freight Transportation Planning and Logistics

The session covers the challenges faced when managing infrastructure. In particular, the papers discuss the operational needs of using electric vehicles to complete urban deliveries and alternatives to allocate deliveries under limited curb space conditions.

Is Crowdshipping A Sustainable Last-Mile Delivery Solution? A Case Study of Rome (TRBAM-25-00663)

Salar Salehi/Sapienza University of Rome, Merve Cebeci/Sapienza University of Rome, Michiel De Bok/Sapienza University of Rome, Mahsa Tey/Sapienza University of Rome, Marco Rinaldi/Sapienza University of Rome, Guido Gentile/Sapienza University of Rome

Artificial Intelligence for Tracking Curbside Conflicts in Last-Mile Deliveries (TRBAM-25-04046)

Aditya Mehta/University of Washington, Juan Pablo Castrellon/University of Washington, Ivan Sanchez-Diaz/University of Washington, Dr. Michael Browne/University of Washington, Dr. Anne Goodchild/University of Washington, Dr. Edward McCormack/University of Washington

Large-Scale Modular Battery Swapping Design for Electric Truck Urban Deliveries Using Synthetic Tour Data (TRBAM-25-04692)

Haggai Davis, III/New York University, Joseph Chow/New York University

ESTIMATION OF A LOADING/UNLOADING PARKING DURATION MODEL FOR COMMERCIAL VEHICLES IN URBAN AREAS IN THE GLOBAL SOUTH USING LASSO REGRESSION (TRBAM-25-04712)

Lina Vasco-Diaz/Universidad Nacional de Colombia, Carlos Rivera-Gonzalez/Universidad Nacional de Colombia, John Posada-Henao/Universidad Nacional de Colombia, Carlos A. Gonzalez-Calderon/Universidad Nacional de Colombia, Diana Ramirez-Rios/Universidad Nacional de Colombia

3033 **CM** (1.75)

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 143AB

Fuels of the Future: Cross-Cutting Research for Aviation, Maritime, and Heavy Rail

Edward Carr, Energy and Environmental Research Associates LLC, presiding

Sponsored By Standing Committee on Environmental Issues in Aviation, Joint Subcommittee on Sustainable Aviation Fuels (with AV030, AV010), Standing Committee on Aviation System Planning, Standing Committee on Marine Environment, Standing Committee on Alternative Fuels and Technologies

This session will examine fuels of the future with an eye to overall decarbonization relative to various types of modes of transportation. While all transportation modes are pursuing various alternative fuels to reach their decarbonization goals, discussions between modes of transportation are needed to highlight the opportunities and challenges with system wide implications on supply, infrastructure, technology transition, and funding. The discussion will focus around the different modes of transportation and the upcoming fuels including discussions on the current state of SAF, powers-to-liquid, hydrogen, among others.

Fuels of the Future: Aviation (P25-20586)

Florian Allroggen/Massachusetts Institute of Technology

Fuels of the Future: Rail (P25-20587)

Jason Lustbader/National Renewable Energy Laboratory (NREL)

Fuels of the Future: Maritime (P25-20588)

Anthony Odak/John W. Stone Oil Distributor LLC

3034

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 143C

Airfield Asphalt Pavements: Rutting Study and Tests, Use of Reclaimed Asphalt Pavement, Characterization of Cracking Potential, and Mechanism Analysis

Myron Thiessen, Department of National Defence, Canada, presiding

Sponsored By Standing Committee on Aircraft/Airport Compatibility

ACRP Student Paper: Exploring the Use of Reclaimed Asphalt Pavement in Airfield Asphalt Mixes: Insights from Mixture and Binder Scale (TRBAM-25-00744)

Abhilash Vyas/University of Illinois, Urbana-Champaign, Ramez Hajj/University of Illinois, Urbana-Champaign

Rutting Mechanical Tests for Balanced Design of Airfield Asphalt Mixtures. (TRBAM-25-01102)

Nicole Elias/California State Polytechnic University, Pomona, Elie Hajj/California State Polytechnic University, Pomona, Thomas Bennert/California State Polytechnic University, Pomona, Fujie Zhou/California State Polytechnic University, Pomona, Jon Epps/California State Polytechnic University, Pomona, Adam Hand/California State Polytechnic University, Pomona, Kin Ming Chan/California State Polytechnic University, Pomona

Mechanism Analysis of Asphalt Pavement Slippage Failure at High-Speed Exits of Airports (TRBAM-25-02930)

Hao Wang/Rutgers University, Kairen Shen/Rutgers University, Biswajit Kumar Bairgi/Rutgers University, Ashraf Alrajhi/Rutgers University, Nam Tran/Rutgers University, Hasan Ozer/Rutgers University

Rutting Feasibility Study of Reclaimed Asphalt Pavement (RAP) for Use in Airfield Asphalt Concrete Mixes Under the Influence of High Aircraft Tire Pressure and Pavement Temperature (TRBAM-25-04725)

Hasan Kazmee/Applied Research Associates, Inc., Navneet Garg/Applied Research Associates, Inc., Dario Batioja-Alvarez/Applied Research Associates, Inc., Lia Ricalde/Applied Research Associates, Inc.

ACRP Student Paper: Characterization of Cracking Potential of Airfield Asphalt Pavements (TRBAM-25-01113)

Akash Bajaj/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign

3035

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, 147B

Ferry Planning and Case Studies

Catherine Peele, North Carolina Department of Transportation, presiding

Sponsored By Standing Committee on Ferry Transportation

Contemplating Strategies for Improving Customers' Patronage of Inland Water Transport: A Case Study of Kerala (TRBAM-25-01602)

JIJIN A/National Institute of Technology, Calicuta, Yogeshwar Navandar/National Institute of Technology, Calicuta, Bivina G R/National Institute of Technology, Calicuta, Prof K Krishnamurthy/National Institute of Technology, Calicuta

Ferry Travel as an Activity: Demand Forecasting for Cruise Ferries. (TRBAM-25-04479)

Georgios Papaioannou/University of the Aegean, Amalia Polydoropoulou/University of the Aegean

Urban Ferry Planning (P25-20691)

Seamus Murphy/San Francisco Bay Ferry

3036

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Ballroom A

U.S. Department of Transportation: Research, Development, and Technology Results

Firas Ibrahim, OST-R/Office of Research, Development & Technology, presiding

Sponsored By Executive Committee

U.S. Department of Transportation (U.S. DOT) senior executives will discuss the Department's Research, Development and Technology (RD&T) accomplishments enabled by the historic investments made possible by the Bipartisan Infrastructure Law (BIL). The session will provide perspectives from senior leaders from the Office of the Secretary and the Operating Administrations.

Panel Presentation (P25-21402)

Robert Hampshire/U.S. Department of Transportation

3037

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Access Management Best Practices

Grant Schultz, Brigham Young University, presiding

Sponsored By Standing Committee on Access Management

This session includes selected case studies and presentations from the 4th International Conference on Access Management.

Using Case Studies to Enhance Driveway Safety Analysis (P25-20471) - A170

Tia Boyd/USF Center for Urban Transportation Research, Cong Chen/University of South Florida, Pei-Sung Lin/University of South Florida, Elzbieta Bialkowska-Jelinska/University of South Florida, Kristine Williams/KMW Associates, LLC, Gina Bonyani/Florida Department of Transportation

Solving Fayetteville's Connectivity Crisis (P25-20472) - A171

Zachary Bugg/Kittelson & Associates, Inc., Tara Hofferth/Kittelson & Associates, Inc.

Installing Roundabouts to Manage Speeds and Access (P25-20474) - A172

Joseph Frawley/Massachusetts Department of Transportation

Hyannis Great Streets: Roads Reimagined for Regional Access and Safety (P25-20478) - A182

Whitney Burdge/Stantec Consulting Services Inc. -, Michael Clark/Stantec

Reforming Parking Standards and Travel Demand Management: Case Studies in Overland Park, KS and Boston (P25-20481) - A181

Michael Clark/Stantec

Driver's Attention and Cognitive Behavior: T-Consciousness Impact (P25-20484) - A180

Sepideh Eshragh/University of Maryland, College Park, Farzad Ahmadkhanlou/University of California, Irvine, Sina Mousavi/Cosmointel Research Center, Naghmeh Rezaie/University of Delaware, Mohammad Ali Taheri/Cosmointel Research Center

3038

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Advances in Traffic Monitoring Research and Practice

Ioannis Tsapakis, Texas A&M Transportation Institute, presiding

John Ash, University of Cincinnati, presiding

Mayuree Binjolkar, University of Washington, presiding

Andrew Nichols, Virginia Department of Transportation, presiding

Aditi Misra, University of Colorado, Denver, presiding

Sponsored By Standing Committee on Highway Traffic Monitoring

As the technologies used for monitoring traffic continue to advance, analytical challenges arise to ensure that data meet customer needs. These advances also open up new application areas. This session presents research focused on new data collection technologies, analysis techniques, and applications.

Real-Time Turning Movement and Queue Length Estimation and Prediction from Probe Vehicle Data: A Kalman Filter Approach (TRBAM-25-00208) - A210

Amr Shafik/Virginia Polytechnic Institute and State University, Hesham Rakha/Virginia Polytechnic Institute and State University

Predicting Traffic Flow Parameters for Sustainable Highway Management: An Attention-Based EMD–BiLSTM Approach (TRBAM-25-00364) - A212

Yan Zhao/Southeast University, Can Wang/Southeast University, Yikang Rui/Southeast University, Wenqi Lu/Southeast University, Bin Ran/Southeast University

PSO-RF Algorithm for Real-Time Vehicle Classification Based on Roadside LiDAR (TRBAM-25-00513) - A213

Benhao Xie/Shandong University, Xucai Zhuang/Shandong University, Cong Du/Shandong University, Jianqing Wu/Shandong University, Yuan Tian/Shandong University

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Exploring the Use of Connected Vehicle Trajectory Data for Freeway Detector Speed Accuracy Check and Congestion Monitoring (TRBAM-25-00902) - A214
Jianyuan Xu/California Department of Transportation, Aobo Wang/California Department of Transportation, Zong Tian/California Department of Transportation, Zhongren Wang/California Department of Transportation
Is More Better? Measuring the Value of Data Fusion in Search of the Optimal Data Source Combination for Road Incident Monitoring (TRBAM-25-01105) - A216
Kelvin Tsz Hei Choi/Valerann, Jacob Rainbow/Valerann
Data-Driven Transfer Learning Framework for Estimating Turning Movement Counts (TRBAM-25-01394) - A217
Xiaobo Ma/University of Arizona, Hyunsoo Noh/University of Arizona, Ryan Hatch/University of Arizona, James Tokishi/University of Arizona, Zepu Wang/University of Arizona
Prescriptive Analytics for Freeway Traffic State Estimation Based on Data Fusion (TRBAM-25-01650) - A208
Jinyu Zhang/Southeast University, Di Huang/Southeast University, Zhiyuan Liu/Southeast University
Incorporating Temporal Analysis into Sensor Location Models for Accurate Route Flow Estimation (TRBAM-25-02748) - A205
Yao Qi/Southeast University, Qi Cao/Southeast University, Gang Ren/Southeast University
A Thorough Examination of Car Efficiency Using WIM Data: A Case Study of New York City (TRBAM-25-02045) - A190
Pedram Akbari/University of Calgary, Merkebe Getachew Demissie/University of Calgary
Graph Attention Networks for Traffic Volume Estimation Using Connected Vehicle Data (TRBAM-25-02750) - A204
Yiming Zhao/Iowa State University, Jing Dong-O'Brien/Iowa State University
A Hybrid Framework Integrating Data-Driven and Model-Based Methods for Low-Quality Trajectory Data Improvement of Roadside Perception Systems (TRBAM-25-02979) - A203
Zimu Zeng/Tongji University, Shiyu Wang/Tongji University, Cong Zhao/Tongji University, Yuxiong Ji/Tongji University, Yuchuan Du/Tongji University
Integrating Data-driven and Model-driven Approaches for Traffic State Estimation in Data-deficient Areas (TRBAM-25-03072) - A202
Jeric Kim/Seoul National University, Seung Woo Ham/Seoul National University, Jin Hong Min/Seoul National University, Hyun-Seok Lee/Seoul National University, Dong-Kyu Kim/Seoul National University
Improving Truck Volume Estimation from Single Loop Detectors: A Method Integrating Quantile Regression with Light Gradient Boosting Machine (TRBAM-25-03431) - A201
Hairuilong Zhang/University of Tennessee, Knoxville, Yangsong Gu/University of Tennessee, Knoxville, Ruqing Huang/University of Tennessee, Knoxville, Lee Han/University of Tennessee, Knoxville
Using Staked Auto-Encoders to Optimize Freeway Traffic Flow Sensor Spacing Based on Empirical Data (TRBAM-25-03699) - A191
Lijuan Jiao/Southeast University, Chengcheng Xu/Southeast University, Chang Peng/Southeast University, Weilin Ren/Southeast University, Changshuai Wang/Southeast University
Enhanced Traffic Speed Prediction During Social Events Using EA-LSTM and Probe Vehicle Data (TRBAM-25-04118) - A192
Ali Ardestani/McMaster University, Hao Yang/McMaster University, Saiedeh Razavi/McMaster University
Strategies for the Measurement of On-Road Truck Activity and Spatial Interpolation of Truck Counts in an Urban Setting (TRBAM-25-04822) - A196
Yuhong Tian/University of Toronto, St. George, Arman Ganji/University of Toronto, St. George, Marianne Hatzopoulou/University of Toronto, St. George, Matthew Roorda/University of Toronto, St. George
A Statewide Highway System Network Analysis: Impact of Probe Vehicle Composition (TRBAM-25-05140) - A200
Ernest Tufuor/Auburn University, Adrian Cottam/Auburn University, Laurence Rilett/Auburn University
Enhancing Hourly Traffic Volume Estimates Using TabNet and Multi-Source Data Integration (TRBAM-25-05391) - A197
Eugene Antwi Boasiako/Kentucky Transportation Center, Xu Zhang/Kentucky Transportation Center, Mei Chen/Kentucky Transportation Center
Traffic Analysis Day(s) Selection: A Clustering Approach (TRBAM-25-05645) - A198
Syed Ahnaf Morshed/Mead & Hunt, Inc., Kamar Amine/Mead & Hunt, Inc., Mohammed Hadi/Mead & Hunt, Inc.
Multi-Source Urban Traffic Flow Forecasting with Drone and Loop Detector Data (TRBAM-25-05973) - A188
Weijiang Xiong/Ecole Polytechnique Federale de Lausanne (EPFL), Robert Fonod/Ecole Polytechnique Federale de Lausanne (EPFL), Alexandre Alahi/Ecole Polytechnique Federale de Lausanne (EPFL), Nikolas Geroliminis/Ecole Polytechnique Federale de Lausanne (EPFL)

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Advancing Gross Vehicle Weight Rating Classification through the Integration of Inductive Loop and Side Fire Camera System (TRBAM-25-06182) - A187
Guoliang Feng/City College of New York, Yiqiao Li/City College of New York, Andre Tok/City College of New York, Stephen Ritchie/City College of New York
Interactive Data-Driven Real-Time Traffic Data Conflation and State Estimation (TRBAM-25-06229) - A186
Mark Amo-Boateng/University of Missouri, Yaw Adu-Gyamfi/University of Missouri
A Hybrid Approach to Mitigate the Wander Effect in Weigh-in-Motion Systems: Embedded Sensors and Computer Vision (TRBAM-25-06381) - A177
Xinyi Yang/North Dakota State University, Xingyu Wang/North Dakota State University, Yihao Ren/North Dakota State University, Ying Huang/North Dakota State University, Pan Lu/North Dakota State University
Are Loop Detector Data Enough to Estimate Area-Based Mean Speed in Urban Areas? (TRBAM-25-06432) - A176
Fei Ge/University Gustave Eiffel, Allister Loder/University Gustave Eiffel, Mahdi Zargayouna/University Gustave Eiffel, Ludovic Leclercq/University Gustave Eiffel
The Challenge of Measuring Walk Trips in Travel Surveys: Problems of Undercounting and Incomparability Among Countries and Over Time (TRBAM-25-00058) - A220
Ralph Buehler/Virginia Polytechnic Institute and State University, John Pucher/Virginia Polytechnic Institute and State University
Quantifying the Effects of Weather, Holidays, and COVID-19 on Cycling Patterns in Auckland, New Zealand (TRBAM-25-00214) - A211
Timothy Welch/University of Auckland
Advances in Estimating Pedestrian Volume through Artificial Intelligence: From Data Sources, Video Analytics to the Prediction of Crash Frequency (TRBAM-25-01051) - A215
Ting Lian/University of Hong Kong, Becky P.Y. Loo/University of Hong Kong, Zhuangyuan Fan/University of Hong Kong
Using Trajectory Data from Shared E-scooters to Assess the Local Cycling Infrastructure: Chances and Limitations (TRBAM-25-01626) - A218
Michaela Tießler-Horvat/Bundeswehr University, Munich, Silja Hoffmann/Bundeswehr University, Munich
Is Bike Sharing Ridership Derived from Locations of Available Bikes Reliable? (TRBAM-25-01926) - A207
Jiye Xie/Southwest Jiaotong University, Hongtai Yang/Southwest Jiaotong University, Yao Meng/Southwest Jiaotong University, Zhuang Dai/Southwest Jiaotong University, Ke Han/Southwest Jiaotong University, Guocong Zhai/Southwest Jiaotong University
A Walkability and Bikeability Joint Approach for Sustainable Neighborhoods (TRBAM-25-02159) - A206
Anabela Ribeiro/Universidade de Coimbra, Mehrnaz Zargarzadeh/Universidade de Coimbra, Marta Garcia/Universidade de Coimbra, Jose Caceres Merino/Universidade de Coimbra
Reliable, Routable, and Reproducible: Collection of Pedestrian Pathways at Statewide Scale (TRBAM-25-06329) - A178
Yuxiang Zhang/University of Washington, Bill Howe/University of Washington, Anat Caspi/University of Washington

3039

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Transportation Safety Management Systems from Start to Finish
Stephanie Malinoff, University of Minnesota, Twin Cities, presiding
Frank Gross, VHB, presiding
Jaeyoung Lee, Central South University, presiding
Sponsored By Standing Committee on Transportation Safety Management Systems

More research on safety management from a comprehensive, systems approach is desirable. This poster session will allow you to interact one-on-one with the authors to discuss a broad range of safety management topics from the overall roadway safety management process and safe system approach to specific data sources and analysis methods. Topics also cover all surface transportation modes from pedestrians and bicyclists to motorized vehicles and rail. These papers cover the 4Es of safety (engineering, education, enforcement, and EMS) and touch on various safety issues and opportunities related to infrastructure, road user behavior, socioeconomics, and advanced technology (e.g., connected/automated vehicles).

Motorcycle Safety Performance Functions along Kentucky's Rural Multilane Segments (TRBAM-25-00065) - A116
Bharat Pathivada/Western Kentucky University, Arunabha Banerjee/Western Kentucky University, Kirolos Haleem/Western Kentucky University, Tathagatha Khan/Western Kentucky University, Dylan Justice/Western Kentucky University
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Developing Safety Performance Functions for Fatal and Severe Motorcycle Crashes at Intersections (TRBAM-25-00080) - A117
Bharat Pathivada/Western Kentucky University, Arunabha Banerjee/Western Kentucky University, Kirolos Haleem/Western Kentucky University, Tathagatha Khan/Western Kentucky University
Impact of COVID-19 Pandemic on Distraction-Related Motorcycle Crashes (TRBAM-25-00102) - A118
Bharat Pathivada/Western Kentucky University, Noelle Buhay/Western Kentucky University, Dylan Justice/Western Kentucky University, Arunabha Banerjee/Western Kentucky University, Kirolos Haleem/Western Kentucky University
Assessing E-scooter Rider Safety Perceptions in Shared Spaces: Insights from Sweden (TRBAM-25-00294) - A100
Khashayar Kazemzadeh/University of Cambridge, Frances Sprei/University of Cambridge, Pontus Wallgren/University of Cambridge
How Do EV Crashes Differ from ICEV Crashes: A Comparative Study of Pennsylvania (TRBAM-25-00607) - A112
Ningzhe Xu/University of Texas, Austin, Yiming Xu/University of Texas, Austin, Jun Liu/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin
Comparative Analysis of Three Proposed Network Screening Methods on Rural Highways (TRBAM-25-00754) - A101
Ahmed Al-Kaisy/Montana State University, Bishal Dhakal/Montana State University
Spatial Analysis of E-Scooter Accidents, the Case Study of England and Wales (TRBAM-25-01151) - A102
Precious Simbeye/Southwest Jiaotong University, Zhang Xiaoqiang/Southwest Jiaotong University
Analyzing Crash Severity in Texas Piney Woods Rural Areas Using Machine Learning (TRBAM-25-01202) - A103
Jeffrey Baum/University of Texas, Tyler, Matthew Vechione/University of Texas, Tyler
Impact of Operating Speed, Roadway Curvature, and Precipitation on Crash Risks in Rural Two-Lane Roads (TRBAM-25-01229) - A120
Jinli Liu/Texas State University, Rohit Chakraborty/Texas State University, Shriyank Somvanshi/Texas State University, Subasish Das/Texas State University
Characterizing the Riding Behavior of Food Delivery Motor Scooters Based on Sensor Data Mining (TRBAM-25-01298) - A104
Eunsol Cho/Hanyang University, Cheol Oh/Hanyang University, Gunwoo Lee/Hanyang University
Getting a "W" for Safety: Flipping the Script on the Safety "Es" in Search of a Winning Strategy (TRBAM-25-01577) - A105
Meghan Mitman/Fehr & Peers, Terence Zhao/Fehr & Peers, Adrian Engel/Fehr & Peers
Ensuring Accurate Mixed Traffic Safety Assessments: The Vital Role of Safety Metrics and Behavioral Modeling (TRBAM-25-01579) - A115
Kangning Hou/Southwest Jiaotong University, Fangfang Zheng/Southwest Jiaotong University, Linhan Bai/Southwest Jiaotong University, Xiaobo Liu/Southwest Jiaotong University
Modeling the Drivers' Over Speeding Choice Using Simultaneous Equations (TRBAM-25-01631) - A110
Amin Fattahi/Shahid Beheshti University, Mahmoud Mesbah/Shahid Beheshti University, Ali Shafaat/Shahid Beheshti University
Estimating the Cost and Benefits of and Number of Lives Saved by Crash Avoidance Technologies (TRBAM-25-02120) - A106
Haoming Yang/Carnegie Mellon University, Corey Harper/Carnegie Mellon University, Chris Hendrickson/Carnegie Mellon University
Advancing the Methodology for Implementing a Systemic Approach for Identifying Roadway Sites for Safety Improvements (TRBAM-25-02459) - A107
Mahsa Jafari/Ryerson University: Toronto Metropolitan University, Bhagwant Persaud/Ryerson University: Toronto Metropolitan University, Cameron Mohammadi/Ryerson University: Toronto Metropolitan University
A Comprehensive Assessment of Pedestrian Fatalities on High-Speed Roads in Rural Areas (TRBAM-25-02461) - A123
Priyanshu Aman/Indian Institute of Technology, Delhi, Geetam Tiwari/Indian Institute of Technology, Delhi, Dr. Ramachandra Kalaga/Indian Institute of Technology, Delhi
Advanced Crash Weighting Techniques for Forecasting the Future Economic Impact of Collisions (TRBAM-25-02491) - A108
Thomas Cabe/Georgia Institute of Technology, Ayuri Srivastava/Georgia Institute of Technology, Yichang Tsai/Georgia Institute of Technology
Spatial Inequality in Socio-Demographic and Commute Patterns and their Impacts on Traffic Crash Rates: A Comparison of Interpretable Machine Learning and Spatial Statistical Modelling (TRBAM-25-02539) - A124
Pengfei Cui/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Chenzhu Wang/University of Central Florida, Xiaobao Yang/University of Central Florida, Chenzhu Wang/University of Central Florida

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Comparing Location-Based and Home-Addressed Based Approaches in Evaluating Societal Crash and Congestion Costs (TRBAM-25-02725) - A126
Daniel Comeau/Villanova University, Chenfeng Xiong/Villanova University
The Role of Insurance in Nighttime Hit-and-Run Crashes: A Geo-Spatial Analysis (TRBAM-25-02795) - A113
Yanfang Su/University of Alabama, Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
Segment-Level and Intersection-Level Driving Volatility Analysis Using Large-Scale Crowdsourced Vehicle Movement Data (TRBAM-25-02797) - A114
Xiao Zou/University of Alabama, Jiayi Kong/University of Alabama, Zihe Zhang/University of Alabama, Jun Liu/University of Alabama, Alex Hainen/University of Alabama, Steven Jones/University of Alabama, Asad Khattak/University of Alabama
Comparative Analysis of School Bus Crash Severity on Urban versus Rural Roadways: A Random Parameter Logit Model with Mean Heterogeneity (TRBAM-25-02841) - A127
Xiaohua Rao/Chang'an University, Changwei Yuan/Chang'an University, Shengxuan Ding/Chang'an University, Xinjie Fang/Chang'an University, Renteng Yuan/Chang'an University
Analyzing Injury Severity of School Bus Crashes considering Temporal and Spatial Heterogeneity Using Random Parameters Ordered Probit Model (TRBAM-25-02850) - A128
Xiaohua Rao/Chang'an University, Changwei Yuan/Chang'an University, Shengxuan Ding/Chang'an University, Xinjie Fang/Chang'an University, Renteng Yuan/Chang'an University
Assessing the Level of Speed Stability with Reliability-based Empirical Indexes for Sustainable Urban Mobility Environment (TRBAM-25-02906) - A168
Nuri Park/Hanyang University, Yeji Sung/Hanyang University, Juneyoung Park/Hanyang University, Saerona Choi/Hanyang University, Sieun Kim/Hanyang University
How does subjective perception of streetscape affect traffic crashes? A spatial analysis for integrating safety into street planning (TRBAM-25-03178) - A130
Yiping Liu/Korea Advanced Institute of Science and Technology, Tiantian Chen/Korea Advanced Institute of Science and Technology, Hyungchul Chung/Korea Advanced Institute of Science and Technology, Kitae Jang/Korea Advanced Institute of Science and Technology, Pengpeng Xu/Korea Advanced Institute of Science and Technology
Do Riding Behavior, Speeding, and Law Adherence Differ between Professional and Non-professional Riders? (TRBAM-25-03180) - A131
Nazmuz Sadat/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology
Effect of Traffic Characteristics on Pedestrian Crash Risk Around School-—A Micro-level Pedestrian Casualty Model---- (TRBAM-25-03225) - A132
Wenjun Fu/Southeast University, Jiulonghu, Qian Chen/Southeast University, Jiulonghu, Xiaojian Hu/Southeast University, Jiulonghu
Safe Route to Landels Elementary School in the City of Mountain View California (TRBAM-25-03255) - A133
Ryan Chen/Santa Clara Valley Transportation Authority (VTA), Chun-Hung Peter Chen/Santa Clara Valley Transportation Authority (VTA), Karen Gauss/Santa Clara Valley Transportation Authority (VTA), Ria Lo/Santa Clara Valley Transportation Authority (VTA), Lorenzo Lopez/Santa Clara Valley Transportation Authority (VTA)
Transferability and Temporal Heterogeneityof Motorcyclist Injury Severity in Wet and Dry Season: A Case Studyin Cambodia (TRBAM-25-03313) - A135
Yaqiu Li/Southeast University, Junyi Zhang/Southeast University, Haoran Li/Southeast University, Yunpeng Lu/Southeast University, Lon Virakvichetra/Southeast University
Integrating Crowdsourced Speed Data and Crash data for statewide Traffic Management and Road Safety Enhancement (TRBAM-25-03318) - A134
Sushmita Bhandari/University of Arizona, Adrian Cottam/University of Arizona, Xi Zhang/University of Arizona, Alyssa Ryan/University of Arizona, Yao-Jan Wu/University of Arizona
Development of Composite Risk Index (CORSI) to evaluate risky situations while MTWs decide whether to follow or filter (TRBAM-25-03364) - A136
Jaikishan Damani/Indian Institute of Technology, Bombay, Perumal Vedagiri/Indian Institute of Technology, Bombay
Crash data availability and best practices across the United States (TRBAM-25-03526) - A140
Hannah Younes/Rutgers University, Robert Noland/Rutgers University
Spatial Variations in the Relationship Between Built Environment and Severe Crashes: A Case Study in Florida (TRBAM-25-03718) - A137
Onur Alisan/Florida State University, Eren Ozguven/Florida State University, Shrikant Fulari/Florida State University, Mehmet Burak Kaya/Florida State University, Razieh Khayamim/Florida State University, Jieya Yang/Florida State University

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A spatial analysis of safety perceptions across different transport modes: Insights from Athens and Munich (TRBAM-25-03881) - A138
Panagiotis Tzouras/Technische Universitat Munchen, Anna Takayasu/Technische Universitat Munchen, Konstantinos Kepaptsoglou/Technische Universitat Munchen, Klaus Bogenberger/Technische Universitat Munchen
A Context-sensitive Roadway Classification Framework for Speed Limit Setting in the US (TRBAM-25-03897) - A143
Cheng-Kai Hsu/University of California, Berkeley, Melody Tsao/University of California, Berkeley, Julia B. Griswold/University of California, Berkeley, Robert Schneider/University of California, Berkeley, John Bigham/University of California, Berkeley
Comparison of Segment Ranking and Sliding Window Ranking Methods for Rural Two-lane Undivided Roadways in North Carolina (TRBAM-25-03996) - A145
Bo Lan/UNC Highway Safety Research Center, Meghna Chakraborty/UNC Highway Safety Research Center, Raghavan Srinivasan/UNC Highway Safety Research Center, Daniel Levitt/UNC Highway Safety Research Center
Motorcycle Following Distance and its Relationship to the Risk of Rear-End Collisions (TRBAM-25-04039) - A146
Phanuphong Prajongkha/Asian Institute of Technology, Kunnawee Kanitpong/Asian Institute of Technology
Multi-Faceted Walkability Analysis for School Zone Safety in Delhi (TRBAM-25-04043) - A148
Mansha Swami/Morgan State University, Chandrika Pathak/Morgan State University, Sankalp Swami/Morgan State University, Mansoureh Jeihani/Morgan State University
Investigating Factors Affecting Pedestrian Fatalities in the US: A Comparative Study of Pre-Pandemic, Pandemic, and Late-Pandemic Periods (TRBAM-25-04271) - A150
Anshu Bamney/University of Connecticut, Nischal Gupta/University of Connecticut, Sagar Keshari/University of Connecticut, Manmohan Joshi/University of Connecticut
A Data-Driven Framework for Evaluating the Effectiveness of Traffic Safety Countermeasures (TRBAM-25-04351) - A152
A. M. Tahsin Emtenan/CATT Laboratory, Rohan Aras/CATT Laboratory, Sara Zahedian/CATT Laboratory, Ateet Maharjan/CATT Laboratory, Mark Franz/CATT Laboratory
Examining School Bus Stop-Arm Violation Reporting and Enforcement: A Minnesota Case Study (TRBAM-25-04485) - A153
Nichole Morris/University of Minnesota, William Kessler/University of Minnesota, Michael Krukowski/University of Minnesota, Brian Davis/University of Minnesota
Recent Trends and Factors Associated with Risky Motorcyclist Behaviors (TRBAM-25-04640) - A154
Xiaoyuan Zhao/University of South Florida, Tampa, Chanyoung Lee/University of South Florida, Tampa, Savana Wright/University of South Florida, Tampa
Prioritizing Safety Treatment of Rural Corridors using Curve Context (TRBAM-25-04703) - A111
Joseph Corbett-Davies/Abley Ltd, Chris Tredinnick/Abley Ltd, Shane Turner/Abley Ltd, Paul Durdin/Abley Ltd, Steve Abley/Abley Ltd
Safe System for Whom? Quantifying the Impacts of Transport Infrastructure Using a Systematic Analysis (TRBAM-25-04729) - A161
Weijing Wang/University of California, Davis
How Can We Ensure Traffic Safety Funds Improve Safety? A Conversation with Transportation Engineering Professionals. (TRBAM-25-04774) - A141
Hannah Younes/Rutgers University, Leigh Ann Von Hagen/Rutgers University, Sean Meehan/Rutgers University, Samuel Rosenthal/Rutgers University, Mohammad Jalayer/Rutgers University
Community Perceptions of Vision Zero: A case Study of Tacoma, Washington (TRBAM-25-04805) - A121
Janeroza Matyenyi/University of North Florida, Meshack Mihayo/University of North Florida, Angela Kitali/University of North Florida, Thobias Sando/University of North Florida, Panick Kalambay/University of North Florida, Emmanuel Kidando/University of North Florida, Boni Kutela/University of North Florida
Analyzing School Bus-Related Crashes in New Jersey Using Machine Learning Techniques (TRBAM-25-04862) - A142
Md Sadman Islam/Rowan University, Md. Arifuzzaman Nayeem/Rowan University, Mohammad Jalayer/Rowan University, Patrick Szary/Rowan University
Investigating Trends in High-Risk Driving Behaviors Before and After the Onset of the COVID-19 Pandemic (TRBAM-25-04997) - A151
Yazmin Dasgar/Michigan State University, Nischal Gupta/Michigan State University, Ardeshir Fadaei/Michigan State University, Peter Savolainen/Michigan State University
Analysis of Motorcycle Riders' Gap Acceptance at Unsignalized Mid-Block Crosswalks (TRBAM-25-05447) - A147
Tanawan Sutantaviboon/Asian Institute of Technology, Kunnawee Kanitpong/Asian Institute of Technology

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ROADFIRST: A Comprehensive Enhancement of the Systemic Approach to Safety for Improved Risk Factor Identification and Evaluation (TRBAM-25-05595) - A162
Shriyan Reyya/Maryland Department of Transportation, Yao Cheng/Maryland Department of Transportation
Safety Contributing Factors Analysis of Elderly Vulnerable Road Users: Global and Local Perspectives (TRBAM-25-05599) - A125
Xueyu Zhang/Tongji University, Xuesong Wang/Tongji University, Mohamed Abdel-Aty/Tongji University, George Yannis/Tongji University, Guangzhu Luo/Tongji University
Using Probe Data to Model Speeding on Interstate Horizontal Curves and Ramps (TRBAM-25-05636) - A166
Eduardo Vergara/University of Oklahoma, Norman, Juan Aviles-Ordonez/University of Oklahoma, Norman, Yuanchang Xie/University of Oklahoma, Norman, Mohammadali Shirazi/University of Oklahoma, Norman
Understanding the Association Between Transportation Safety and Quality of Life in Austin Using Bayesian Networks (TRBAM-25-05732) - A122
Boni Kutela/Texas A&M Transportation Institute, Subasish Das/Texas A&M Transportation Institute, Syed Javed/Texas A&M Transportation Institute, Abbas Sheykhfard/Texas A&M Transportation Institute, Sia Lyimo/Texas A&M Transportation Institute, Hellen Shita/Texas A&M Transportation Institute, Neema Langa/Texas A&M Transportation Institute
Understanding Pedestrian and Bicyclist Safety Trends in the Post-Pandemic Era (TRBAM-25-05800) - A144
Iman Mahdinia/University of California, Berkeley, Lekshmy Hirandas/University of California, Berkeley, SangHyouk Oum/University of California, Berkeley, Julia B. Griswold/University of California, Berkeley
Two-wheelers trajectory prediction in complex crowded intersection scenarios considering driving style and vehicle interaction forces (TRBAM-25-06096) - A155
Fu Hanbing/NanJing University of Science and Technology, Zhuping Zhou/NanJing University of Science and Technology, Changji Yuan/NanJing University of Science and Technology, Xiaosong Chu/NanJing University of Science and Technology
Prioritization and Implementation of Safe Routes to School (SRTS) in Austin, Texas (TRBAM-25-06141) - A156
Hellen Shita/Florida International University, Sarah Kasomi/Florida International University, Norris Novat/Florida International University, Boni Kutela/Florida International University
The Designation of School Zones Using a Mathematical Framework Based on a Simulated Annealing Algorithm (TRBAM-25-06278) - A157
Jihye Byun/University of Seoul, Jinmun Kwon/University of Seoul
Assessment of vehicle age as a contributor to temporal shifts in single-vehicle driver injury severities (TRBAM-25-06361) - A158
Kofi Adanu/Texas A&M Transportation Institute, Richard Dzinyela/Texas A&M Transportation Institute, Dustin Wood/Texas A&M Transportation Institute, Steven Jones/Texas A&M Transportation Institute
Investigating the Association of Post-Crash Medical Conditions and Human Factors with Motorcyclists Injuries: Insights from Fine Injury Data From Hospital Records (TRBAM-25-06437) - A167
Zia Rehman/National University of Sciences and Technology, Numan Ahmad/National University of Sciences and Technology, Afzal Ahmed/National University of Sciences and Technology, Wasim Kiyani/National University of Sciences and Technology
Characterizing Behavioral Differences and Adaptations of Automated Vehicles and Human Drivers at Unsignalized Intersections: Insights from Waymo and Lyft Open Datasets (TRBAM-25-06465) - A160
Saeed Rahmani/Delft University of Technology, Zhenlin Xu/Delft University of Technology, Simeon Calvert/Delft University of Technology, Bart Arem/Delft University of Technology

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Asphalt Mixture Design and Performance
Brett Stanton, Asphalt Pavement Association of Michigan, presiding
Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design

This poster session focuses on the design methodologies and performance evaluations of various asphalt mixtures. It includes studies on optimizing mix designs, evaluating performance under different conditions, and implementing advanced technologies like AI for better design and assessment.

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Intelligent Asphalt Mixture Design: A Combined Supervised Machine Learning and Deep Reinforcement Learning Approach (TRBAM-25-05288) - B524
Jian Liu/University of Georgia, Chunru Cheng/University of Georgia, Zhen Wang/University of Georgia, Shuhan Yang/University of Georgia, Linbing Wang/University of Georgia
Optimization of Fine Aggregate Matrix Mix Design and Fabrication Using Criteria Derived from Experimental Data (TRBAM-25-00820) - B526
Thiago Souza/Federal University of Rio de Janeiro, Clara Souza/Federal University of Rio de Janeiro, Marcos Rocha/Federal University of Rio de Janeiro, Alexis Enríquez-León/Federal University of Rio de Janeiro, Francisco Thiago Sacramento Aragão/Federal University of Rio de Janeiro
Performance Evaluation of Low Gyration Asphalt Mixtures (TRBAM-25-01357) - B538
Shuai Yu/Penn State Altoona, Frank Ni/Penn State Altoona, Ohhoon Kwon/Penn State Altoona, Howie Moseley/Penn State Altoona, Greg Sholar/Penn State Altoona
The Use of Balanced Mix Design (BMD) Process With High Polymer Modified Asphalt: A Case Study at a Brazilian Airpor (TRBAM-25-04463) - B539
MARCELA ALVES/Universidade Federal do Rio Grande do Sul, Regis Carvalho/Universidade Federal do Rio Grande do Sul, Silvio Schuster/Universidade Federal do Rio Grande do Sul, Victoria Nunes-Ramos/Universidade Federal do Rio Grande do Sul, Douglas Mendonça/Universidade Federal do Rio Grande do Sul, Gesley Freitas/Universidade Federal do Rio Grande do Sul, Diogenes Sartor/Universidade Federal do Rio Grande do Sul, Gracieli Colpo/Universidade Federal do Rio Grande do Sul, Luciano Specht/Universidade Federal do Rio Grande do Sul, Lélio Brito/Universidade Federal do Rio Grande do Sul
Designing Asphalt Concrete Mixtures Based on Balanced Mix Design Requirements Utilizing A Two-Step Approach (TRBAM-25-01395) - B511
Hong Lang/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign, Uthman Mohammed Ali/University of Illinois, Urbana-Champaign
Influence of Compaction Method and Specimen Size on Performance Test Results within a Balanced Mixture Design Framework (TRBAM-25-04322) - B522
Tiana Wright/Auburn University, Benjamin Bowers/Auburn University, Nathan Moore/Auburn University
Performance Evaluation of Open Graded Friction Course with Modified Aggregate Gradation – Tennessee Experience Phase I (TRBAM-25-02114) - B513
Hong Park/Tennessee Department of Transportation
Comparative Analysis of Different Surrogate Performance Tests for Evaluating the Rutting Potential of Marshall-designed Bituminous Mixes (TRBAM-25-01988) - B510
Sadiya Shaikh/Indian Institute of Technology, Varanasi, Ankit Gupta/Indian Institute of Technology, Varanasi, Vaibhav Lokhande/Indian Institute of Technology, Varanasi
Performance Assessment of Thin Asphalt Mixes for Low-Volume Roads (TRBAM-25-06336) - B528
Harish Nanda/Indian Institute of Technology, Guwahati, Lukulapu Mohan Jagadeesh/Indian Institute of Technology, Guwahati, Akshya Pattanayak/Indian Institute of Technology, Guwahati, Anjan Kumar Siddagangaiah/Indian Institute of Technology, Guwahati
Enhancing Thin Asphalt Overlay Performance through Optimized Mix Design: An Investigation of Key Parameters (TRBAM-25-03145) - B529
Morshed Washif Hasan/Arizona State University, Nafiur Rahman/Arizona State University, Hossein Noorvand/Arizona State University, Kamil Kaloush/Arizona State University
Development of an Artificial Intelligence (AI)-Based Tool for the Design of Open-Graded Friction Course (TRBAM-25-04653) - B521
José Carlos Azucena/Louisiana State University, S M Tanvir/Louisiana State University, Mostafa Elseifi/Louisiana State University, Haitao Liao/Louisiana State University, Nikesh Kumar/Louisiana State University
Lab Calibration Study for Implementing Asphalt Balanced Mix Design for the State of Arkansas (TRBAM-25-03587) - B520
Mohammad Tahir Ansari/University of Arkansas, Fayetteville, Amarjeet Tiwari/University of Arkansas, Fayetteville, Andrew Braham/University of Arkansas, Fayetteville
Reducing Low-Temperature Cracking on Local Roads (TRBAM-25-05414) - B514
William Berner/University of Cincinnati, Munir Nazzal/University of Cincinnati, Ala Abbas/University of Cincinnati, Sang Soo Kim/University of Cincinnati
Mechanistic-Based Evaluation of Performance Thresholds for Balanced Mix Design Asphalt Surface Mixtures (TRBAM-25-04426) - B523
Omar Othman/North Carolina State University, Benjamin Underwood/North Carolina State University, Jhony Habbouche/North Carolina State University, Ilker Boz/North Carolina State University, Stacey Diefenderfer/North Carolina State University

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Implementing Complex System Response to Optimize Asphalt Concrete Mix Design Performance and Ensure the Factory Production Stage's Performance (TRBAM-25-03497) - B512
Aulia Rachman/National Cheng Kung University, Shih-Hsien Yang/National Cheng Kung University, Ning Lee/National Cheng Kung University, Chi-Long Lue/National Cheng Kung University, Firmansyah Rachman/National Cheng Kung University
Influence of RAP Fractionation and Dosage on Interaction and Fracture Behavior of Cold Asphalt Mix (TRBAM-25-04052) - B527
Harish Nanda/Indian Institute of Technology, Guwahati, Anjan Kumar Siddagangaiah/Indian Institute of Technology, Guwahati, bharath gottumukkala/Indian Institute of Technology, Guwahati
Cement grouted bituminous mixtures containing reclaimed asphalt pavement material: design and mechanical properties (TRBAM-25-03678) - B525
Bhuvana Priya Dhandapani/Indian Institute of Technology, Hyderabad, Ramya Sri Mullapudi/Indian Institute of Technology, Hyderabad
Impact of Increasing Laboratory-Molded Density on Performance of Mixtures with Recycled Asphalt Pavement (TRBAM-25-04484) - B537
parastoo Bahri Iraei/University of Texas, El Paso, Miguel Montoya/University of Texas, El Paso, Imad Abdallah/University of Texas, El Paso, Dr. Soheil Nazarian/University of Texas, El Paso

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Material Properties and Testing in Asphalt
Kimberly Lyons, South Carolina Department of Transportation, presiding
Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design

These papers delve into the fundamental properties of asphalt materials and the methods used to test them. Topics include the rheological performance of bituminous mastic, the impact of aggregate morphology, and the analysis of air voids and compaction characteristics.

Effects of Coarse Aggregate Morphology on Asphalt Mixture's Flowability: Parametric and Prediction Study (TRBAM-25-01253) - B530
Fengteng Liu/Southeast University, Xunhao Ding/Southeast University, Tao Ma/Southeast University, Baitong Xiao/Southeast University
Introducing the Mineral Powder to Strengthen Polyurethane Grouting Materials for Crack Repair of Asphalt Pavements (TRBAM-25-00533) - B546
Kun Xiong/Chang'an University, Lei Lyu/Chang'an University, Jiupeng Zhang/Chang'an University, Junbo Li/Chang'an University
Influence of Physicochemical Characteristics of Mineral Fillers on the Rheological Performance of Bituminous Mastic (TRBAM-25-01327) - B542
Venkata Akhilesh Danam/Indian Institute of Technology, Kharagpur, PV Arjun/Indian Institute of Technology, Kharagpur, Amaranatha Reddy Muppireddy/Indian Institute of Technology, Kharagpur
Effect of RAP on Creep Compliance of Asphalt Concrete (TRBAM-25-02971) - B540
Md Saddam Hossain/University of New Mexico, Albuquerque, B S Pushpendue Biswas/University of New Mexico, Albuquerque, Muhammad Tasnim Alam/University of New Mexico, Albuquerque, Rafi Tarefder/University of New Mexico, Albuquerque
Evaluating the Impact of Laboratory Mixing Methods on Fibers Distribution and Laboratory Performance (TRBAM-25-04123) - B541
Ali Raza Khan/Rowan University, Mohit Chaudhary/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Ben Cox/Rowan University, Mohamed Elshaer/Rowan University
Effect of Rainfall during Curing Period on Performance of Bitumen Emulsion-Based Cold In-place Recycling Mixture and Mastic (TRBAM-25-04301) - B534
Jingling Wang/Southeast University, Jiangtao Liu/Southeast University, Zili Zhao/Southeast University, Shuheng Yu/Southeast University, Jiwang Jiang/Southeast University, Fujian Ni/Southeast University
Using Color Measurements to Assess Reclaimed Asphalt Pavement (RAP) Degree of Activity (TRBAM-25-00169) - B544
Rafaella Fonseca da Costa/North Carolina State University, Cassie Castorena/North Carolina State University

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Combined Effect of Crumb Rubber Particle Size and Dosage Rate on the Performance and Oxidation Resistance of Crumb Rubber Bituminous Mixtures (TRBAM-25-06446) - B532
Ms. Harshitha Vuthipalli/Birla Institute of Technology and Science, Pilani, Prof. Akshay Gundla/Birla Institute of Technology and Science, Pilani, Sridhar Raju/Birla Institute of Technology and Science, Pilani, Prasanta Sahu/Birla Institute of Technology and Science, Pilani
Molecular-level Analysis of Oxygen and Asphalt Behavior on Aggregate Surfaces (TRBAM-25-03414) - B543
Qi Liu/Southeast University, Xiaoying Yi/Southeast University, Mingmao Cai/Southeast University, Bin Yu/Southeast University, Augusto Cannone Falchetto/Southeast University
Characterization of Asphalt Mixture Compaction at Particle-scale Using Discrete Element Model Optimized by Real-time SmartRock Sensing Data (TRBAM-25-03625) - B549
Xue Wang/Chang'an University, Zifang Wang/Chang'an University, Xuanye Luo/Chang'an University
Molecular mechanisms of interfacial adhesion between asphalt and mineral aggregate based on molecular dynamics and density functional theory (TRBAM-25-03849) - B547
Shuang Liu/Harbin Institute of Technology, Enhao Zhang/Harbin Institute of Technology, Liyan Shan/Harbin Institute of Technology
A Study of Air Voids and Effective Air Voids in Hot Mix Asphalt (HMA) (TRBAM-25-02552) - B531
Dasina Francis/University of Texas at El Paso, Ali Regimand/University of Texas at El Paso, Rajib Mallick/University of Texas at El Paso
Optimization of Alkali Treatment Parameters for Agro-Waste Banana Fiber and Its Assessment as a Reinforcing Additive in Open-Graded Friction Course Mixes (TRBAM-25-03410) - B535
Ashish Sharma/Indian Institute of Technology, Guwahati, Rajan Choudhary/Indian Institute of Technology, Guwahati, Saswat Dash/Indian Institute of Technology, Guwahati, Ankush Kumar/Indian Institute of Technology, Guwahati
Revisiting the Role of Aggregates Packing and Its Significance for the Asphalt Mixture Compaction (TRBAM-25-00743) - B548
Shuai Yu/Penn State Altoona, Shihui Shen/Penn State Altoona, Jubair Musazay/Penn State Altoona
A Study to Evaluate the Effect of Aggregate Gradation and Binder Type on Aggregate Bond Slippage Failures in Stone Matrix Asphalt under the Combined Action of Temperature and Moisture. (TRBAM-25-04973) - B545
Saswat Dash/Indian Institute of Technology, Guwahati, Rajan Choudhary/Indian Institute of Technology, Guwahati, Ashish Sharma/Indian Institute of Technology, Guwahati, Ankush Kumar/Indian Institute of Technology, Guwahati
Investigation on the blending behavior, mechanism and performance evaluation of epoxy asphalt and aged asphalt (TRBAM-25-03959) - B533
Shi Zhiyong/No Organization, Zhaohui Min/No Organization, Wei Huang/No Organization
Influence of lignin modification on the bonding-debonding properties between natural aggregates and asphalt binder using surface free energy method (TRBAM-25-01656) - B536
Shubham Suryawanshi/No Organization, Aniket Kataware/No Organization

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Recycled Materials and Sustainable Innovations in Asphalt Concrete
Katie DeCarlo, Heritage Research Group, presiding
Sponsored By Standing Committee on Asphalt Mixture Evaluation and Performance

Papers in this session focus on the use of recycled materials, sustainability, and innovative approaches to pavement engineering.

Cracking Damage Behavior Characterization of Epoxy Asphalt Recycled Pavement Based on Acoustic Emission and Digital Image Correlation Methods (TRBAM-25-00059) - B482
Jun Yang/Southeast University, Yixin Zhou/Southeast University, Yulou Fan/Southeast University, Chenguang Shi/Southeast University, Bingshen Chen/Southeast University, Gang Xu/Southeast University, Xing Cai/Southeast University, Xianhua Chen/Southeast University
Performance Analysis of Cold Recycled Mix Asphalt (CRMA) Using 100% RAP and Reinforced with Recycled/byproduct Fibers (TRBAM-25-00289) - B483
Victor Rafael Estrada-Escalante/Clemson University, Alvaro Cerdas-Murillo/Clemson University, Fabricio Leiva/Clemson University
Development and Evaluation of Conductive Asphalt Concrete with Three Conductive Phase Materials (TRBAM-25-01941) - B494
Cai Xu/Southeast University, Yang Liu/Southeast University, Zhendong Qian/Southeast University

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Research on Road Performance of Acid-treated Steel Slag and Asphalt Mixture (TRBAM-25-01975) - B473
Zhao Weixiang/Southeast University, Wen Wu/Southeast University, Hu Jing/Southeast University
Research on Cracking Characteristics and Failure Modes of Semi-Flexible Pavement Materials (TRBAM-25-02021) - B450
Zhongbo Chen/Tongji University, Senlin Ling/Tongji University, Daquan Sun/Tongji University, Lei Xu/Tongji University, Yumiao Wu/Tongji University
Experimental Evaluation on Self-leveling Epoxy Asphalt Concrete as Future Assembly-oriented Bridge Deck Pavement Materials (TRBAM-25-02087) - B484
Gang Liu/City University of Hong Kong, Guoyang Lu/City University of Hong Kong, Shiu Tong Thomas Ng/City University of Hong Kong, Zhendong Qian/City University of Hong Kong
Evaluation of Surface Characteristics and Long-term Fracture Behavior of Asphalt Mixtures Functionalized by Thermochromic Spraying Coating (TRBAM-25-02109) - B493
Larissa Ribas/University of Nebraska, Lincoln, Farzad Yazdipanah/University of Nebraska, Lincoln, Jose Santos/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln, Veronica Castelo Branco/University of Nebraska, Lincoln
Pre-treatment of Steel Slag and its Applicability in Asphalt Mixtures for Sustainable Pavements (TRBAM-25-02503) - B463
Jia Sun/Southeast University, Sang Luo/Southeast University, Yaozheng Wang/Southeast University, Qifeng Dong/Southeast University, Zhihan Zhang/Southeast University
Experimental Assessment and Prediction of Fracture Characteristics of Hybrid HMA Using Gene Expression Programming (TRBAM-25-02710) - B451
Sherbaz Khan/University of Louisiana, Lafayette, Muhammad Faizan Asghar/University of Louisiana, Lafayette, Mohammad Khattak/University of Louisiana, Lafayette, Syed Abdul Rizvi/University of Louisiana, Lafayette, Muhammad Faisal Javed/University of Louisiana, Lafayette
Laboratory and Field Performance Characterization of Recycled Plastic Modified Asphalt Mixtures at the NCAT Test Track (TRBAM-25-02737) - B464
Fan Yin/National Center for Asphalt Technology (NCAT), Matthew Kmetz/National Center for Asphalt Technology (NCAT), David Timm/National Center for Asphalt Technology (NCAT), Randy West/National Center for Asphalt Technology (NCAT), Adam Taylor/National Center for Asphalt Technology (NCAT)
Cracking Resistance evaluation of Epoxy Reclaimed Asphalt Mixture Toughened by SBS/CR and CSR With High Content of Reclaimed Asphalt Pavement (RAP) (TRBAM-25-02738) - B472
Hao Yu/Southeast University, Yulou Fan/Southeast University, Jun Yang/Southeast University
Investigation on the effect of the degree of blending on performances of epoxy component modified recycled asphalt and its mixture (TRBAM-25-04031) - B462
Shi Zhiyong/No Organization, Zhaohui Min/No Organization, Wei Huang/No Organization
Evaluating Mechanical Performance of High-RAP Asphalt Materials Modified with Bio- and Petroleum-Based Recycling Agents: Insights from the Pavement Testing Facility (TRBAM-25-04132) - B452
Behnam Jahangiri/GENEX Systems, Adrian Andriescu/GENEX Systems, Hamzeh Haghshenas/GENEX Systems, David Mensching/GENEX Systems
Evaluating Low-Temperature Cracking and Stress Relaxation in Polyethylene-Modified Asphalt Mixtures: A Thermal and Mechanical Assessment (TRBAM-25-04138) - B492
Venkatsushanth Revelli/Rowan University, Anil Baditha/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Ben Cox/Rowan University, Sadie Casillas/Rowan University, Wade Lein/Rowan University
Enhanced Low-Temperature Indirect Tensile Strength Prediction for Asphalt Mixtures with RAP (TRBAM-25-04285) - B474
Jun Liu/Louisiana Transportation Research Center (LTRC), Qiming Chen/Louisiana Transportation Research Center (LTRC)

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Advanced Analytical Techniques and Modeling in Asphalt Concrete Evaluation
Zahid Hossain, Arkansas State University, presiding
Sponsored By Standing Committee on Asphalt Mixture Evaluation and Performance, Section - Materials

Posters in this session cover more advanced techniques, such as numerical modeling and novel analytical methods, to improve understanding of asphalt mixture behavior.

(continued)

Analysis of Dynamic Effects in Complex Modulus Characterization of Asphalt Concrete (TRBAM-25-00003) - B501
Eyal Levenberg/Technical University of Denmark
Modeling Fracture Evolution of Asphalt Concrete under Long-Term Vapor Exposure: A Coupled Moisture-Mechanical Approach (TRBAM-25-00806) - B519
Minda Ren/No Organization, Hongren Gong/No Organization, Lan Wang/No Organization, Lin Cong/No Organization, Chao Li/No Organization
Damage Evolution in Asphalt Mixtures Based on In-Situ CT Scanning (TRBAM-25-01178) - B506
Geng Chen/Chang'an University, Tao Liu/Chang'an University, Lei Lyu/Chang'an University, Jianzhong Pei/Chang'an University
A Numerical-Experimental Modeling Approach to Simulate Reflective Cracking in Asphalt Pavements (TRBAM-25-01264) - B516
Alex Oliveira/Federal University of Rio de Janeiro, Marcos Rocha/Federal University of Rio de Janeiro, Francisco Thiago Sacramento Aragão/Federal University of Rio de Janeiro, Luis Alberto Nascimento/Federal University of Rio de Janeiro, Francisco Almeida/Federal University of Rio de Janeiro
Rheological Behavior and Rutting Evolution of Gussasphalt Pavement on Steel Bridge Deck under the Coupling of Heavy Load and Variable Temperatures (TRBAM-25-01474) - B504
Yang Liu/Southeast University, Cai Xu/Southeast University, Zhendong Qian/Southeast University
Characterization the Dynamic Modulus Properties of Asphalt Concrete Based on Generalized Fractional Viscoelastic Constitutive Modelling Methods (TRBAM-25-01555) - B509
Xiaojin LU/Southeast University, Jie Zhou/Southeast University, Gang Xu/Southeast University, Xianhua Chen/Southeast University
Multi-Physical Modeling and Prediction of the Oxidation Aging in the Wearing Course of Asphalt Pavement Based on Field Data (TRBAM-25-01759) - B505
Jitong Ding/City University of Hong Kong, Jiwang Jiang/City University of Hong Kong, Guoyang Lu/City University of Hong Kong, Jingling Wang/City University of Hong Kong, Fujian Ni/City University of Hong Kong
A Three-Dimensional Viscoelastic-Damage Model for Asphalt Concretes with Applications to Cyclic Indirect Tensile Fatigue Tests (TRBAM-25-01868) - B515
Hanyu Zhang/Southeast University, Gordon Airey/Southeast University, Yuqing Zhang/Southeast University
Effects of RAP Content on Asphalt Mixture's Fracture Behaviour based on Nonlinear Viscoelastic Cohesive Zone Modeling Approach (TRBAM-25-02052) - B503
Farzad Yazdipanah/University of Nebraska, Lincoln, Nitish Bastola/University of Nebraska, Lincoln, Adalberto Faxina/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln
A Machine Learning Based Framework to Identify Differences in Dynamic Modulus Between Laboratory and Field Performance of Asphalt Mixtures (TRBAM-25-02542) - B517
Mohammadjavad Berangi/Delft University of Technology, Bernardo Mota Lontra/Delft University of Technology, Kumar Anupam/Delft University of Technology, Sandra Erkens/Delft University of Technology, Dave Van Vliet/Delft University of Technology, Almar Snippe/Delft University of Technology, Mahesh Moenielal/Delft University of Technology
Numerical Modeling of Gyratory Compaction of Asphalt Mixture Using Bullet Physics: Implementation of Burger's Viscoelastic Contact Model (TRBAM-25-02747) - B518
Chen Wang/Delft University of Technology, Mark Jol/Delft University of Technology, Kumar Anupam/Delft University of Technology, Cor Kasbergen/Delft University of Technology, Sandra Erkens/Delft University of Technology
Investigating Mechanical Responses of Cold In-Place Recycled Asphalt Pavement Sections Under Accelerated Truck Loading by Finite Element Modeling (TRBAM-25-02792) - B502
Chenchen Huang/Rowan University, Lakshmana Ravi Raj Gali/Rowan University, Cheng Zhu/Rowan University, Yusuf Mehta/Rowan University, Ayman Ali/Rowan University, Wade Lein/Rowan University
Characterization of Multi-Level Structures in Asphalt Mixtures via Digital Image Processing and Complex Network Theory (TRBAM-25-03466) - B508
Hu Yang/No Organization, Ziwan Xie/No Organization, Liyan Shan/No Organization
Asphalt Mix Material Parameters Identification Using Dynamic Semi-circular Bending Tests through Extended Finite Element Model (TRBAM-25-06463) - B500
Surya Marimuthu/Indian Institute of Technology, Tirupati, B Radhika/Indian Institute of Technology, Tirupati, Sriram Sundar/Indian Institute of Technology, Tirupati, Krishna Prapoorna Biligiri/Indian Institute of Technology, Tirupati
Enhancing Performance-Related Specifications of Asphalt Mixtures: Quantifying the Uncertainty of Index-Volumetrics Relationship Predictions (TRBAM-25-04442) - B507
Ala' Hudaib/North Carolina State University, Lei Xue/North Carolina State University, Boris Goenaga/North Carolina State University, Youngsoo Kim/North Carolina State University, Benjamin Underwood/North Carolina State University

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Pavement Material Rheology, Polymer-Based Pavement Formulations, Fiber-Reinforced Geopolymer Composites, and Grouting Materials for Cement-Stabilized Macadam

Michael Stenko, SCS LLC, presiding

Sponsored By Standing Committee on Polymer Concretes, Adhesives, and Sealers

Research on Rheology of various polymer based pavement formulations, fiber reinforced geopolymer composites, and grouting materials for cement-stabilized macadam.

Grouting materials for cement-stabilized macadam considering toughness enhancement: properties, mechanisms, and repair effects (TRBAM-25-01588) - B423

Shiao Yan/Southeast University, Xinyuan Cao/Southeast University, Zhou Zhou/Southeast University, Bin Shi/Southeast University, Kang Yao/Southeast University, Qiao Dong/Southeast University

Assessing Rheological Performance of Innovative Sealant Materials Using Traditional Superpave Binder Equipment (TRBAM-25-02681) - B413

Anik Roy/University of Arkansas, Fayetteville, Jackson Hedden/University of Arkansas, Fayetteville, Ben Cox/University of Arkansas, Fayetteville, Andrew Braham/University of Arkansas, Fayetteville

Enhancing the Mechanical Properties of Metakaolin-Based Engineered Geopolymer Composites Through Fiber Treatment (TRBAM-25-04281) - B424

Ruwa Abufarsakh/Louisiana State University, Hassan Noorvand/Louisiana State University, Heena Dhasmana/Louisiana State University, Adriana Alvarado/Louisiana State University, Sujata Subedi/Louisiana State University, Zhen Sang/Louisiana State University, Oscar Huang/Louisiana State University, Gabriel Arce/Louisiana State University, Svetlana Sukhishvili/Louisiana State University, Miladin Radovic/Louisiana State University, Marwa Hassan/Louisiana State University

Evaluation of Different Fiber Types on Potassium and Sodium Activated Metakaolin Fly Ash Based Fiber Reinforced Geopolymer Composites (TRBAM-25-04311) - B414

Ruwa Abufarsakh/Louisiana State University, Hassan Noorvand/Louisiana State University, Heena Dhasmana/Louisiana State University, Adriana Alvarado/Louisiana State University, Sujata Subedi/Louisiana State University, Gabriel Arce/Louisiana State University, Svetlana Sukhishvili/Louisiana State University, Miladin Radovic/Louisiana State University, Marwa Hassan/Louisiana State University

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Innovations in Sustainable and Resilient Pavements

Egemen Okte, University of Massachusetts, Amherst, presiding

Ibrahim Elnaml, Louisiana Department of Transportation and Development, presiding

Sponsored By Section - Pavements

This session reports research results concerned with methods and practices to improve sustainability and resilience in pavement engineering, performance, and management. This includes research to develop measurements and assessments techniques of pavement sustainability including environmental, economic and social factors to improve practices throughout the life cycle of pavements, including design, materials, construction, asset management, and end-of-life options. Topics include circularity, carbonation, pavement life cycle assessment, pavement resilience, UHI mitigation, porous pavements, inductive charging and more.

Role of Asphalt Pavements in Achieving Net-Zero Emission in the US Transportation Sector (TRBAM-25-00347) - B410

Lara Diab/University of Illinois, Urbana-Champaign, Asad Khan/University of Illinois, Urbana-Champaign, Murryam Hafeez/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign

The Carbonation Potential for Concrete Using Thermodynamic Modeling for Concrete Sustainability Calculations (TRBAM-25-00949) - B420

Catherine Lucero/Oregon State University, Jason Weiss/Oregon State University, O. Burkan Isgor/Oregon State University

(continued)

Study on Microwave Absorption Properties of Different Industrial Slags for Pavement Deicing (TRBAM-25-01221) - B443
Fan Zhang/Aalto University, Yuxuan Sun/Aalto University, Augusto Cannone Falchetto/Aalto University
Life Cycle Assessment for the Use of Steel Slag in Soil Stabilization (TRBAM-25-01373) - B440
Taisa Medina/University of Nebraska, Lincoln, Joao Calmon/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln
Fatigue performance and lifecycle benefits of epoxy-modified recycled asphalt mixture (TRBAM-25-02274) - B444
Maijian Liu/Southeast University, Sang Luo/Southeast University, Wei Huang/Southeast University, Jing Hu/Southeast University, Qifeng Dong/Southeast University, Bohao Zhang/Southeast University
Investigation of the Performance and Micro-evolution Mechanism of Low-content Thermosetting Epoxy Asphalt Binder Towards Sustainable Highway and Bridge Decks Paving (TRBAM-25-02356) - B453
Jia Sun/Southeast University, Wei Huang/Southeast University, Guoyang Lu/Southeast University, Sang Luo/Southeast University, Youheng Li/Southeast University
Assessing Sweden's Greenhouse Gas Emissions from Road Maintenance using Environmental Product Declarations (EPDs) and Network Lifecycle Optimization (TRBAM-25-02404) - B432
Kristin Eklöf/salbo.ai, Roozbeh Rashedi/salbo.ai, Jonas Ekblad/salbo.ai, Linda Löwhagen/salbo.ai
Laboratorical Investigation on Asphalt Fume Suppression of Molecular Sieve Powders (TRBAM-25-02609) - B433
Ming Jia/Tongji University, Hui Li/Tongji University, Xue Zhang/Tongji University, Yuzhao Han/Tongji University, Zhijie Lin/Tongji University, Abul Khairb/Tongji University
BIM-Based Framework for Automated Design of Pavement Structures with Economic And Sustainability Evaluation (TRBAM-25-04089) - B431
Tao Han/Southeast University, Tao Ma/Southeast University, Jiangyin Xiao/Southeast University, Zhengxian Dong/Southeast University, Yuxuan Ji/Southeast University
A Framework for Bridging Paradigms: Integrating Circularity and Sustainability in Pavement Maintenance (TRBAM-25-04972) - B430
Avishreshth Singh/Delft University of Technology, Aikaterini Varveri/Delft University of Technology
Multiscale Investigation of In-Situ Porous Asphalt Pavement Degradation: Pavement Condition, Mixture Performance, and Micro-Morphology (TRBAM-25-03209) - B454
Shuheng Yu/Southeast University, Fujian Ni/Southeast University, Jiwang Jiang/Southeast University, Jingling Wang/Southeast University, Zhu Zhang/Southeast University
Assessing Flooding Impact on Flexible Pavement Using AASHTO 1993 Method with Various Subgrade Modulus Approaches (TRBAM-25-02306) - B442
Xiao chen/Rutgers University, Hao Wang/Rutgers University
Impact of MERRA-2 Longwave Radiation and Soil Temperature on Pavement Temperature Prediction (TRBAM-25-02700) - B441
Ashith Marath/Rowan University, Surya Teja Swarna/Rowan University, Yusuf Mehta/Rowan University
Climate Resilience in Mechanistic-Empirical Flexible Pavement Analysis – Investigation of Impacts for Subsurface Pavement Temperature from Average Ensemble and Individual Global Climate Model Selection Routines (TRBAM-25-05315) - B434
Austin Jarrell/Federal Highway Administration (FHWA), James Bryce/Federal Highway Administration (FHWA)
Climate-Informed Thermochromic Coatings for UHI Mitigation (TRBAM-25-05638) - B421
Richa Bhardwaj/University of Illinois, Urbana-Champaign, Jeffery Roesler/University of Illinois, Urbana-Champaign, Sushobhan Sen/University of Illinois, Urbana-Champaign
Integrating Wireless Power Transfer Systems into Asphalt Pavements: A Thermal Analysis (TRBAM-25-04172) - B422
Pedram Sirgani/University of Texas at El Paso, Rajib Mallick/University of Texas at El Paso, Dr. Soheil Nazarian/University of Texas at El Paso

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Research in Transportation Equity

Tracee Strum-Gilliam, PRR, Inc., presiding

Sponsored By Standing Committee on Equity in Transportation

This session shares the most up-to-date research on transportation equity. Topics range across modes of transportation and methods of analysis.

Transportation Access Equity Analysis in Two U.S. Cities Using Bayesian Inference-Based Logsum Compensating Variation Metrics (TRBAM-25-00050) - B559

Omid Armantalab/University of Nebraska, Lincoln, Jason Hawkins/University of Nebraska, Lincoln, Md Sami Hasnine/University of Nebraska, Lincoln

Transport, Inequality, and Policy Feedback (TRBAM-25-00118) - B558

Xavier Harmony/Northern Virginia Transportation Commission, Anthony Perl/Northern Virginia Transportation Commission

Estimating Disadvantaged Populations Based on Public Data: A Method for Transportation Programming (TRBAM-25-00287) - B557

Yiqing Xu/Virginia Transportation Research Council, Lance Dougald/Virginia Transportation Research Council

Equity, Diversity, and Inclusion in Cycling: An Umbrella Review and Way Forward (TRBAM-25-00292) - B590

Khashayar Kazemzadeh/University of Cambridge, James Woodcock/University of Cambridge, Kristen MacAskill/University of Cambridge

Addressing Transportation Disparities through Targeted Investments: A Case of Shared Micromobility Programs (TRBAM-25-00304) - B556

Lauren McCarthy/George Mason University

Pathways to Participation: Ensuring Voting Access for HBCUs (TRBAM-25-00343) - B555

Sally Ayuk/University of Texas, Arlington

Exploring How Emerging Mobility Services Affect Equity: A Framework with Reachability-based Employment Access as the Key Indicator (TRBAM-25-00662) - B572

Yuesong Ding/University of Calgary, Abebe Dress Beza/University of Calgary, Merkebe Getachew Demissie/University of Calgary, Lina Kattan/University of Calgary, Santi Phithakkitnukoon/University of Calgary

Study on Accessibility and Equity of Multi-Scenario Land Transportation in Urban Agglomeration (TRBAM-25-00762) - B554

Simeng Guo/No Organization, Jin Zhang/No Organization

Spatiotemporal Variations in Accessibility and Transport Equity: Lessons from Athens, Greece (TRBAM-25-01850) - B582

Stefanos Tsigdinos/National Technical University of Athens (NTUA), Theodore Chatziioannou/National Technical University of Athens (NTUA), Panagiotis Tzouras/National Technical University of Athens (NTUA), Konstantinos Kepaptsoglou/National Technical University of Athens (NTUA)

Potentials and Limitations of Large-Scale Mobile Device Location Data for Food Access Analysis (TRBAM-25-02583) - B569

Duanya Lyu/Auburn University, Luyu Liu/Auburn University, Catherine Campbell/Auburn University, Yuxuan Zhang/Auburn University, Xiang Yan/Auburn University

Unraveling the Determinants of Unmet Travel Needs in the United States: Insights from the 2022 National Household Travel Survey (TRBAM-25-02684) - B568

Baldev Giri/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

Tradable Equity Credits (TECs) and Internalized Revenue Maximization: A Nonlinear Programming Model for Promoting Equitable Public Transit Services (TRBAM-25-02724) - B580

Xin Wu/Villanova University, Kailun Liu/Villanova University, Dongyang Zhen/Villanova University, Ya Ji/Villanova University, Xinshu Shang/Villanova University, Qingbin Cui/Villanova University, Chenfeng Xiong/Villanova University

Exploring the Influence of Transportation Equity Factors on Pedestrian Crashes in Louisiana (TRBAM-25-02815) - B567

Nurul-Haq Mohammed/Louisiana Transportation Research Center (LTRC), Milhan Moomen/Louisiana Transportation Research Center (LTRC), M. Ashifur Rahman/Louisiana Transportation Research Center (LTRC), Kelvin Terkper/Louisiana Transportation Research Center (LTRC), Julius Codjoe/Louisiana Transportation Research Center (LTRC)

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How Equitable Are Our Investments in Nonmotorized Transportation? A Justice40 Analysis of Transportation Alternatives Grants (TRBAM-25-02829) - B579
Gwyn Kash/OST-R/Volpe Center, Steve Suder/OST-R/Volpe Center, Christopher Douwes/OST-R/Volpe Center, Keven Sandoval/OST-R/Volpe Center
The Efficiency-Equity Tradeoff of Congestion Mitigation Schemes: A Comparative Study on a Bimodal Network (TRBAM-25-03038) - B578
Benjamin Rosenblad/University of Michigan, Xi Lin/University of Michigan, Yafeng Yin/University of Michigan
Which Transportation Barriers Contribute to Transportation-Related Social Exclusion among Young Adults? (TRBAM-25-03082) - B577
Attiya Haseeb/Toronto Metropolitan University, Raktim Mitra/Toronto Metropolitan University
Structural Barriers to Service for Marginalized Groups in Centralized Transport Planning Systems: Lessons from the Israeli Case (TRBAM-25-03213) - B552
David Weinreich/University of Bergen, Karel Martens/University of Bergen
Advancing Equity in China's Vehicle Electrification (TRBAM-25-03508) - B575
Qianqian Yan/South China University of Technology, Zhenhong Lin/South China University of Technology, Xiaotong Yin/South China University of Technology, Runzhe Xu/South China University of Technology, Kaibo Pang/South China University of Technology, Qiyue Chen/South China University of Technology, Shiqi Ou/South China University of Technology, Peiqun Lin/South China University of Technology, Huanhuan Ren/South China University of Technology
How Pedestrian-Friendly Is the Built Environment in Dubai, UAE, on a Hot Summer Day? (TRBAM-25-03632) - B574
Xuan He/Chinese University of Hong Kong, Jianxiu Wen/Chinese University of Hong Kong
Urban Mobility Reveals Social Barriers of Charging Infrastructure Accessibility (TRBAM-25-03758) - B573
Hossein Gazmeh/Rice University, Qi Wang/Rice University, Yuntao Guo/Rice University, Xinwu Qian/Rice University
Using Machine Learning to Understand Electric and Hybrid Vehicle Ownership in Disadvantaged and Non-Disadvantaged Communities (TRBAM-25-03905) - B563
Zeeshan Aslam/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville, Moetasim Ashfaq/University of Tennessee, Knoxville
Exploring Equity Frameworks for a Cross-Jurisdictional Vehicle Miles Traveled Mitigation Program in Santa Clara County, California (TRBAM-25-04016) - B589
Serena Alexander/Northeastern University, Luana Chen/Northeastern University, Maxwell Belote-Broussard/Northeastern University
Exploring Road Safety Disparities and Crash Factors in Disadvantaged Communities (TRBAM-25-04187) - B550
Ruqaya Alfaris/Rowan University, Deep Patel/Rowan University, Mohammad Jalayer/Rowan University
Exploring the Relationship between Transportation Cost Burden and Mental Health in Disadvantaged Communities, while Addressing Endogeneity (TRBAM-25-04355) - B564
A. Latif Patwary/University of Tennessee, Knoxville, Sheikh Muhammad Usman/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville
Understanding Transportation Equity Through Alternative Mobility Options (TRBAM-25-04459) - B588
Utkuhan Genc/Purdue University, Hao Luo/Purdue University, Hua Cai/Purdue University
Individual Ease of Movement Analysis Using Anonymous Global Position System (GPS) Movement Data (TRBAM-25-04530) - B553
Zhengrong Li/Technion - Israel Institute of Technology, Karel Martens/Technion - Israel Institute of Technology
Evaluating Network-Level Social Equity for Bridge Conditions: A Quantitative Approach (TRBAM-25-04758) - B587
Chirag Kothari/WSP, Bharathwaj Sankaran/WSP
Investigation of Transportation Barriers to Healthcare Services in Rural Illinois (TRBAM-25-04798) - B586
Maryam Yousefibaseri/University of Illinois, Chicago, Yi-Ling Cheng/University of Illinois, Chicago, Jane Lin/University of Illinois, Chicago
Driving Equity: Are There Differences in Public Interest Toward Automated Vehicles' Ownership in Disadvantaged and Non-Disadvantaged Communities? (TRBAM-25-04872) - B565
Sheikh Muhammad Usman/University of Tennessee, Knoxville
Achieving Equity in EV Charging: Spatial and AI-Driven Evidence from Maryland (TRBAM-25-04999) - B581
Dongyang Zhen/University of Maryland, College Park, Samrad Babaee/University of Maryland, College Park, Zahra Halimi/University of Maryland, College Park, Qingbin Cui/University of Maryland, College Park
Being at the Table or on the Menu: A Look Into Transportation Equity and Justice Through the Eyes of Black Transportation Practitioners (TRBAM-25-05319) - B585
Angela Johnson-Rodriguez/Rutgers University

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A Framework for Equity Performance and Output Measures in Post-IIJA State Freight Plans (TRBAM-25-05377) - B584
Christopher Lindsey/Cambridge Systematics, Inc., Clay Barnes/Cambridge Systematics, Inc., Elaine McKenzie/Cambridge Systematics, Inc., Christopher Lamm/Cambridge Systematics, Inc.
A Multi-Dimension and High-Granularity Equity Measurement for Transportation Services Through Accessibility and Reliability (TRBAM-25-05439) - B583
Mengke (Enola) Ma/New York University, Zilin Bian/New York University, Jingqin Gao/New York University, Hai Yang/New York University, Joseph Chow/New York University, Kaan Ozbay/New York University
Public Transportation Accessibility and Its Impact on Minority and Women Entrepreneurs in Baltimore (TRBAM-25-05460) - B562
Ramina Javid/Morgan State University, Eazaz Sadeghvaziri/Morgan State University, Parisa Masoumi/Morgan State University, Ehsan Mehryaar/Morgan State University, Mansoureh Jeihani/Morgan State University
Exploring Willingness to Use and Share Self-Driving On-Demand Transportation Services: Insights from a Nationwide Survey with a Focus on Marginalized Populations (TRBAM-25-05511) - B591
Kyuhyun Lee/Texas A&M Transportation Institute, Ipek Sener/Texas A&M Transportation Institute
Reliable Accessibility for Constrained Transit Riders: An Examination of Benefits of an Integrated Accessibility-Reliability Measure. (TRBAM-25-05522) - B592
Oluwanifemi Adegbulugbe/HNTB, Tierra Bills/HNTB
Electric Vehicle Charging Utilization in Disadvantaged and Non-Disadvantaged Communities (TRBAM-25-05609) - B593
Camila Colandré/University of Rhode Island, Mehrsa Khaleghikarahrodi/University of Rhode Island, Tim Jonas/University of Rhode Island, Gretchen Macht/University of Rhode Island
Harnessing Generative Models for Equity in Transportation: A Survey (TRBAM-25-05640) - B594
Bo Yu/University of Utah, Chenxi Liu/University of Utah
Unpacking Transportation Equity: A Contemporary Literature Review and Qualitative Analysis (TRBAM-25-05770) - B551
Ruqaya Alfaris/Rowan University, Mohammad Jalayer/Rowan University
Different Slopes for Different Folks: How and Why Do Associations between Walkability and Walking Behavior Vary across Sociodemographic Groups? (TRBAM-25-05993) - B595
Lindsay Braun/University of Illinois, Urbana-Champaign
We Want Justice! What Does It Mean In Terms Of Mobility? (TRBAM-25-06389) - B596
David Duran-Rodas/Technical University of Munich, Nurefsan Ahmed/Technical University of Munich, Fernanda Navarro/Technical University of Munich
Assessing the Benefits to Disadvantaged Communities of the Federally-Funded EV Infrastructure Rollout: Learning from the three Research Lenses of the JUST Lab Consortium (TRBAM-25-06249) - B597
Margaret Taylor/Lawrence Berkeley National Laboratory, K. Sydny Fujita/Lawrence Berkeley National Laboratory, Alexia Holloway/Lawrence Berkeley National Laboratory, Alana Wilson/Lawrence Berkeley National Laboratory, James Supeyo/Lawrence Berkeley National Laboratory, Marcy Rood/Lawrence Berkeley National Laboratory

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Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Current Research in Railroad Infrastructure
Stephen Wilk, Association of American Railroads, presiding
Sponsored By Standing Committee on Railroad Infrastructure Design and Maintenance

This session will present posters on railroad infrastructure design, construction, and maintenance.

A Potential Field-RRT-Star Algorithm for Mountain Railway Alignment Optimization Incorporating Environmental Suitability Analysis (TRBAM-25-00042) - A240
Xinjie Wan/Central South University, Hao Pu/Central South University, Paul Schonfeld/Central South University, Yang Ran/Central South University, Taoran Song/Central South University, Wei Li/Central South University, Ting Hu/Central South University, Lihui Peng/Central South University
YOLO-Rail: Continuous Incremental Learning for Obstacle Detection in Railway Operations (TRBAM-25-00174) - A243
Zengqing Wang/Beijing Jiaotong University, Zhengyu Xie/Beijing Jiaotong University, Mengting Lu/Beijing Jiaotong University

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Automatic Potential Safety Hazard Detection for High-Speed Railroad Surrounding Environment Using Lightweighted Hybrid Detect and Segment Architecture (TRBAM-25-00765) - A241
Zheda Zhao/Kunming University, Yu Qian/Kunming University, Yunpeng Wu/Kunming University, Lei Kou/Kunming University, Wenwen Qin/Kunming University, Zhen Yang/Kunming University, Fengxiang Guo/Kunming University
Quantifying the Vulnerability of Railway Switches and Crossings to Climate Change (TRBAM-25-00919) - A247
Katherine Dodds/University of Edinburgh, Robert De Bold/University of Edinburgh, Michael Forde/University of Edinburgh, Sin Sin Hsu/University of Edinburgh, Carlton Ho/University of Edinburgh
An Efficient Design Method for High-Speed Railway Track Geometric Irregularity Maintenance Scheme based on Inspection Principle and Pareto Theory (TRBAM-25-01530) - A250
Huakun Sun/Southwest Jiaotong University, Ping Wang/Southwest Jiaotong University, Qing He/Southwest Jiaotong University
Large-Scale Triaxial Test on Deformation of Fouled Ballast in Different Weather Conditions (TRBAM-25-01593) - A242
Phuriwit Jaikaew/University of South Carolina, Yu Qian/University of South Carolina, Shihao Huang/University of South Carolina
Automation Railway Fastener Tightness Detection Based on Instance Segmentation and Monocular Depth Estimation (TRBAM-25-01928) - A252
Qiang Yin/Central South University, Weidong Wang/Central South University, Jin Wang/Central South University, Shi Qiu/Central South University, Jun Peng/Central South University
Hybrid Prestressing System for Concrete Crossties Using Localized Shape Memory Alloys (TRBAM-25-02399) - A254
Ernesto Pérez-Claros/University of Illinois, Urbana-Champaign, Bassem Andrawes/University of Illinois, Urbana-Champaign
Statistical Analysis of Inspection Records of Railroad Point Machines using Weibull Hazard Model (TRBAM-25-02675) - A251
Wataru Inaba/Railway Technical Research Institute, Kodai Matsuoka/Railway Technical Research Institute
Under-tie Ballast Condition Assessment via Near-Infrared Spectroscopy: A Feasibility Study (TRBAM-25-04040) - A245
Boshra Besharatian/University of North Dakota, Sattar Dorafshan/University of North Dakota
Advanced monitoring of Rail track beds with locomotive-mounted Ground Penetrating Radar (TRBAM-25-04425) - A244
Syed Mostaquim Ali/University of Western Ontario, Mohamed Zaki/University of Western Ontario, Juan Hiedra Cobo/University of Western Ontario, Oliver Wang/University of Western Ontario
Rail Track Monitoring with Distributed Acoustic Sensing (DAS) System (TRBAM-25-04613) - A253
Bibek Parajuli/Oklahoma State University, Mahsa Gharizadehvarnosefaderani/Oklahoma State University, Daria Damm/Oklahoma State University, Md. Fazle Rabbi/Oklahoma State University, Bernd Drapp/Oklahoma State University, Andreas Pooch/Oklahoma State University, Debakanta Mishra/Oklahoma State University
Evaluation of Electrical Resistivity Imaging for Assessing Ballast Fouling in Railway Tracks (TRBAM-25-06255) - A246
A Q M Zohuruzzaman/Jackson State University, Saimum Hossain/Jackson State University, Mahdi Zulfikar/Jackson State University, Rakesh Salunke/Jackson State University, Sadik Khan/Jackson State University, Abby Cisko/Jackson State University, Theodore Sussmann/Jackson State University, Hugh Thompson/Jackson State University
Reconstructing the Wheel-Rail Trajectory over Railroad Frogs at Scale Using a Digital Twin (TRBAM-25-06457) - A248
Louis Saade/Konux, Marko Milošević/Konux, Immo Söllner/Konux
The Robust Heavy-haul Train Scheduling Method in Marshalling Railway Station (TRBAM-25-06173) - A255
Xueyong Lu/Beijing Jiaotong University, Zhian Qiu/Beijing Jiaotong University, Hongwei Wang/Beijing Jiaotong University, Xi Wang/Beijing Jiaotong University, Xin Yang/Beijing Jiaotong University

3048

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Recent Advances in Rail Safety Research
Jason Wornoff, Federal Railroad Administration (FRA), presiding
Sponsored By Standing Committee on Rail Safety

This session will present posters that describe research in rail safety.

(continued)

How Stress and Cognitive Functions Affect Time/Movement Anticipation in Train Dispatchers? (TRBAM-25-00626) - A230
Ahmad Dehghan/Iran University of Science and Technology, Morteza Bagheri/Iran University of Science and Technology, Ali Khanpour/Iran University of Science and Technology, Vahid Sadeghi Firoozabadi/Iran University of Science and Technology, Hadi Mirasadi/Iran University of Science and Technology
Rail Dark-You Only Look Once (RD-YOLO): Multiscale Feature Fusion Detection Network for Low-Light Railway Scenes (TRBAM-25-01071) - A231
Jiali Wang/Beijing Jiaotong University, Zengqing Wang/Beijing Jiaotong University, Zhengyu Xie/Beijing Jiaotong University, Junyan Mao/Beijing Jiaotong University
Analysis of Mass Rail Transit Accidents at Ishikawa, Human Factors Analysis and Classification System (HFACS) and Decision-Making Trail and Evaluation Laboratory (DEMATEL) (TRBAM-25-01074) - A232
Fuh Shyong Yang/National Cheng Kung University, Yung Cheng/National Cheng Kung University
Review of Emergency Egress and Rescue Challenges in Rail Tunnels, from Fire Command Perspective (TRBAM-25-03090) - A233
Gary English/Underground Command and Safety, Harold Levitt/Underground Command and Safety
Identifying Risk Factors for Derailment Using Logistic Regression and Ensemble Learning Approaches (TRBAM-25-04234) - A234
Habeeb Mohammed/North Carolina A&T State University, Rongfang (Rachel) Liu/North Carolina A&T State University, Liu Lv/North Carolina A&T State University
Expertise Management for U.S. Railroad Safety Leadership Positions (TRBAM-25-05098) - A235
Michael Coplen/TrueSafety Evaluation, LLC, Brian Moon/TrueSafety Evaluation, LLC, Juna Snow/TrueSafety Evaluation, LLC, Cara Menges/TrueSafety Evaluation, LLC
High-Speed Rail Driver Stress Detection Using Multimodal Features of Electrocardiogram and Respiration Signals (TRBAM-25-00888) - A236
Kun Liu/Southwest Jiaotong University, Chenglin Liu/Southwest Jiaotong University, Yubo Jiao/Southwest Jiaotong University, Yantong Jin/Southwest Jiaotong University, Tong Wang/Southwest Jiaotong University, Chaozhe Jiang/Southwest Jiaotong University
Development and Initial Evaluation of the Short Line Safety Institute Safety Climate Survey Short Form (TRBAM-25-03056) - A237
Samantha Lacey/Short Line Safety Institute, Julia Leone/Short Line Safety Institute, Janet Barnes-Farrell/Short Line Safety Institute

3049

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Inland Waterway Transportation Research
Mehdi Azimi, Texas Southern University, presiding
Sponsored By Standing Committee on Inland Water Transportation

These posters will highlight recent research related to inland waterway transportation.

Assessment of Waterway Lock Service Quality in the Yangtze Delta: Perspectives from Customers and Suppliers (TRBAM-25-00495) - A227
Wenzhang Yang/Southeast University, Shangkun Jiang/Southeast University, Peng Liao/Southeast University, Hao Wang/Southeast University
Quantifying Freight Modal Shift Barriers to Inland Waterways: A Cross-Continental Comparison between Europe and Asia (TRBAM-25-06002) - A228
Silvia Dopler/Indian Institute of Technology, Pankaj Gupta/Indian Institute of Technology, Denise Beil/Indian Institute of Technology, Agnivesh Pani/Indian Institute of Technology, Lisa-Maria Putz-Egger/Indian Institute of Technology, Ankit Gupta/Indian Institute of Technology

3050

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Research in Marine Environment

Michael Aldridge, U.S. Environmental Protection Agency (EPA), presiding

Sponsored By Standing Committee on Marine Environment

A Novel Method for Calculating Fuel Sulfur Content of Ships Without Relying on CO2 Concentration (TRBAM-25-01226) - A221

Chao Wang/Jinling Institute of Technology, Xueyao Li/Jinling Institute of Technology, Hao Wu/Jinling Institute of Technology, Zhirui Ye/Jinling Institute of Technology

Comprehensive Methodology for Assessment of Road Transport Emissions in Seaports: Port of Barcelona Case Study (TRBAM-25-03943) - A222

Matteo Boschian Cuch/Center For Innovation in Transport - CENIT, Maurici Hervas/Center For Innovation in Transport - CENIT, Joaquim Cortes/Center For Innovation in Transport - CENIT, Sergi Sauri/Center For Innovation in Transport - CENIT

Developing a Port Commercial Maritime Vessel Emission Inventory Using Publicly Accessible Data (TRBAM-25-04633) - A223

Tao Li/Texas A&M Transportation Institute, Minci Sun/Texas A&M Transportation Institute, Madhusudhan Venugopal/Texas A&M Transportation Institute, Jim Kruse/Texas A&M Transportation Institute, Rodolfo Souza/Texas A&M Transportation Institute, Guo Quan Lim/Texas A&M Transportation Institute

3051

Tuesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Advanced Analytical Methods to Enhance Maritime Safety for Vessel Encounter and Waterways

Joseph Myers, ABS Consulting, presiding

Sponsored By Standing Committee on Marine Safety and Human Factors

Prediction of Ship Trajectories Considering Collision Avoidance Intentions During Encounters (TRBAM-25-05612) - A224

Wei He/MinJiang University, Chuanguang Zhu/MinJiang University, Yangjie Chen/MinJiang University, Jinyu Lei/MinJiang University

Level of Service Evaluation Method for Waterways Based on Vessel Displacement (TRBAM-25-01998) - A225

Yihua Liu/Shanghai Maritime University, Menglin Wang/Shanghai Maritime University

A Probabilistic Model for Decision-Making Based on the Study of Ship Overtaking Behavior in Straight Channel (TRBAM-25-01996) - A226

NIAN LIU/Shanghai Maritime University, Yihua Liu/Shanghai Maritime University

Tuesday, 09:00 a.m. - 04:00 p.m., Convention Center, Hall D&E

Exhibits

Sponsored By Technical Activities Council

Plan to visit over 200 exhibits, including the TRB booth, showcasing the many transportation-related products and services. View the floor plan and interactively search for exhibiting organizations on the Mobile App. Between sessions, food concessions are available in the Exhibit Hall.Located in the exhibit hall, the Solutions Showcase theaters will feature presentations from exhibiting and patron organizations on the goods, services, and solutions they provide. Presentations begin every half hour during exhibit hours, and are 30 minutes in length. For a list of presentations, see the mobile app (available in early December) or the onsite printed program.

(continued)

Tuesday, 09:30 a.m. - 04:00 p.m., Convention Center, Exhibit Hall D Theater

Solutions Showcase Theater

Sponsored By Technical Activities Council

The Solutions Showcase Theater is your opportunity to hear from exhibitors and patrons about the newest trends and products in the transportation industry. Participating companies will give 30-minute presentations on goods, services, and solutions their organizations provide. 9:30 AM Cyvl - Empowering Municipal Decision-Making with Advanced Data Analytics: Cyvl's Solutions for Sustainable Infrastructure Planning10:30 AM Dareesoft Inc. - AI Transforming Road Management: Case Studies11:30 AM Skydio - From Snowfall to Spring Thaw: Year-Round Benefits of Remote Drone Technology for Corridor Management12:30 PM Cambridge Systematics, Inc. - Resilient Transportation Networks and Climate-Ready Communities: Big Data Solutions to Plan for the Future1:30 PM IEEE - IEEE National Transportation Data & Analytics Solutions (NTDAS): Driving Global Roadways Research with Real-World Vehicle Data Analytics Platform2:30 PM Intelligent Engineering ConnectionsIncorporated - TWINSA: Breakthrough in Boundary Condition Lifecycle Management --- Transcending Structural Health Monitoring: The Era of Adaptive Digital Twin

3052

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon B

Shaping the Future of Transportation: Career Insights and Strategies from Emerging Leaders

Lauren Gardner, Vanderbilt University, presiding

Niloo Parvinashtiani, Iteris Inc., presiding

Ryan Dittoe, Mead & Hunt, Inc., presiding

Sponsored By Young Members Coordinating Council, Subcommittee on Data, Planning, and Analysis Group Young Members, Subcommittee on Policy and Organization Group Young Members, Subcommittee on Transportation Infrastructure Group Young Members, Subcommittee on Young Members-Sustainability and Resilience, Subcommittee on Young Members-Aviation

In this session, young leaders in transportation will offer practical advice for those starting their careers, transitioning to new roles, or looking to expand their skill sets. The event will feature a mode-specific panel with leaders from infrastructure, aviation, freight, and public transportation, alongside a panel focused on cross-cutting topics like safety, resilience, sustainability, operations, policy, data, and planning. Panelists will highlight key skills, competencies, and industry trends within the field that will be useful for career mobility. They will also discuss how they tackle critical issues such as climate change, equity and inclusion, road safety, public health, and building a competitive economy throughout.

Young Member Panel - Modal-focused Topics (P25-20312)

Hoda Azari/Federal Highway Administration (FHWA), Sofia Perez-Guzman/Georgia Institute of Technology, Sanskrit Singh/WSP, Stephanie Atallah/WSP, Jhony Habbouche/Asphalt Institute

Young Member Panel - Crosscutting Topics (P25-20076)

Dan Malsom/Kimley-Horn and Associates, Inc., Melrose Pan/Oak Ridge National Laboratory, Mike Sellinger/Alta Planning + Design, Agnimitra Sengupta/HNTB, Emily Lindsey/Denver Regional Council of Governments (DRCOG)

3053

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon C

Interstate Highway System Operational Resilience and Digital Infrastructure

John Corbin, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Intelligent Transportation Systems

This session will explore the national security and economic significance of the Interstate Highway System. Speakers will review the origins and condition of the Interstate Highway System and highlight recent research and deployments to understand the scale of operational and structural needs and enhancement opportunities. Further, speakers will discuss priority actions, frameworks, and policy issues related to modernization and investment, cybersecurity, decarbonization, supply chain vulnerabilities, geopolitical disruptions, data interoperability and standards, and other key considerations to ensure operational resilience through integration and scale of transportation digital infrastructure and associated technologies.

Session Purpose and Overview (P25-20750)

John Corbin/Federal Highway Administration (FHWA)

The Context of National Transportation Network Resilience (P25-21180)

Ashley Simmons/Coalition for Reimagined Mobility

The Origins and Condition of the Interstate Highway System (P25-21181)

Kirk Steudle/Steudle Executive Group

The Status of Intelligent Transportation Systems and Roadway Digital Technology at National Network Scale (P25-21182)

Deepak Gopalakrishna/ICF

Critical Issues: Moderated Executive Panel (P25-21183)

Ashley Simmons/Coalition for Reimagined Mobility, Russell McMurry/Georgia Department of Transportation, Scott Marler/Iowa Department of Transportation, Victoria Kramer/Nebraska Department of Transportation, Tracy Larkin Thomason/Nevada Department of Transportation, Darran Anderson/Texas Department of Transportation

Reflection on Key Points and Urgent Opportunities (P25-20751)

John Corbin/Federal Highway Administration (FHWA)

3054

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon A

Large-Scale Multimodal Traffic Modeling

Ali Zockaie, Michigan State University, presiding

Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

This session is about large-scale network modeling and control focusing on multi-modal applications.

Cooperative Route Guidance and Flow Control for Mixed Road Networks Comprising Expressway and Arterial Network (TRBAM-25-01562)

Yunran Di/University of Wisconsin, Madison, Haotian Shi/University of Wisconsin, Madison, Weihua Zhang/University of Wisconsin, Madison, Heng Ding/University of Wisconsin, Madison, Xiaoyan Zheng/University of Wisconsin, Madison, Bin Ran/University of Wisconsin, Madison

The Thermodynamics of Traffic Flow: The City as an Engine (TRBAM-25-03838)

Jorge Laval/Georgia Institute of Technology, Garyoung Lee/Georgia Institute of Technology

Congestion Pricing in Multi-Modal Networks: An Application of Deep Reinforcement Learning (TRBAM-25-05297)

Nasser Parishad/University of Queensland, Mehmet Yildirimoglu/University of Queensland, Mark Hickman/University of Queensland

Multi-Region Perimeter Control In Complex Urban Environments: A Decentralized Approach Using Reinforcement And Imitation Learning (TRBAM-25-03575)

Emmanouil Kampitakis/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)

(continued)

Unveiling Challenges in Empirical Estimation of Multimodal Network Macroscopic Fundamental Diagrams: A Data Fusion Perspective (TRBAM-25-03673)
Nandan Maiti/University Gustave Eiffel, Manon Seppecher/University Gustave Eiffel, Ludovic Leclercq/University Gustave Eiffel

3055

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 102B
Strategies for Law Enforcement to Advance Traffic Safety
Nicole Oneyear, Federal Highway Administration (FHWA), presiding
Grady Carrick, Enforcement Engineering, Inc., presiding
Sponsored By Standing Committee on Traffic Law Enforcement

Improving Law Enforcement Response by Utilizing Crowdsourced Data to Complement Computer-Aided Dispatch Data (TRBAM-25-01461)
Majed Alkrdy/University of Central Florida, Aws Alott/University of Central Florida, Adrian Sandt/University of Central Florida, Haitham Al-Deek/University of Central Florida, Grady Carrick/University of Central Florida, Shahad Ibrahim/University of Central Florida
Integrated Analysis for Effective Traffic Police Enforcement: A Spatiotemporal Network Kernel Density Estimation Approach (TRBAM-25-04859)
Jaeyeong Lee/Seoul National University, Shin Hyoung Park/Seoul National University, Chungwon Lee/Seoul National University
Best Practices for Automated Speed Enforcement: Results from a Semi-Structured Interview of Agencies in the United States (TRBAM-25-04869)
Sophia Semensky/Portland State University, Miguel Figliozzi/Portland State University
A Comprehensive Analysis of Crash Hotspot Identification Methods for Law Enforcement Resource Allocation (TRBAM-25-06103)
Jingwen Zhu/University of Wisconsin, Madison, Steven Parker/University of Wisconsin, Madison, Pei Li/University of Wisconsin, Madison, Bin Ran/University of Wisconsin, Madison, David Noyce/University of Wisconsin, Madison

3056

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 103A
Intriguing Trends in Impaired Driving
Tara Casanova Powell, Association of Transportation Safety Information Professionals, presiding
Ryan Smith, National Transportation Safety Board (NTSB), presiding
Sponsored By Standing Committee on Impairment in Transportation

Boating Under the Influence (TRBAM-25-02401)
Jonathan Hsieh/U.S. Coast Guard (USCG)
Identifying Patterns in Risk Factors and Injury Severity Scores in Substance-Related Traffic Crashes (TRBAM-25-05229)
Mahmuda Mimi/Texas State University, Rohit Chakraborty/Texas State University, Swastika Barua/Texas State University, Subasish Das/Texas State University, Md Nasim Khan/Texas State University, Bahar Dadashova/Texas State University
Cannabis Use And Driving Patterns in California Following Legalization Of Recreational Use (TRBAM-25-02702)
Linda Hill/University of California, San Diego, Daniel Ageze/University of California, San Diego, Renee Dell'Acqua/University of California, San Diego, Alice Gold/University of California, San Diego, Ilene Lanin-Kettering/University of California, San Diego, Thomas Shaughnessy/University of California, San Diego, Thomas Marcotte/University of California, San Diego

3057

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 150B

Analysis of International Road Safety Data

Chou-Lin Chen, National Highway Traffic Safety Administration (NHTSA), presiding

Stephen Perkins, International Transport Forum, presiding

Sponsored By Standing Committee on Statewide/National Transportation Data and Information Management, International Coordinating Council, Subcommittee on Traffic Safety Data

The session, organized by the International Transport Forum (ITF) Group on International Road Traffic Safety Data (IRTAD), will bring together leading experts from various countries to discuss latest trends in road safety. It will highlight key global developments in road safety, focusing on topics such as the use of technology in data collection and analysis, and the impact of new mobility trends like electric vehicles and micromobility.

ITF 2024 Annual Report on Road Safety: Key International Trends and Conclusions (P25-20147)

Dominique Mignot/University Gustave Eiffel

Road Safety Developments in the United States (P25-20160)

Chou-Lin Chen/National Highway Traffic Safety Administration (NHTSA)

Using AI and Big Data for Road Safety Data Collection and Analysis (P25-20161)

James Bradford/International Road Assessment Program

Analysis of Speed Data from Multiple Sources: A Case Study in Bogota (P25-20165)

David Perez-Barbosa/World Resources Institute

Analysis of Crash and Mobility Data Involving Micromobility in Korea (P25-20164)

Hyo Seung Han/KoROAD: Road Traffic Authority

Crash Risk Data and Vehicle Types: Trends in Crashes with Electric Vehicles in Denmark (P25-20163)

Mette Møller/Danmarks Tekniske Universitet, Thomas Skallebæk Buch/Danish Road Directorate

Review of City-Wide 30 km/h Speed Limit Benefits in Europe (P25-20162)

George Yannis/National Technical University of Athens (NTUA)

3058 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 151A

Innovative State Department of Transportation Strategies for Selecting and Managing Projects

Charles Stoll, California Department of Transportation, presiding

Sponsored By Standing Committee on Transportation Planning Policy and Processes, Standing Committee on Strategic Management, Standing Committee on Performance Management, Standing Committee on Economics and Finance

This session will focus on innovative state DOT practices for project screening and selection, performance management, and cost contingency allowances. Presentations will discuss GIS tools to improve stakeholder communication and project management for various projects. Lessons learned from Florida DOT's Source Book, a central repository for performance and asset conditions for multimodal facilities, can help improve understanding and communication with stakeholders regarding the performance of multimodal systems. The effectiveness of contingency allowances for different project components (e.g., construction, right-of-way) can be evaluated and how management reserve can be utilized to cover cost overruns not covered by contingency allowance.

Rethinking Project Selection: Innovative Screening and Evaluation for Arizona DOT's Transportation Alternatives Program (TRBAM-25-00872)

Brittany Gernhard/High Street Consulting Group, LLC, Jason Biernat/High Street Consulting Group, LLC, Crystal Fernandez-Pena/High Street Consulting Group, LLC, Bret Anderson/High Street Consulting Group, LLC

Beyond Dashboards: The FDOT Source Book Tells the Story of Florida's Transportation System Performance & Trends (TRBAM-25-01348)

Yihang Sui/Kittelson & Associates, Inc., Jane Lim-Yap/Kittelson & Associates, Inc., Rebecca Marsey/Kittelson & Associates, Inc., Monica Zhong/Kittelson & Associates, Inc., Rolando Valdes/Kittelson & Associates, Inc., Arthur Nelson/Kittelson & Associates, Inc.

A Comprehensive Assessment of Contingency Allowances for NCDOT Transportation Projects: Enhancing the Current Project Cost Management Process (TRBAM-25-05269)

Abdullah Alsharef/King Saud University, Daniel Findley/King Saud University, Edward Jaselskis/King Saud University

3059

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 151B

Novel Transportation Demand Management Strategies

Sabyasachee Mishra, University of Memphis, presiding

Lisa Kay Schweyer, Foursquare Integrated Transportation Planning, presiding

Sponsored By Standing Committee on Transportation Demand Management

This lectern session consists of four high-quality presentations, including novel Transportation Demand Management Strategies, including pick-up and drop-off mobility-on-demand services, e-scooters to reduce parking congestion, GPS data to manage commute demand, and efficient management of EV charging.

Analyzing the Effects of Pick-Up and Drop-Off (PUDO) Duration and its Stochasticity on Mobility-On-Demand Services (TRBAM-25-05840)

Santiago Álvarez-Ossorio Martínez/Technical University of Munich, Florian Dandl/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

Using E-Scooters to Reduce Chicago Parking-Related Congestion: A Multimodal Integration Deployment Study (TRBAM-25-05040)

Natalia Zuniga-Garcia/Argonne National Laboratory, Jan Zill/Argonne National Laboratory, Tom McCoy/Argonne National Laboratory, Jamie Ponce/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory

Potential for Commuting Demand Management: Analysis of Day-to-Day Modal Variability Based on a One-Year GPS-Tracking Dataset (TRBAM-25-03946)

Isabella Waldorf/Technical University of Munich, Allister Loder/Technical University of Munich, Johannes Müller/Technical University of Munich, Victoria Dahmen/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

Managing Electric Vehicle Charging Stations via Credit-Based Schemes: First Empirical Results (TRBAM-25-03893)

Giovanni Albano/JRC: European Commission Joint Research Centre, Stefano Tarantola/JRC: European Commission Joint Research Centre, Lorenzo De Ambrosis/JRC: European Commission Joint Research Centre, Federico Ferretti/JRC: European Commission Joint Research Centre, Bat-hen Nahmias-Biran/JRC: European Commission Joint Research Centre, Biagio Ciuffo/JRC: European Commission Joint Research Centre

3060

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 152B

What Is Happening to Our Workforce?: A State Department of Transportation Executive Conversation

Mara Campbell, Jacobs, presiding

Sponsored By Section - Executive Management Issues, Subcommittee on Risk Management, Standing Committee on Strategic Management, Standing Committee on Workforce Development and Organizational Excellence, Standing Committee on Performance Management, Standing Committee on Transportation Asset Management, Subcommittee on Asset Management Education, Standing Committee on Research Innovation Implementation Management, Subcommittee on Coordination and Collaboration, Subcommittee on Research through Deployment of Emerging Topics, Subcommittee on the Transportation Innovation Lifecycle, Standing Committee on Public Engagement and Communications, Standing Committee on Information and Knowledge Management, Standing Committee on Economics and Finance, Subcommittee on Public-Private Partnerships, Joint Subcommittee on Congestion Pricing Economics (with AEP60), Standing Committee on Contracting Equity, Standing Committee on Data for Decision Making

The transportation industry is facing a growing workforce shortage—especially within the public sector.Without a reliable pipeline of dedicated staff, these agencies could experience disruptions in the important work they do.Public transportation agencies face unprecedented challenges in preserving the workforce necessary to function effectively and need robust strategies to maintain workforce resiliency by recruiting and retaining quality staff to construct and maintain transportation infrastructure now and into the future.This Executive Conversation will provide an opportunity for attendees to hear directly from executives about how they approach the challenges and opportunities facing their workforce and their strategies to move forward.

"What's Happening to Our Workforce" - Oklahoma Department of Transportation Perspective (P25-20098)

Dawn Sullivan/Oklahoma Department of Transportation

(continued)

“What’s Happening to Our Workforce” - Texas Department of Transportation Perspective (P25-20099)
Brandye Hendrickson/Texas Department of Transportation
“What’s Happening to Our Workforce” - Minnesota Department of Transportation Perspective (P25-20100)
Karin Van Dyck/Minnesota Department of Transportation
What’s Happening to Our Workforce - Delaware Department of Transportation Perspective (P25-20101)
Shante Hastings/Delaware Department of Transportation

3061

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 152A
Advancing Policy Through Effective Performance Management
Peter Rafferty, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Performance Management, Standing Committee on Transit Management and Performance

Effective performance management is crucial for advancing toward desired strategic and policy outcomes. This session highlights examples of effective data-driven performance management processes and how agencies are using performance data to meaningfully advance policy. The most effective performance measures are those most relevant and feasible for providing all of us with objective evidence of progress toward better outcomes, ranging from resilience, sustainability, safety, asset condition, access, and more.

Transportation Resilience Performance Management in Minnesota (P25-20510)
Christopher Berrens/Minnesota Department of Transportation
New Tools, Technology, & KPIs for Asset Performance in Ontario (P25-20511)
Yolibeth Mejias de Pernia/Ontario Ministry of Transportation
Building a Performance Management Culture to Achieve Strategic Goals (P25-20512)
Jordan Holt/Washington Metropolitan Area Transit Authority
Improved Safety with the Wildly Important Goal (WIG) & Theory of Change (ToC) Frameworks (P25-20517)
William Johnson/Colorado Department of Transportation

3062 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 150A
Measuring Customer Experience: What Department of Transportation Executives Need to Know
Julie Lorenz, 1898 & Co., presiding
Meghan Haggerty, Massachusetts Department of Transportation, presiding
Sponsored By Standing Committee on Data for Decision Making, Standing Committee on Pedestrians, Standing Committee on Human Factors of Vehicles, Standing Committee on Impairment in Transportation, Standing Committee on Strategic Management, Standing Committee on Research Innovation Implementation Management, Standing Committee on Public Engagement and Communications, Standing Committee on Equity in Transportation, Standing Committee on Women and Gender in Transportation, Subcommittee on Accessible Transportation and Mobility Practices, Tools, and Techniques, Standing Committee on Community Resources and Impacts

Join industry leaders in a panel conversation about what it takes to lead with empathy and understand customer behavior in an increasingly complex environment. This discussion panel is an opportunity to discover empathetic leadership’s transformational role in transportation as well as methods for measuring its impact. Aligned with the principles of AASHTO's Vision and Moonshots, we will also examine empathetic leadership’s connection to customer experience and improvements in transportation outcomes. This session is a companion to the customer experience exhibit running at the TRB 2025 expo hall. This combination panel and experience is not to be missed!

CEO Perspective from State DOTs (P25-20123)
Marie Therese Dominguez/New York State Department of Transportation
Multimodal CEO Perspective (P25-20659)
Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design
Empathetic Leadership: A Transformation Scientist's Perspective (P25-20661)
Angela Hinzey/MITRE Corporation

(continued)

National Transportation Perspective (P25-21084)
Kristin White/Federal Highway Administration (FHWA)
Private Sector Perspective (P25-21520)
Shawn Wilson/WSP

3063

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 202B
Legal Implications of the Use of Engineering Judgment in Transportation Operations
Terri Parker, Missouri Department of Transportation, presiding
Sponsored By Standing Committee on Tort Liability and Risk Management

A group of transportation officials will use case studies from legal and engineering practices to frame their discussions on the use of engineering judgement to guide human factors, design, operational and engineering applications. Panel members will discuss the flexibility provided for in generally accepted transportation guidance and its use in the courtroom.

Legal Implications of the Use of Engineering Judgement in Transportation Operations (P25-20060)
Gene Hawkins/Kittelson & Associates, Inc., Heidi Skinner/County of San Diego, John Campbell/Exponent, Inc., Alan Steinberg/California Department of Transportation

3064

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 207B
Structural Monitoring and Non-Destructive Testing Technologies for Improved Bridge Condition Assessment
Hoda Azari, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Testing and Evaluation of Transportation Structures

This session delves into advanced methods for evaluating structural assets through nondestructive evaluation (NDE) and structural monitoring (SM). The presentations will showcase emerging technologies and methodologies, and offer a combination of practical NDE and SM applications and analytical models.

Bridge Weigh-in-Motion System for A Continuous Multi-Girder Bridge Considering Multiple Vehicles Presence Condition (TRBAM-25-04041)
Hanli Wu/Harbin Institute of Technology, Seangkru Sreng/Harbin Institute of Technology, Hua Zhao/Harbin Institute of Technology, Shipeng Ruan/Harbin Institute of Technology
Remote Structural Health Monitoring and Finite Element Analysis for Performance Assessment of Aging Steel Plate Girder Railroad Bridge (TRBAM-25-04499)
Ishwarya Srikanth/EXP Services Inc., Joshua Jackson/EXP Services Inc., Rahman Abdallah/EXP Services Inc., Nicholas McNulty/EXP Services Inc., Husky Ohonwa/EXP Services Inc., John Flint/EXP Services Inc.
Preservation of Post-Tensioned Concrete Girders using Multi-Modal Nondestructive Testing and Evaluation (TRBAM-25-02157)
Arezoo Imani/BDI, Marisol Tsui Chang/BDI, Shane D Boone/BDI, Annette Adams/BDI
will be updated (P25-20276)
Philip Meinel/Wisconsin Department of Transportation

3065

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 204AB

Are We Ready for the Next Big Earthquake?

Ian Buckle, University of Nevada, Reno, presiding

Sponsored By Standing Committee on Seismic Design and Performance of Bridges

In this session seven respected engineering practitioners and researchers been asked to answer the question 'Are we ready for next big earthquake… with respect to bridge performance?' Each has been asked to say 'yes', 'no', or 'maybe', and give reasons for their opinion. The audience will then be invited to weigh-in with their opinion. In the likely event the majority opinion is 'no' or 'maybe', the expected outcome will be what still needs to be done to be ready for the next big earthquake.

Are we ready for the next big earthquake? - a geotechnical consultant's view (P25-20427)
Donald Anderson/Jacobs
Are we ready for the next big earthquake? - a structural academic's view (P25-20428)
Mervyn Kowalsky/North Carolina State University
Are we ready for the next big earthquake? - a USGS seismologist's view (P25-20430)
Andrew Makdisi/U.S. Geological Survey
Are we ready for the next big earthquake? - a former Alaska DOT&PF engineer's view (P25-20435)
Elmer Marx/Marx & Arndt Engineering, LLC
Are we ready for the next big earthquake? - a structural consultant's view (P25-20439)
Thomas Murphy/Modjeski and Masters, Inc.
Are we ready for the next big earthquake? - an FHWA engineer's view (P25-20443)
Jia-Dzwan Shen/Federal Highway Administration (FHWA)
Are we ready for the next big earthquake? - a Caltrans engineer's view (P25-20446)
Christopher Traina/California Department of Transportation

3066

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 156

Latest Advancements in Accelerated Bridge Construction

Randy Thomas, Jacobs, presiding

Sponsored By Standing Committee on Construction of Bridges and Structures, Standing Committee on Concrete Bridges

This session will focus on latest researches on ABC and bridge demolition techniques.

A Comprehensive Decision Support Tool for Accelerated Bridge Construction: Integrating Safety, Social Equity, and Environmental Justice with Technical and Construction Factors (TRBAM-25-05270)
Nasim Mohamadiazar/Florida International University, Ali Ebrahimian/Florida International University
Review of Concrete Structure Demolition Technologies (TRBAM-25-04680)
Mohsen Mohammadi/Rowan University, Saman Muhammad/Rowan University, Mehdi Roshanbin/Rowan University, Gilson Lomboy/Rowan University, Shahriar Abubakri/Rowan University
Development and Analysis of an Additively Manufactured Concrete Box Culvert (TRBAM-25-03847)
Jon Erekson/Applied Research Associates, Inc., Michelle Barry/Applied Research Associates, Inc., James Brokaw/Applied Research Associates, Inc., Jaden Bennett/Applied Research Associates, Inc., Eric Kreiger/Applied Research Associates, Inc.
Evaluation of Hollow-Core-FRP-Concrete-Steel Column and Footing Connection. (TRBAM-25-04069)
Omar Yadak/University of Oklahama, Royce Floyd/University of Oklahama, Jeffery Volz/University of Oklahama
Attaching Steel Bridge Rail Posts Directly to Bridge Decks: Design Procedures, Best Practices, and Case Studies (TRBAM-25-03005)
Andrew Loken/University of Nebraska, Lincoln, Scott Rosenbaugh/University of Nebraska, Lincoln, Robert Bielenberg/University of Nebraska, Lincoln, Ronald Faller/University of Nebraska, Lincoln, Joshua Steelman/University of Nebraska, Lincoln

3067

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 101

Connected and Automated Vehicles Impacting Road Design

Roxane Mukai, Maryland Transportation Authority, presiding

Sponsored By Standing Committee on Performance Effects of Geometric Design

Assessing Aquaplaning Thresholds through Critical Vehicle and Freeway Geometric Parameters (TRBAM-25-00823)

Stergios Mavromatis/National Technical University of Athens (NTUA), Antonis Kontizas/National Technical University of Athens (NTUA), Vassilios Matragos/National Technical University of Athens (NTUA), Antonios Trakakis/National Technical University of Athens (NTUA)

Road Design Optimisation for Autonomous Vehicles (TRBAM-25-00447)

Ferdinand Kuteesa/Trinity College, Dublin, Margaret O'Mahony/Trinity College, Dublin

Evaluation of Safe Distance for Truck with Vehicular Network Connection Passage under Considering Temperature Variation of Pavement Surface in Freeway Downhill Section (TRBAM-25-03183)

XiaoJian Hu/Southeast University, Yimiao Bao/Southeast University

Influence of CACC-Based Truck Platooning on Traffic Flow in Dedicated Lane Highways with Consideration of Bridge Safety (TRBAM-25-04173)

Amir Hossein Karbasi/McMaster University, Hao Yang/McMaster University

3068

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 207A

Roadside Safety Design: Designing for the Future

Ali Hangul, Tennessee Department of Transportation, presiding

Sponsored By Standing Committee on Roadside Safety Design

Developing and Evaluating MASH Test Level 4 Compliant Fence System Attached to Single Slope Concrete Bridge Barrier (TRBAM-25-02982)

Sun Hee Park/Texas A&M Transportation Institute, Nauman Sheikh/Texas A&M Transportation Institute

Installation Guidelines for Midwest Guardrail System on Curbed Roadways for MASH TL-3 Applications (TRBAM-25-04430)

Scott Rosenbaugh/University of Nebraska, Lincoln, Robert Bielenberg/University of Nebraska, Lincoln, Ronald Faller/University of Nebraska, Lincoln, Cody Stolle/University of Nebraska, Lincoln

Design and MASH Evaluation of Pedestrian and Hybrid Bridge Rails (TRBAM-25-04651)

Brandon Perry/Midwest Roadside Safety Facility (MWRSF), Ronald Faller/Midwest Roadside Safety Facility (MWRSF), Scott Rosenbaugh/Midwest Roadside Safety Facility (MWRSF), Cody Stolle/Midwest Roadside Safety Facility (MWRSF), Robert Bielenberg/Midwest Roadside Safety Facility (MWRSF), Joshua Steelman/Midwest Roadside Safety Facility (MWRSF)

MASH TL-4 Engineering Analyses and Detailing of 36 Inches and 42 Inches High Median Barriers for Louisiana Department of Transportation (LADOTD) (TRBAM-25-05375)

William Williams/Texas A&M University, Jilong Cui/Texas A&M University

Evaluation of Raised Safety Platforms:Design Considerations and Safety Impacts (TRBAM-25-01596)

Zeke Ahern/Queensland University of Technology, Fahimeh Golbabaei/Queensland University of Technology, Simon Denman/Queensland University of Technology, Alexander Paz/Queensland University of Technology

3069

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 102A

Mapping the Future: Development of a Surveying and Mapping Guide for Transportation Projects

Michael Dennis, National Geodetic Survey (NOAA/NOS), presiding

Wei Johnson, South Carolina Department of Transportation, presiding

Sponsored By Standing Committee on Geospatial Data Acquisition Technologies

Ready to better position yourself for the future? This session will provide an overview of NCHRP 08-174 - Development of a Surveying and Mapping Guide for Transportation Projects. Join the research team as they lay out the nuts and bolts of this research project. The session is packed with insights and opportunities to help you chart the road ahead.

3070

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 209C

Using Numerical Modeling for Predicting Advanced Concrete Material Behaviors

Nicole Dufalla, University of Virginia, presiding

Sponsored By Standing Committee on Properties of Concrete and Constituent Materials

Prediction and Analysis on Compressive Strength of CA Mortar Based on Machine Learning (TRBAM-25-01646)

Huacheng Jiao/Tongji University, Yifan Li/Tongji University, Heng Wang/Tongji University, Jie Yuan/Tongji University

Prediction of Yield Stress and Viscosity of 3D Printed Concrete with Interpretable Machine Learning Model (TRBAM-25-02524)

Xiong Yu/Case Western Reserve University

Effect of Pre-carbonation on the Rheological Properties of Cement-based Materials (TRBAM-25-03304)

Chenguang Jia/Tongji University, Xin Qian/Tongji University, Mengxiao Li/Tongji University, Heng Yang/Tongji University, Ting Huang/Tongji University, Hongduo Zhao/Tongji University

Flow Behavior and Mechanism of CRTS II Cement Emulsified Asphalt Mortar (TRBAM-25-04054)

Huacheng Jiao/Tongji University, Jie Yuan/Tongji University, Chang Hong/Tongji University

3071

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 209AB

Innovative Polishing Techniques and Frictional Resistance of Pavement Aggregates

Kyle Brashear, Atco, presiding

Sponsored By Standing Committee on Aggregates, Standing Committee on Pavement Surface Properties and Vehicle Interaction

This session examines various studies on aggregate friction and skid resistance affecting roadway safety. Key topics include the Louisiana DOTD's evaluation of frictional resistance using different testing methods, Ohio's assessment of aggregates under various polishing levels, and the impact of aggregate morphology on asphalt pavement skid resistance. Additionally, it explores the sustainability of Recycled Concrete Aggregates (RCA) compared to Natural Aggregates (NA). Findings highlight the importance of aggregate properties in maintaining pavement friction and the potential of RCA in promoting circular economy principles in concrete production.

Evaluation of Aggregate Frictional Resistance Based on Laboratory Polishing Procedures (TRBAM-25-05442)

Sudhir Bharati/Louisiana Department of Transportation and Development, Ricardo Hungria/Louisiana Department of Transportation and Development, Zhong Wu/Louisiana Department of Transportation and Development

Study of the Circularity of Recycled Concrete Aggregates Subjected to Different Mechanical and Chemical Treatments (TRBAM-25-02629)

Petra Monaco/University of Windsor, Ava Richardson/University of Windsor, Larsa Ishaq/University of Windsor, Nathanael Habtamu/University of Windsor, Abimbola Oyeyi/University of Windsor, Nicola Baldo/University of Windsor

Characterization of Aggregate Susceptibility to Polishing Using Micro-Deval (TRBAM-25-05063)

Khalil Alafeef/University of Akron, Tariq Sharaf/University of Akron, Ala Abbas/University of Akron

(continued)

Exploring the Aggregate Morphological Characteristics with Laboratory Polishing for Enhanced Pavement Skid Resistance (TRBAM-25-05018)
Ahmed El-Ashwah/Nebraska Department of Transportation, Magdy Abdelrahman/Nebraska Department of Transportation

3072

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 202A
Pavement Structural Evaluations: Falling Weight Deflectometer and Structural Modeling
Jeremy Robinson, U.S. Army Corps of Engineers (USACE), presiding
Erdem Coleri, Oregon State University, presiding
Sponsored By Standing Committee on Pavement Structural Testing and Evaluation

An Improved Approach for FWD Deflection Temperature Correction in Full-depth Asphalt Pavements (TRBAM-25-02392)
Pablo Orosa Iglesias/Indiana Department of Transportation, Jin Li/Indiana Department of Transportation, Cheng Zhang/Indiana Department of Transportation, Seonghwan Cho/Indiana Department of Transportation, Bongsuk Park/Indiana Department of Transportation, John Haddock/Indiana Department of Transportation
Characterizing Mechanical Responses of Composite Pavements in FWD Testing for Structural Condition Evaluation (TRBAM-25-02480)
Cheng Zhang/Indiana Department of Transportation, Seonghwan Cho/Indiana Department of Transportation, Bongsuk Park/Indiana Department of Transportation, Pablo Orosa Iglesias/Indiana Department of Transportation, Jin Li/Indiana Department of Transportation, John Haddock/Indiana Department of Transportation
Stiffness-Based Field Testing Framework for Design and Evaluation of Pavement Subsurface Layers (TRBAM-25-04491)
Margarita Ordaz/U.S. Army Engineer Research and Development Center, Victor Garcia/U.S. Army Engineer Research and Development Center, Ernest Berney IV/U.S. Army Engineer Research and Development Center
Applicability of Viscoelastic Structural Model of Electrified Pavements Using Full-Scale Test Sections (TRBAM-25-04084)
Hector Cruz/University of Texas, El Paso, Cesar Tirado/University of Texas, El Paso, Dr. Soheil Nazarian/University of Texas, El Paso

3073

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 103B
Connected and Automated Vehicles: Implications for Department of Transportation Fleets and Operations
Henry Canipe, Mott MacDonald, LLC, presiding
Sponsored By Standing Committee on Maintenance Fleet and Equipment, Standing Committee on Maintenance and Operations Management

Speakers from academia and the public and private sectors will address the impact of connected and automated vehicles on the operations of state Departments of Transportation (DOTs). Details of specific state DOT fleet projects will also be shared.

Connected and Automated Vehicles in Maintenance Fleet Operations (P25-21018)

3074

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 201
Advancements in Winter Maintenance Treatment
Nishantha Bandara, Lawrence Technological University, presiding
Sponsored By Standing Committee on Winter Maintenance, Standing Committee on Road Weather

Evaluating Alternative Deicers: An Investigation on the Impact on Frictional Characteristics of Asphalt Pavement (TRBAM-25-03037)
Mitchell Lawlor/Carleton University, Kamal Hossain/Carleton University, Jennifer Drake/Carleton University

(continued)

Development of a Salt Spreader Controller Program Using Machine-Sensed Roadway Weather Parameters (TRBAM-25-06232)
Vaishnavi Avhad/University of Massachusetts, Amherst, Bryan Remache-Patino/University of Massachusetts, Amherst, Chengbo Ai/University of Massachusetts, Amherst, Russell Tessier/University of Massachusetts, Amherst, Mark Goldstein/University of Massachusetts, Amherst
Accurate and Simple Prediction of Ice Melting Capacity in Chloride Deicer Brine Blends (TRBAM-25-01207)
Scott Koefod/Cargill Salt Group
Exploring the Correlation Between Winter Severity Indices and Winter Maintenance Costs: Insights and Comparative Analysis from Nationwide Practices (TRBAM-25-03812)
Ardeshir Fadaei/Michigan State University, Farish Jazlan/Michigan State University, Amirali Soltanpour/Michigan State University, Hamid Mozafari/Michigan State University, Ali Zockaie/Michigan State University, Mehrnaz Ghamami/Michigan State University, James Roath/Michigan State University
Swedish Winter Road Climate - Past and Future Changes (P25-20267)
Anna Arvidsson/Swedish National Road and Transport Research Institute (VTI)

3075

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 206
Decision Making in Pavement Management
Aaron Gerber, Mott MacDonald, LLC, presiding
Sponsored By Standing Committee on Pavement Management Systems

This session will review the use of pavement management data in making decisions related to pavement system. Subjects cover areas from evaluating impact of wildfires on pavement systems to review of pavement design approaches as well as incorporating probability in the decision-making process.

Impact of Wildfires on Pavement Systems (TRBAM-25-03105)
Prashant Ram/Applied Pavement Technology, Inc., Sarah Lopez/Applied Pavement Technology, Inc., Jeff Stempihar/Applied Pavement Technology, Inc., Kurt Smith/Applied Pavement Technology, Inc., Amir Golalipour/Applied Pavement Technology, Inc.
Does Recycling Compromise Long-Term Performance and Life-Cycle Costs? A Comparative Analysis of Full-Depth Reclamation and Overlay Pavements (TRBAM-25-00105)
Anneliese Crayton/University of Colorado, Boulder, Jonathan Schmidt/University of Colorado, Boulder, Cristina Torres-Machi/University of Colorado, Boulder
Development of a Pavement Design Catalog through CalME and Life Cycle Cost Analysis (TRBAM-25-05341)
Yara Chedid/No Organization, Shadi Saadeh/No Organization, Sampat Kedarisetty/No Organization, John Harvey/No Organization
Probability Based Pavement Asset Management in Ireland (TRBAM-25-00442)
Ray McGowan/PMS Pavement Management Services, Ltd., Alan O'Connor/PMS Pavement Management Services, Ltd., Kieran Feighan/PMS Pavement Management Services, Ltd., Stephen Smyth/PMS Pavement Management Services, Ltd.

3076 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146A
Designing Equitable Transit
Tracee Strum-Gilliam, PRR, Inc., presiding
Sponsored By Standing Committee on Equity in Transportation, Standing Committee on Bus Transit Systems, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Rural, Intercity Bus, and Specialized Transportation

How do we design public transportation to be equitable? This session shares research on transit equity by exploring issues in Title VI, characterizing transit ridership, addressing rural transit needs, and looking forward at autonomous transit. Insights will support equitable transit policy, laying the groundwork for future applications.

Is Title VI Analysis Enough? A National Review of Bus Network Redesign Equity Analyses (TRBAM-25-03955)
Minyu Situ/University of Texas, Austin, Alex Karner/University of Texas, Austin

(continued)

Investigating Factors Influencing Stop-Level Public Transit Ridership in Halifax, Incorporating Business Establishment Attributes (TRBAM-25-05619)
Muhammad Habib/Dalhousie University, Kashfia Nahrin Nokshi/Dalhousie University
Sociodemographic Attributes and Travel Characteristics of Public Microtransit Users (TRBAM-25-03886)
Raisa Mehnaj/North Carolina State University, Eleni Bardaka/North Carolina State University, Christopher Mayhorn/North Carolina State University, Kai Monast/North Carolina State University, Munindar Singh/North Carolina State University
An Equity Analysis on the Use of Public Transportation as an Alternative Mode in Rural Areas (TRBAM-25-04363)
A. Latif Patwary/Oak Ridge National Laboratory, Melrose Pan/Oak Ridge National Laboratory, Majbah Uddin/Oak Ridge National Laboratory
On the Road to Inclusion: Exploring Equity in Autonomous Public Transportation (TRBAM-25-02647)
Hyun Kim/New Jersey Institute of Technology, Timothy Proctor/New Jersey Institute of Technology, Sharon Kim/New Jersey Institute of Technology, Pei Jia Pok/New Jersey Institute of Technology, Hwasoo Yeo/New Jersey Institute of Technology, Kunhee Choi/New Jersey Institute of Technology

3077

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146B
Benchmarking Equity and Mobility Needs for Tribal Governments
Heidi Nelkie, Lindahl Reed, presiding
Sponsored By Standing Committee on Native American Transportation Issues, Standing Committee on Equity in Transportation, Rural Transportation Issues Coordinating Council, Standing Committee on Workforce Development and Organizational Excellence

Tribal governments have responsibilities for their transportation systems similar to those of state departments of transportation, and the responsibilities for tribal elected officials are also similar to federal and state legislative bodies. However, the context in which they operate is significantly different. All too often, tribes do not have access to the equitable resource levels to fulfill those tasks. This equity gap has yet to be studied and addressed.

Presentation 1 (P25-21146)
Sheri Bozic/Pueblo of Jemez
Presentation 2 (P25-21147)
Ronald Hall/Upper Great Plains Transportation Institute
Presentation 3 (P25-21148)
Tyler Reeb/California State University, Long Beach
Presentation 4 (P25-21149)
Cameron Ishaq/Fasterhorse LLC
Presentation 5 (P25-21150)
Terry Holman/The Chickasaw Nation Roads Program

3078

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146C
Enhancing Transportation Resilience: The Role of Artificial Intelligence in Climate Adaptation Planning
Mark Abkowitz, Vanderbilt University, presiding
Steven Olmsted, Arizona Department of Transportation, presiding
Sponsored By Standing Committee on Extreme Weather and Climate Change Adaptation

As climate change increasingly threatens transportation networks, innovative solutions are essential for ensuring the resilience of our infrastructure. This session will focus on how artificial intelligence (AI) can be a game-changer in climate resilience planning within the transportation sector. Among the topics to be discussed are improving accuracy of climate models, predicting extreme weather events, data integration and simulation, incorporating resilience into planning and design, disaster risk management, and disaster recovery planning. By the end of the session, participants will be equipped with actionable strategies for integrating AI into their transportation resilience planning efforts.

3079 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 140

Addressing Emerging Contaminants in Transportation

David Wilson, Virginia Department of Transportation, presiding

Sponsored By Standing Committee on Resource Conservation and Recovery

Per- and Polyfluoroalkyl Substances (PFAS) and a vehicle tire chemical known as 6PPD-quinone continue to make headlines as emerging contaminants. This session will provide an overview of their potential impacts within the Transportation sector and efforts to identify solutions through research.

Identification and Mitigation of PFAS Contamination in Highway Construction: Current and Future Practices (TRBAM-25-02474)

Joseph Charbonnet/Iowa State University, Roy Sturgill/Iowa State University

PFAS Analytic Tools: Integrating National Data Streams in Support of EPA's PFAS Strategic Roadmap (P25-20121)

Nicholas Spalt/U.S. Environmental Protection Agency (EPA)

Where the rubber meets the road: Updates on the science surrounding the tire chemicals, 6PPD & 6PPD-quinone (P25-20120)

Kelly Grant/California Department of Toxic Substances Control

3080 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 145A

Making Headways: Strategies and Lessons Learned in Headway-Based Bus Operations

Frances Fisher, San Francisco Bay Area Rapid Transit, presiding

Sponsored By Public Transportation Group, Standing Committee on Bus Transit Systems, Standing Committee on Transit Management and Performance

This panel discussion will highlight various implementations of headway-based management, primarily in the United States. We will focus on the staff experience, both on the front-line as well as possible management changes needed for successful implementation. Attendees will hear insights from Chicago, Boston, Minneapolis, and Seattle. Do you have experience with headway-based operations? Are you curious about it? If so, please join us!

Headway Control Experiments in Chicago: Insights on Performance and Compliance (TRBAM-25-05730)

Joseph Rodriguez/Northeastern University, Haris Koutsopoulos/Northeastern University, Thomas McKone/Northeastern University, Zhihao Lyu/Northeastern University, Carla Delgado/Northeastern University, Dingyi Zhuang/Northeastern University, Jinhua Zhao/Northeastern University, Shenhao Wang/Northeastern University, John Moody/Northeastern University, Jorge Besa/Northeastern University

Headway-Based Service on Arterial Bus Rapid Transit (P25-20648)

Jonathan Ahn/Metro Transit (MN), Eli Miller/Metro Transit (MN)

Organizational Learning from Piloting Dispatcher-Controlled Bus Headway Management at a Legacy Transit Agency (P25-20700)

Sandy Johnston/Massachusetts Bay Transportation Authority (MBTA)

Managing Headways on High Frequency Routes (P25-20721)

Brian Van Abbema/King County Metro, Kamal Gounder/King County Metro Transit

Working with Drivers to Successfully Implement Headway-based Operations (P25-20729)

Kari Watkins/University of California, Davis

3081 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 145B

Factors Affecting Passenger Satisfaction in Public Transportation

P.S. Sriraj, University of Illinois, Chicago, presiding

Sponsored By Standing Committee on Transit Capacity and Quality of Service

In this session attendees will learn about different factors affecting transit passenger satisfaction. Presentations in this session cover topics such as passenger satisfaction with transit services, including with a water metro service, and factors influencing satisfaction among older transit users.

Influence of Tolerable, Perceived, and Actual Travel Time on Trip Satisfaction among Canadian Older Adults (TRBAM-25-00958)

Thiago Carvalho/McGill University, Ahmed El-Geneidy/McGill University

Urban Transit Infrastructure and Elder Passenger Needs: Identifying Necessary Adjustments for Inclusive Design and Operations (TRBAM-25-03685)

Maria Giannoulaki/University of Patras, Zoi Christoforou/University of Patras

Factors Influencing Passenger Satisfaction with Water Metro: An Ordered Probit Model Estimation (TRBAM-25-01669)

Darshana Othayoth/National Institute of Technology, Tiruchirappalli, TV Rameesha/National Institute of Technology, Tiruchirappalli, B. Anish Kini/National Institute of Technology, Tiruchirappalli

A Systematic Comparison and Evaluation of the Satisfaction with Travel Scale (STS) and Existing Customer Satisfaction Scales (TRBAM-25-00257)

Richa Maheshwari/University of Liege, Mario Cools/University of Liege

3082 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 147A

Special Topics in Transit Safety: Vulnerable Road Users and Transit Collisions

Lisa Staes, USF Center for Urban Transportation Research, presiding

Sponsored By Standing Committee on Transit Safety and Security

During this session, participants will gain understanding of transit collision contributors and outcomes. Presentations will be made covering a range of topics including pedestrian safety near bus stops, operator behaviors that may influence bus collision rates or those that could be considered a contributor or cause of collisions, and vulnerable road user casualties in collision events.

Accident Data-Driven Study of Safety Causation Mechanism of Rail Drivers' Driving Behavior (TRBAM-25-00038)

Ye Zhang/Beijing Jiaotong University, Yanhui Wang/Beijing Jiaotong University, Qiuyang Ren/Beijing Jiaotong University

A Safety Analysis of Vulnerable Road Users in Transit Bus Collisions: Insights from the National Transit Database (TRBAM-25-03608)

Sheikh Muhammad Usman/University of Tennessee, Knoxville, Muhammad Adeel/University of Tennessee, Knoxville, Candace Brakewood/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville, Candace Brakewood/University of Tennessee, Knoxville

Identifying Leading Indicators of Bus Collision Rates through Temporal and Spatial Analysis of Operator Behaviors Within WMATA Compact Area (TRBAM-25-02729)

Yuxuan Guo/WSP, Tao Liang/WSP, Jeetesh Tripathi/WSP, Soodabeh Yazdani/WSP, Amanda Redmiles/WSP, Lubna Shereen/WSP

Safety Performance Functions by Random Parameters Negative Binomial-Lindley Model for Pedestrian Safety Near Bus Stops (TRBAM-25-04784)

Mohammad Anis/Texas A&M University, Srinivas R. Geedipally/Texas A&M University, Dominique Lord/Texas A&M University

Bus Safety and Design Impacting Operator Visibility (P25-21385)

Gibran Abifadel/Federal Transit Administration (FTA)

3083

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 144C

Analysis of Non-Ballasted Track Structures

John Lobo, HDR, presiding

Sponsored By Standing Committee on Rail Transit Infrastructure Design and Maintenance

Time-dependent Reliability Analysis of Track Slab in Cold Region under Different Thermal Insulation Measures (TRBAM-25-00265)

Wengao Liu/Southwest Jiaotong University, Shijie Deng/Southwest Jiaotong University, wenlong ye/Southwest Jiaotong University, Juanjuan Ren/Southwest Jiaotong University

Fatigue damage evolution analysis of the CA mortar of ballastless tracks via damage mechanics-finite element full-couple method (TRBAM-25-00622)

Shijie Deng/Southwest Jiaotong University, wenlong ye/Southwest Jiaotong University, Wengao Liu/Southwest Jiaotong University, Juan Ren/Southwest Jiaotong University, Wei Du/Southwest Jiaotong University

Analysis of Mechanical Properties and Deformation Characteristics of Debonding-repaired Slab Track (TRBAM-25-00768)

Wei Du/Southwest Jiaotong University, Shijie Deng/Southwest Jiaotong University, Juan Ren/Southwest Jiaotong University

Effects of different Materials within the Mounted Top Layer of Slab Track Systems on Supporting Layers (TRBAM-25-02030)

Lasse Hansen/Technical University Berlin, Dragan Marinkovic/Technical University Berlin, Ferdinand Pospischil/Technical University Berlin

3084

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 149

Decarbonization of the Freight Transportation Sector

Jolanda Prozzi, Jacobs, presiding

Sponsored By Standing Committee on Agriculture and Food Transportation, Standing Committee on International Trade and Transportation

This session addresses the timely and important topic of the Decarbonization of the Freight Transportation Sector. A panel of five members with diverse backgrounds will share their perspectives on the regulatory landscape, the implications, and the practical challenges for shippers and carriers to comply with the requirements.

Panelist 1 (P25-20622)

Miguel Jaller/University of California, Davis

Panelist 2 (P25-21396)

Dean Bushey/North American Council for Freight Efficiency (NACFE)

Panelist 3 (P25-21397)

Zach Miller/Trucking Association of New York

Panelist 4 (P25-21398)

Jerry Maldonado/Warren Transport, Inc.

Panelist 5 (P25-21399)

Roman Ramirez/Greenabl

3085

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, **CANCELLED**

CANCELLED—Latest Research in Food and Agricultural Transportation

Sponsored By Standing Committee on Agriculture and Food Transportation

3086 **CM** (1.75)

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 143AB

Powering the Aviation System

Jacqueline Kuzio, Texas A&M Transportation Institute, presiding

Sponsored By Standing Committee on Aviation System Planning, Standing Committee on Environmental Issues in Aviation, Standing Committee on Aircraft/Airport Compatibility

With the move to reduce emissions from the transportation sector and advancements in technology, airport systems are integrating alternative fuels. Powering the airport system of the future may require on-site energy production and a diversity of fuel types, which requires airports to plan now to ensure successful implementation. This session will highlight current experiences with alternative fuels ranging from the switch to unleaded fuel in general aviation to preparing for the introduction of electric aviation and hydrogen fuel at airports.

University of North Dakota's Switch to Unleaded Fuel: Operational Impacts (P25-20806)

Jeremy Roesler/University of North Dakota

University of North Dakota's Experience with Unleaded Fuel (P25-20807)

Nicholas Wilson/University of North Dakota

Hydrogen and Electrification Feasibility for a General Aviation Airport (P25-20808)

Brandon Rakes/City of Chehalis

3087

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 143C

Research in Airfield and Airspace Performance, Part 2 (Part 1, Session 2032)

Michael Hanowsky, Woolpert, Inc., presiding

Sponsored By Standing Committee on Airfield and Airspace Performance

Real-time Risk Assessment Method for Multi-aircraft Interaction Based on Potential Field Theory (TRBAM-25-00339)

yueyang li/Southwest Jiaotong University, yi ai/Southwest Jiaotong University, Linheng Li/Southwest Jiaotong University, huimin tang/Southwest Jiaotong University, qifeng wan/Southwest Jiaotong University

A Polyhedral Trajectory Tube-based Three-Dimensional Sector Division in Terminal Areas Considering Anomalous Trajectories (TRBAM-25-00895)

Mengyuan Sun/Nanjing University of Aeronautics and Astronautics, Yong Tian/Nanjing University of Aeronautics and Astronautics, Yue Lv/Nanjing University of Aeronautics and Astronautics, Jiangchen Li/Nanjing University of Aeronautics and Astronautics, Xuening Mi/Nanjing University of Aeronautics and Astronautics, Yedan Cheng/Nanjing University of Aeronautics and Astronautics

Comparison of United States Flight Event and Surveillance Data Coverage and Future Research Directions (TRBAM-25-00145)

Susan Hotle/Virginia Polytechnic Institute and State University, Kyle Titlow/Virginia Polytechnic Institute and State University, Mehdi Hashemipour/Virginia Polytechnic Institute and State University, Ed Strocko/Virginia Polytechnic Institute and State University

Optimization of Runway Exits Locations Based on Fleet Mix and Operational Delays (TRBAM-25-03220)

Zheyu Li/University of Maryland, College Park, Paul Schonfeld/University of Maryland, College Park

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, 147B

Ferry Technology and Environmental Sustainability Initiatives

Catherine Peele, North Carolina Department of Transportation, presiding

Sponsored By Standing Committee on Ferry Transportation

The Role of Digital Twins in Enhancing Ferry Vessel Operations (TRBAM-25-04916)

Matt Versdahl/Washington State Department of Transportation

Digital Twins in Ferry Transportation (P25-21125)

Joshua Bibb/CUPIX, Inc.

(continued)

Hydrofoil Ferry Initiatives (P25-21126)
David Tyler/Artemis
Ferry Electrification Progress in the San Francisco Bay (P25-21138)
Edgar Gharibian/Arup

3089

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Ballroom A
State DOT CEO Roundtable: Centering Safety on Every State Department of Transportation Action
Garrett Eucalitto, Connecticut Department of Transportation, presiding
Sponsored By Executive Committee

This session will focus on AASHTO President Garrett Eucalitto's Emphasis Areas, which places safety at the center of all actions made by state departments of transportation. Centering Safety necessitates different tactics for different goals—all resulting in safer communities, safer users, and safer workers. The whole is greater than the sum of its parts, and this session will discuss how the state DOT community is harnessing the “whole-of-AASHTO” to address the safety crisis and improve outcomes towards zero deaths.

Roundtable Discussion (P25-21240)
Joel Jundt/South Dakota Department of Transportation, Marc Williams/Texas Department of Transportation, Kristina Boardman/Wisconsin Department of Transportation, Jared Perdue/Florida Department of Transportation, Edwin Sniffen/Hawaii Department of Transportation

3090

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Travel Survey Experiences in the Post-Pandemic Era
Cemal Ayvalik, University of Illinois, Chicago, presiding
Zachary Patterson, Concordia University, presiding
Sponsored By Standing Committee on Travel Survey Methods

This is an invitation-only poster session sponsored by the Standing Committee on Travel Survey Methods AEP25 that focuses on post-pandemic travel survey experiences. The session includes presentations of synthesized findings from completed research efforts showcasing regional or national household travel surveys, activity surveys, transit surveys, freight surveys, stated preference surveys and establishment surveys. The session will feature presentations that provide valuable insights on pre-vs. post-COVID changes and innovations in travel survey planning, administration and delivery implemented to address both the traditional and new challenges, as well as capturing the degree and the nature of disruptions in travel behavior.

Temporally Tangled: Addressing the Challenges of Standardizing Recurrent Surveys Over Time (P25-20293) - A235
Abigail Rosenson/RSG, Ashley Asmus/RSG, Suzanne Childress/Puget Sound Regional Council, Brian Lee/Puget Sound Regional Council
Validation and Analysis of the OKI 2022 Household Travel Survey (P25-20283) - A242
Liren Zhou/OKI, Hui Xie/OKI Regional Council of Governments, Ting Zuo/OKI Regional Council of Governments
Post-COVID Household Travel Surveys: Experiences from Four Canadian Cities (P25-20285) - A221
Muhammad Habib/Dalhousie University, Taylor Oliver/Dalhousie University, Sophie Marchant/Dalhousie University
Using Large Language Models to Classify Free-Text Survey Responses in Multiple Choice Questions (P25-20286) - A243
Caroline Tang/TransLink, Bo Wen/TransLink
A Passive Data Aided Approach for Trip Rate Development (P25-20288) - A234
Aichong Sun/Texas A&M Transportation Institute, Tian Huang/Texas A&M Transportation Institute, Sonya Solinsky/Texas Department of Transportation, Janie Temple/Texas Department of Transportation
Travel Behavior Changes in the Twin Cities Region Between 2018 and 2021 (P25-20295) - A244
Andrew Rohne/RSG, Jonathan Ehrlich/Metropolitan Council, Dennis Farmer/Metropolitan Council, Brandon Whited/Metropolitan Council

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Improving Travel Data Collection: A Study of App-Based vs. Traditional Household Travel Surveys in Texas (P25-20320) - A233
Anxi Jia/Texas A&M Transportation Institute, Aichong Sun/Texas A&M Transportation Institute, Sanju Maharjan/Texas A&M Transportation Institute, Edgar Millard/Texas A&M Transportation Institute, Mark Ojah/Texas A&M Transportation Institute, Sonya Solinsky/Texas Department of Transportation, Janie Temple/Texas Department of Transportation
Comparing a One-Day vs. Weeklong Activity Travel Survey Data from British Columbia, Canada (P25-20321) - A231
Mahmudur Fatmi/University of British Columbia, Imrul Kayes Shafie/University of British Columbia, Okanagan, Mostaq Ahmed/No Organization, Nick Chen/University of British Columbia, Khalad Hasan/University of British Columbia, Nicholas Blackwell/University of British Columbia
What Does 2023 Household Travel Survey in Beijing Tell Us? The Roles of Innovative Survey Methods and Changes in Travel Mode Preferences of Residents (P25-20297) - A245
He Hao/Beijing Jiaotong University, Enjian Yao/Beijing Jiaotong University, Long Pan/Beijing Jiaotong University, Yang Yang/Beijing Jiaotong University, Rongsheng Chen/Beijing Jiaotong University, Yue Wang/Beijing Jiaotong University
Household Travel Survey Response Rate Modelling in the Post-Pandemic Era (P25-20319) - A230
Joe Chestnut/RSG, Ilona Craigie/RSG, Claire Goldhammer/RSG
Driving Towards Equity: Utilizing NHTS to Measure Disparities in Transportation Access (P25-20322) - A232
Daniel Jenkins/Federal Highway Administration (FHWA), Mitchell Fisher/MacroSys Research and Technology, Paul Schroeder/Brennan Research, Stacey Bricka/MacroSys Research and Technology
NHTS Insights into Pandemic Recovery Travel Patterns Among Females (P25-20323) - A237
Jenna Sinclair/Federal Highway Administration (FHWA), Mitchell Fisher/MacroSys Research and Technology, Paul Schroeder/Brennan Research, Stacey Bricka/MacroSys Research and Technology, Layla Sun/MacroSys Research and Technology
Lessons Learned from 10 Years of the Netherlands Mobility Panel (MPN) (P25-20324) - A246
Mathijs de Haas/KiM Netherlands Institute for Transport Policy Analysis, Roel Faber/KiM Netherlands Institute for Transport Policy Analysis, Marije Hamersma/KiM Netherlands Institute for Transport Policy Analysis
Multichannel Survey Methods for a Longitudinal Study on the Changes in Travel Behavior in California During and After the COVID-19 Pandemic (P25-20325) - A240
Maria Carolina Lecompte/University of California, Davis, Patrick Loa/University of California, Davis, Basar Ozbilen/University of California, Davis, Xiatian Iogansen/University of California, Davis, Keita Makino/University of California, Davis, Aurojeet Jena/University of California, Davis, Siddhartha Gulhare/University of California, Davis, Giovanni Circella/Ghent University, Yongsung Lee/University of California, Davis
Who of the Online Opinion Panel Users will be Staying on Our Travel Survey Panel? Investigation of Retention Behaviors of the UC Davis Mobility Panel Dataset (P25-20326) - A241
Keita Makino/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/Ghent University
America's Finest Journeys: An Exploration of Travel in San Diego (P25-20327) - A247
Connor Vaughs/San Diego Association of Governments, Timothy Andersen/San Diego Association of Governments
E-Commerce Behavior Does Not Replace In-Person Shopping Trips, Even in Post-Pandemic Years (P25-20296) - A236
Ashley Asmus/RSG, Claire Goldhammer/RSG, Samantha Williams/RSG, Youme Yai/RSG
Developing a Commercial Freight Demand Survey for Capturing Urban Delivery Traffic in an On-Demand Economy (P25-20328) - A250
Suprava Mishra/Indian Institute of Technology, Varanasi, Agnivesh Pani/Indian Institute of Technology, Varanasi, Ankit Gupta/Indian Institute of Technology, Varanasi
Perpetually Behind: Analyzing Parenting Pressure in Navigating Parental Healthcare Access Choice Using Survey Metadata (P25-20329) - A251
Amanda Stathopoulos/Northwestern University, Gretchen Bella/Northwestern University
Miami-Dade County Transit Onboard Travel Survey Experiences in the Post-Pandemic Era, and Comparison of the Post-Pandemic Ridership Trends and Travel Behavior with the Pre-Pandemic Conditions (P25-20330) - A248
Aileen Bouclé/Miami-Dade Transportation Planning Organization, Maria Teresita Vilches-Landa/Miami-Dade Transportation Planning Organization, Jeannine Gaslonde/Miami-Dade Transportation Planning Organization, Hector Di Donato/Miami-Dade Transportation Planning Organization, Srin Varanasi/The Corradino Group, Kenneth Kaltenbach/The Corradino Group, Inc., Aditya Katragadda/The Corradino Group, Aaron Hekele/ETC Institute
Travel Behavior in the Post-Pandemic Era: Insights from NJ TRANSIT's Multi-Phase Surveys (P25-20331) - A222
Susan O'Donnell /NJ TRANSIT, Marina Hofbauer/NJ TRANSIT
Tracking Public Transit Satisfaction Trajectories with Longitudinal Multilevel Models (P25-20332) - A252
Spencer Aeschliman/Northwestern University, Amanda Stathopoulos/Northwestern University

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Developing a Multi-Pronged Public Transportation Travel Survey Approach for Capturing Hard-to-Reach Population Segments in India (P25-20333) - A253
Hridya G Muralidharan/Indian Institute of Technology, Varanasi, Agnivesh Pani/Indian Institute of Technology, Varanasi

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
How Smartphones Are Continuing to Take Their Place in Data Collection
Zachary Patterson, Concordia University, presiding
Katherine Asmussen, University of Tennessee, Knoxville, presiding
Sponsored By Standing Committee on Travel Survey Methods, Standing Committee on Travel Survey Methods

This poster session brings together a series of cutting edge papers demonstrating how smartphones continue to take their place in travel-related data collection.

Mobile Phone Application Data for Activity Schedule Generation (TRBAM-25-00055) - A223
Çağlar Tozluoğlu/Chalmers University of Technology, Yuan Liao/Chalmers University of Technology, Frances Sprei/Chalmers University of Technology
Transfer Learning-Based Fine-Grained Travel Mode Identification Using Mobile Phone Signaling Data (TRBAM-25-00243) - A224
Yulang Huang/Zhejiang University, Meng Zhang/Zhejiang University, Zhengyi Cai/Zhejiang University, Jiaqi Zeng/Zhejiang University, Dianhai Wang/Zhejiang University
Aggregation of Mobile Phone Data: An Opportunity for Better Mobility Patterns Analysis (TRBAM-25-01869) - A212
Clémence de Rolland/No Organization, Caroline Bayart/No Organization
Smartphone Sensor-Based Driver and Passenger Classification: Exploring Techniques for Resource-Constrained Devices (TRBAM-25-00886) - A225
Wilson Lozano/University of South Florida, Tempestt Neal/University of South Florida
Assessing the Potential of Google Location History (GLH) Data for Travel Behavior Research in the Context of Developing Country (TRBAM-25-05681) - A215
Annesha Enam/Bangladesh University of Engineering and Technology, Md Kaiser Hamid Munna/Bangladesh University of Engineering and Technology, Sayem Noor/Bangladesh University of Engineering and Technology

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Recruiting, Retaining, and Asking New Questions
Abigail Rosenson, RSG, presiding
Zachary Patterson, Concordia University, presiding
Sponsored By Standing Committee on Travel Survey Methods, Standing Committee on Travel Survey Methods

This poster session assembles a series of papers concerned with the latest methods in recruiting and retaining respondents as well as asking new questions to travel survey respondents. You won't want to miss this one!

Eliminating Recall and Proxy Bias in Household Travel Surveys: Sample Correction Methodology under the Core-Satellite Fusion Paradigm (TRBAM-25-01489) - A210
Melvyn Li/University of Toronto, Kaili Wang/University of Toronto, Khandker Nurul Habib/University of Toronto
Modeling the Efficiency of Transportation Survey Recruitment and Reminder Methods (TRBAM-25-05565) - A238
Elis Davanzo/University of British Columbia, Muntahith Orvin/University of British Columbia, Mahmudur Fatmi/University of British Columbia
Investigating the Influence of Alternative Survey Participant Recruitment Strategies on Measurement and Inference of Mobility Patterns (TRBAM-25-06192) - A220
Victor Alhassan/Arizona State University, Fan Yu/Arizona State University, Jose Roberto Dimas Valle/Arizona State University, Tassio Magassy/Arizona State University, Irfan Batur/Arizona State University, Deborah Salon/Arizona State University, Chandra Bhat/Arizona State University, Ram Pendyala/Arizona State University

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Efforts Toward Realizing a New Urban Transportation Survey System in Japan (TRBAM-25-03604) - A213
Koshi Isono/Institute of Behavioral Sciences (IBS), Takahiro Ishigami/Institute of Behavioral Sciences (IBS), Shun Fujimatsu/Institute of Behavioral Sciences (IBS), Syoichi Funami/Institute of Behavioral Sciences (IBS), Shigeoki Tanaka/Institute of Behavioral Sciences (IBS)
Using Questionnaires to Identify Travel Barriers: How (Not) to Ask Questions (TRBAM-25-04588) - A211
Paromita Nakshi/University of Toronto, Matthew Palm/University of Toronto, Elnaz Barri/University of Toronto, Steven Farber/University of Toronto, Michael Widener/University of Toronto
Designing a Comprehensive Survey Structure with an Innovative Stated Preference Time-Use Survey to Estimate Components of Value of Travel Time Saving (TRBAM-25-04624) - A214
Maliheh Tabasi/University of New South Wales, Kensington, John Rose/University of New South Wales, Kensington, Nazmul Arefin Khan/University of New South Wales, Kensington, Joshua Auld/University of New South Wales, Kensington, Taha Rashidi/University of New South Wales, Kensington

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
E-Commerce and Urban Mobility: Trends and Impacts
Michiko Namazu, Uber Technologies, Inc., presiding
Rui Shao, Ghent University, presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This session focuses on various topics related to e-commerce and urban mobility. Presentations will explore e-commerce impacts on urban logistics, sustainability, people's mobility habits, and parcel delivery patterns in the global south.

Impacts of E-commerce on Shopping Trips: Implications for Urban Logistics with Empirical Evidence from an Emerging Country (TRBAM-25-00172) - A256
Thanh Thi My Truong/University of Transport Technology
Analyzing E-Commerce Last-Mile: Key Variables in Adoption, Frequency, and Returns. (TRBAM-25-00328) - A254
Thais Rangel/Universidad Politecnica de Madrid, Juan Gomez/Universidad Politecnica de Madrid, Guilherme Alves/Universidad Politecnica de Madrid, José Manuel Vassallo/Universidad Politecnica de Madrid
Analyzing the Parcel Delivery Pattern in the Global South: The Case of the Brazilian Favelas (TRBAM-25-00390) - A257
Leise Kelli de Oliveira/Universidade Federal de Minas Gerais, Rui Colaço/Universidade Federal de Minas Gerais, Gracielle Gonçalves Ferreira Araújo/Universidade Federal de Minas Gerais, João de Abreu e Silva/Universidade Federal de Minas Gerais
Does e-Commerce Lead to More Sustainable Travel? Evidence from the 2017 and 2022 National Household Travel Surveys (TRBAM-25-01413) - A258
Guang Tian/University of New Orleans, Andrew Tritch/University of New Orleans, Bob Danton/University of New Orleans
Connecting E-Purchases and Mobility: How does E-commerce Impact People's Mobility Habits? (TRBAM-25-02003) - A255
Daniela Castaño/Universidad Politécnica de Madrid, Juan Gomez/Universidad Politécnica de Madrid, Laura Garrido/Universidad Politécnica de Madrid, Lucía Tapiador/Universidad Politécnica de Madrid, José Manuel Vassallo/Universidad Politécnica de Madrid
Exploring Online Delivery Patterns and Returns in the United States: Insights from the 2022 National Household Travel Survey (TRBAM-25-03191) - A260
Adedolapo Ogungbire/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville
Transportation Impacts of Dark Kitchens (DK): A Disruptive On-Demand Food Service establishments (TRBAM-25-05049) - A261
Carlos Granada-Muñoz/Universiteit Antwerpen, Ivan Cardenas-Barbosa/Universiteit Antwerpen, Ivan Sanchez-Diaz/Universiteit Antwerpen, Joris Beckers/Universiteit Antwerpen, Carlos A. Gonzalez-Calderon/Universiteit Antwerpen
Investigating Changes in The Relationship Between E-Commerce Usage And Travel Behavior Over Time: A Moderation Analysis (TRBAM-25-05430) - A262
Ibukun Titiloye/Florida International University, Xia Jin/Florida International University
The Symbiotic Relationship between E-commerce and Travel Demand (TRBAM-25-06183) - A266
Xiaomin Chen/Virginia Polytechnic Institute and State University, Daud Nabi Hridoy/Virginia Polytechnic Institute and State University, Md Sami Hasnine/Virginia Polytechnic Institute and State University

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Determinants of Crowdshippers Participation in Crowdshipping in Mumbai (TRBAM-25-05757) - A267
Aditya Saxena/George Mason University, Deepjyoti Das/George Mason University, Alireza Ermagun/George Mason University, David Levinson/George Mason University
Unravelling the Relationship Between Online Shopping and Vehicle Miles Traveled Associated with Shopping Trips (TRBAM-25-04860) - A268
Manreet Sohi/University of California, Davis, Patrick Loa/University of California, Davis, Basar Ozbilen/University of California, Davis, Xiatian Iogansen/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Virtual Versus Physical: The New Dynamics of Activity and Travel
Ramachandran Balakrishna, Caliper Corporation, presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This session explores how virtual versus physical dynamics impact activity and travel.

Modelling Activity Participation and Time-Allocation in Physical and Virtual Spaces (TRBAM-25-01409) - A270
Md Asif Hasan Anik/Dalhousie University, Muhammad Habib/Dalhousie University
In the age of super apps: Exploring the interactions between virtual and physical activities across different purposes, times and locations of activities (TRBAM-25-01861) - A272
Muhamad Rizki/BOKU University, Tri Basuki Joewono/BOKU University, Yusak Susilo/BOKU University
Activity Scheduling Considering Physical and Virtual Spaces within an Activity-Based Travel Demand Modelling System (TRBAM-25-04677) - A271
Md Asif Hasan Anik/Dalhousie University, Muhammad Habib/Dalhousie University
Interaction between the Emerging Components of Online Shopping and In-Person Activities: Insights from Behavioral Survey and the Justice40 Initiative (TRBAM-25-04971) - A276
A. Latif Patwary/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville
Modeling Time Use Behavior for Different Discretionary Activities Performed in In-home, Online and Out-of-home, and their Interaction (TRBAM-25-05758) - A277
Imrul Kayes Shafie/University of British Columbia, Mahmudur Fatmi/University of British Columbia, Muntahith Orvin/University of British Columbia
Going the Extra Mile: Estimating the Willingness to Travel to Meet With Friends Using a Joint Destination Choice Model (TRBAM-25-01978) - A278
Benjamin Gramsch-Calvo/ETH Zurich, Koki Okamura/ETH Zurich, Kiyoshi Takami/ETH Zurich, Yuki Oyama/ETH Zurich, Makoto Chikaraishi/ETH Zurich, Kay Axhausen/ETH Zurich, Giancarlos Parady/ETH Zurich
Day-to-day Variations in the Symbiosis between At-home Tele-Activities and Out-of-Home Travel (TRBAM-25-00948) - A288
Kaili Wang/University of Toronto, Bianca Zhang/University of Toronto, Khandker Nurul Habib/University of Toronto

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Telework Trends: Shaping Mobility in the Post-Pandemic World
Kaili Wang, University of Toronto, presiding
Muhammad Habib, Dalhousie University, presiding
Roger Chen, University of Hawai'i, Manoa, presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This session addresses telework trends and how they shape the world of post-pandemic mobility. The presentations will discuss how telework impacts employee intentions to relocate, vehicle miles traveled and transit ridership, the relationship between telework and nonwork travel impacts on daily activities, and how telework will shape discussions related to policy.

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"Should I Stay or Should I Go ?" How Working-from-Home Impacts Employee's Intention to Relocate (TRBAM-25-00252) - A294
Veronique Van Acker/Luxembourg Institute of Socio-Economic Research, Corinne Mulley/Luxembourg Institute of Socio-Economic Research
Interpreting an unfolding future: is teleworking as common after the pandemic as we expected? And what does it mean for policy? (TRBAM-25-00361) - A295
Matthias Sweet/Toronto Metropolitan University, Darren Scott/Toronto Metropolitan University
Impacts of remote work on vehicle miles traveled and transit ridership in the USA (TRBAM-25-00780) - A296
Yunhan Zheng/SMART, Shenhao Wang/SMART, Lun Liu/SMART, Jim Aloisi/SMART, Jinhua Zhao/SMART
Unveiling Commute Mode Choice Amidst the Rise of Telework in the New Normal (TRBAM-25-01000) - A297
Lamis Ashour/University of Washington, Qing Shen/University of Washington
Telework-to-Play or Play-to-Telework? Investigating the Directional Relationship Between Telework and Nonwork Travel (TRBAM-25-01541) - A298
Katherine Asmussen/University of Texas, Austin, Angela Haddad/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
Adapting to Remote Work: Analyzing WFH Trends and Impacts on Other Daily Activities in New Normal (TRBAM-25-05781) - A300
Motahare Mohammadi/University of Illinois, Chicago, Zahra Hajibagher/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago, Sybil Derrible/University of Illinois, Chicago, Ram Pendyala/University of Illinois, Chicago, Deborah Salon/University of Illinois, Chicago
Investigating Activity, Travel and Time Use Patterns by Work Arrangements: Evidence from the British Columbia Activity-Time Use Survey (BC ATUS) - Wave 1 (TRBAM-25-06181) - A293
Mahmudur Fatmi/University of British Columbia, Mostaq Ahmed/University of British Columbia
Modeling Departure Time, Travel Mode and Destination Location Choice for Different Work Profiles (TRBAM-25-06142) - A292
Bijoy Saha/University of British Columbia, Nazmul Arefin Khan/University of British Columbia, Mahmudur Fatmi/University of British Columbia
Simulating the Impact of Telecommuting on Spatial, Temporal and Modal Distribution of Travel (TRBAM-25-06205) - A301
Bijoy Saha/University of British Columbia, Mahmudur Fatmi/University of British Columbia, Nazmul Arefin Khan/University of British Columbia
Investigating Telework Adoption and Frequency in the Post-Pandemic Era (TRBAM-25-04892) - A302
Hamid Rezaei/Florida International University, Md Al Adib Sarker/Florida International University, Ibukun Titiloye/Florida International University, Xia Jin/Florida International University
The Impacts of Pandemic-Induced Productivity Changes on Future Working from Home Policies: A Comparative Study of Two Waves of COVID-19 (TRBAM-25-05613) - A303
Sanaz Kazemzadehazad/Illinois Institute of Technology, Mohammad Miralinaghi/Illinois Institute of Technology, Sina Sahebi/Illinois Institute of Technology, Zongzhi Li/Illinois Institute of Technology, Fateme Hafizi/Illinois Institute of Technology
Investigation of Post-Pandemic Work Arrangement of California Hybrid Workers (TRBAM-25-06197) - A291
Keita Makino/University of California, Davis, Siddhartha Gulhare/University of California, Davis, David Bunch/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis
When and Where Do People Work Post-Pandemic? Clustering of Week-Long Temporal and Spatial Work Arrangements in California (TRBAM-25-05631) - A290
Keita Makino/University of California, Davis, Siddhartha Gulhare/University of California, Davis, David Bunch/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis
Understanding the Post-Pandemic Evolution of Telecommuting Preferences by using a Panel Stated Preference Survey (TRBAM-25-03848) - A304
Alireza Dianat/University of Toronto, Khandker Nurul Habib/University of Toronto
Does Post-Pandemic Teleworking Influence Intentions for Residential Location Choice in Scotland? (TRBAM-25-03880) - A305
Mostafa Ilham/Edinburgh Napier University, Achille Fonzone/Edinburgh Napier University, Grigorios Fountas/Edinburgh Napier University, Luca Mora/Edinburgh Napier University
How Has the Importance of Factors Influencing Telework Adoption Changed Over Time? Observing Pre- to Late-Pandemic Trends Using Multi-Year Data from Two US Regions (TRBAM-25-04267) - A314
Seung Eun Choi/Georgia Institute of Technology, Ilsu Kim/Georgia Institute of Technology, Xinyi Wang/Georgia Institute of Technology, Jason Soria/Georgia Institute of Technology, Patricia Mokhtarian/Georgia Institute of Technology

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The Treatment Effects of Post-Pandemic Hybrid/Remote Work on Vehicle Miles Traveled: A Case Study of California Workers (TRBAM-25-06307) - A315
Xiatian Iogansen/University of California, Davis, Basar Ozbilen/University of California, Davis, Yongsung Lee/University of California, Davis, Giovanni Circella/University of California, Davis

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Shifting Modes and Minds: Choices, Challenges, and Impacts
Tassio Magassy, WSP, presiding
Wei KANG, Anhui Jianzhu University, presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This session examines the choices, challenges, and impacts of shifting modes. The session further discusses how users in Solent area, UK, use Mobility-as-a-Service, societal perceptions and adoption intentions of Autonomous vehicles in Texas, ride-hailing users changing travel patterns in Chicago, and decision-making under inclement weather.

An analysis of factors affecting the mode choice of Mobility-as-a-Service (MaaS) users in the Solent area, UK (TRBAM-25-01017) - A310
Nazam Ali/University of Portsmouth, Seda Sucu/University of Portsmouth, Nima Dadashzadeh/University of Portsmouth, Djamila Ouelhadj/University of Portsmouth
Bounded Rationality in Ride-Sourcing Drivers' Dwelling at Transportation Terminals: A Behavioral Queueing Analysis (TRBAM-25-01382) - A311
Tianming Liu/George Washington University, Zhengtian Xu/George Washington University, Jussi Keppo/George Washington University, Yafeng Yin/George Washington University, Hongtu Zhu/George Washington University
Factors Influencing Adoption and Continuance Intention Towards the Use of Ride-Sourcing Services: An Empirical Study Among University Students in Nanjing, China (TRBAM-25-01513) - A312
Wei Kang/Anhui Jianzhu University, Meng Ning/Anhui Jianzhu University, Qun Wang/Anhui Jianzhu University, Yanping Zeng/Anhui Jianzhu University
From Skylines to Sidelines: Unveiling the Societal Impact Perceptions and Adoption Intentions of Autonomous Vehicles in Urban vs. Rural Texas (TRBAM-25-02519) - A313
Muhammad Usman/Texas A&M University, Wei Li/Texas A&M University, Tara Goddard/Texas A&M University, Marcia Ory/Texas A&M University, Chanam Lee/Texas A&M University, Luca Quadrifoglio/Texas A&M University
Mode Substitution for Daily Usage after Adopting New Mobility Portfolios: Evidence from a Sequential Stated Adaptation Choice Experiment (TRBAM-25-02596) - B610
Xueting Ren/Eindhoven University of Technology, Soora Rasouli/Eindhoven University of Technology, Harry Timmermans/Eindhoven University of Technology, Astrid Kemperman/Eindhoven University of Technology
Beyond the Mobility Impact of Ride-hailing Services: Have Ride-hailing Users Changed their Destinations in Chicago? (TRBAM-25-04210) - B611
Shubhayan Ukil/University of Michigan
Acceptability of Personal Electric Mobility Sharing Related to Subjective Factors (TRBAM-25-02762) - B612
Yue Wang/Nagoya University, Meilan Jiang/Nagoya University, Toshiyuki Yamamoto/Nagoya University, Takayuki Morikawa/Nagoya University, Hitomi Sato/Nagoya University, Yusaku Ogai/Nagoya University, Misaki Nakashita/Nagoya University, Miwa Ueki/Nagoya University
Evaluating Pre-Travel Decision Making under Snowy Weather for Commuting Trips (TRBAM-25-03099) - B613
Jiajun Pang/University at Buffalo, SUNY, Irina Benedyk/University at Buffalo, SUNY, Panagiotis Anastasopoulos/University at Buffalo, SUNY
Travel Satisfaction of Expressway Users during Chinese Spring Festival: Leveraging Social Media to Identify the Heterogeneity across Individuals and Spatiotemporal Variations (TRBAM-25-03229) - B614
Yucheng Wang/Southeast University, Min Yang/Southeast University, Bozhan Qin/Southeast University, Yueru Xu/Southeast University
UNDERSTANDING MEGA-CITY INTERMODAL CHOICE BEHAVIOR IN THE CONTEXT OF MAASVIOR I (TRBAM-25-03347) - B615
Jianhong Ye/Tongji University, Lei Gao/Tongji University
`Mind the Gap' - analysing and mitigating the impact of discrepancies between Google Maps API and reported travel data in the Global South (TRBAM-25-04437) - B616
Faza Bastarianto/University of Leeds, Thomas Hancock/University of Leeds, Anugrah Ilahi/University of Leeds, Ed Manley/University of Leeds, Charisma Choudhury/University of Leeds
(continued)

Exploring the Impacts of Mobile Application Interventions on Walking Behavior using an Intersectionality Lens (TRBAM-25-04894) - B617
Reza Abdullah/Hiroshima University, Namgung Hyewon/Hiroshima University, Varun Varghese/Hiroshima University, Makoto Chikaraishi/Hiroshima University, Akimasa Fujiwara/Hiroshima University
Impact of Commuting on Mental Well-Being: Using Time-Stamped Subjective and Objective Data (TRBAM-25-04950) - B618
Xuenuo Zhang/Peking University, Liang Ma/Peking University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
The Post-Pandemic Puzzle: How COVID-19 Redefined Mobility and Work
Tao Feng, Hiroshima University, presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This session focuses on how the pandemic redefined mobility and work and its impacts on consumer preferences, activities, online shopping, changing dynamics of travel behavior patterns, and land-use and transportation planning.

Analyzing the Impact of COVID-19 on Consumer Preferences and Shopping Trip Frequencies (TRBAM-25-03783) - A280
Afsana Chowdhury/Florida International University, Md Al Adib Sarker/Florida International University, Xia Jin/Florida International University
What and Where We Do Activities in Post-COVID Era: Developing a Copula-based Modelling Framework for Halifax, Canada (TRBAM-25-04448) - A281
Xinming Li/Dalhousie University, Muhammad Habib/Dalhousie University, Hasan Shahrier/Dalhousie University
How Does Teleworking Influence Online Shopping and Home Delivery Activity? Findings from Post-Pandemic New York City (TRBAM-25-04841) - A282
Fateme Rezapour Fardin/City College of New York, Mila Le Morvan--Chevestre/City College of New York, Alison Conway/City College of New York
Changing Dynamics of Travel Behavior Patterns and their Impacts on Land Use and Transportation Planning During and After the COVID-19 Pandemic. (TRBAM-25-05017) - A283
Vaibhavi Kamdar/George Mason University, Mohan Venigalla/George Mason University
Tracking Disadvantage and its Influence on Mode Choice and Travel Behavior in the Post-Pandemic Era (TRBAM-25-05714) - A284
Catherine Suria Velasquez/Kittelson & Associates, Inc., Nikhil Menon/Kittelson & Associates, Inc.
New Norms or Old Habits: Evaluating Interlinked Trajectories of Online Shopping and Work Commute Post-Pandemic (TRBAM-25-05107) - A285
Shivam Sharda/National Renewable Energy Laboratory (NREL), Patrick Alonso/National Renewable Energy Laboratory (NREL), Venu Garikapati/National Renewable Energy Laboratory (NREL), Isabel Laguarda/National Renewable Energy Laboratory (NREL), Konstadinos Goulias/National Renewable Energy Laboratory (NREL), Nicole Viz/National Renewable Energy Laboratory (NREL)
Telemedicine Adoption Before, During, and After COVID-19: The Role of Socioeconomic and Built Environment Variables (TRBAM-25-01539) - A286
Angela Haddad/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
Hybrid Workers' Activity Intensity: Post-Pandemic Comparison of Telework-Only and In-Person Workdays (TRBAM-25-05775) - A287
Chandra Bhat/University of Texas, Austin, Ali Kothawala/University of Texas, Austin, Angela Haddad/University of Texas, Austin, Patrick Loa/University of Texas, Austin, Yongsung Lee/University of Texas, Austin, Giovanni Circella/University of Texas, Austin

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Improving Project Delivery Through Better Project Initiation and Permitting

Cole Kopca, Washington State Department of Transportation, presiding

Sponsored By Standing Committee on Strategic Management

Improving project delivery at transportation agencies requires innovations in practices that promote better project implementation. This session will focus on improved practices in environmental permitting and project initiation that can be employed by transportation agencies to make such improvements possible.

Unlocking Success in the Ecosystem of Mega Infrastructure Programs: A Comprehensive Analysis of Crucial Initiation Factors for Client Services (P25-20242) - A208

Rohit Motwani/Jacobs

Innovative Approaches to Environmental Permitting to Improve Project Delivery (P25-20247) - A207

Tess Paganelli/Massachusetts Bay Transportation Authority (MBTA)

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Transforming Transportation Agencies Through Improved Governance

Cole Kopca, Washington State Department of Transportation, presiding

Sponsored By Standing Committee on Strategic Management

The issue of organizational governance has become an increasing focus of transportation agencies as they attempt to meet the changing demands of system users. This session details several areas where improved practices around governance can help transportation agencies meets these evolving needs.

Integrating Advanced Mobility Services in Federated Data Spaces: An Exploration of Organizational Roles (TRBAM-25-02412) - A218

Wolfgang Schulz/Zeppelin University, Jens Gessler/Zeppelin University, Hanspeter Rychlik/Zeppelin University

Breaking Barriers: Institutional Challenges and Strategies for Advancing Active Transportation Infrastructure in U.S. State DOTs (TRBAM-25-04398) - A216

Rachel Auerbach/UNC Chapel Hill, Dan Gelinne/UNC Chapel Hill, Matthew Palm/UNC Chapel Hill

Product Evaluation Programs at State Departments of Transportation (TRBAM-25-04022) - A217

Christofer Harper/Colorado State University, Roy Sturgill/Colorado State University, Dan Tran/Colorado State University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Workforce Development in Practice

Enrique Gonzalez, Loudoun County Transportation, presiding

Sponsored By Standing Committee on Workforce Development and Organizational Excellence, Section - Executive Management Issues, Standing Committee on Research Innovation Implementation Management, Standing Committee on Information and Knowledge Management

Join practitioners and researchers to have an in-depth discussion on workforce development solutions which have been effective for their agencies. Receive information which you can take back and apply to your agency's challenges with the workforce development and staffing crisis faced by many in our industry.

Forging a Resilient Labor Force for U.S. Transit Agencies (TRBAM-25-03799) - A227

Bryan Pounds/McKinsey & Company, Jared Katseff/McKinsey & Company, Greg Bishop/McKinsey & Company, Tony Shorris/McKinsey & Company

(continued)

Bridging Silos: A Vision for a Transdisciplinary Transportation Engineering Workforce (TRBAM-25-04435) - A228
Jeffrey Walters/University of Washington, Tacoma, Philip Balyagati/University of Washington, Tacoma, Panick Kalambay/University of Washington, Tacoma, Josiah Owusu-Danquah/University of Washington, Tacoma, Emmanuel Kidando/University of Washington, Tacoma, Angela Kitali/University of Washington, Tacoma, Heather Dillon/University of Washington, Tacoma
Transportation Job Ads: Do they Reflect the Transformation in the Transportation Sector? (TRBAM-25-04476) - A226
Alireza Ershad/Stony Brook University, Anil Yazici/Stony Brook University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Advancements in Soil and Embankment Stabilization
Karla Lechtenberg, Midwest Roadside Safety Facility (MWRSF), presiding
Khalid Mohamed, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Low-Volume Roads, Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials, Standing Committee on Aggregates

New advancements and techniques in utilizing and characterizing soil and embankment stabilization.

Developing Preliminary Guidelines for Soil Stabilization Using Liquid Polymers (TRBAM-25-02998) - B517
Jianxin Huang/Texas A&M University, College Station, Anand Puppala/Texas A&M University, College Station, Aparna Deshmukh/Texas A&M University, College Station
Lime Stabilization of Moisture-Susceptible Soil in Highway Embankment Slopes: A Case Study from Houston, Texas (TRBAM-25-00736) - B518
Ayush Kumar/Texas A&M University, College Station, Aditya Deshmukh/Texas A&M University, College Station, Nripojyoti Biswas/Texas A&M University, College Station, Puneet Bhaskar/Texas A&M University, College Station, Benamar Mebarkia/Texas A&M University, College Station, Anand Puppala/Texas A&M University, College Station
Study on Mechanical Properties and Microstructure of Glacial Till Stabilized by Ionic Soil Stabilizer (TRBAM-25-00133) - B516
Yifan Huang/Southeast University, Tao Ma/Southeast University, Jinliang Wu/Southeast University
Utilizing Dielectric Constant and Electrical Conductivity to Estimate Cement Content in Stabilized Subgrade Soils (TRBAM-25-04000) - B515
Zack Hall/University of Georgia, Sung-Hee Kim/University of Georgia
A Novel Testing to Assess Moisture-Induced Durability of Stabilized Soils under Cyclic Loading (TRBAM-25-04298) - B514
Ayazhan Bazarbekova/Texas A&M University, College Station, Yong-Rak Kim/Texas A&M University, College Station, Dallas Little/Texas A&M University, College Station, John Rushing/Texas A&M University, College Station

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Stabilization with Recycled Products, Coproducts, and Byproducts
Kang-Won "Wayne" Lee, University of Rhode Island, presiding
David Orr, Cornell Local Roads Program, presiding
Sponsored By Standing Committee on Stabilization of Geomaterials and Recycled Materials, Standing Committee on Low-Volume Roads, Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials, Standing Committee on Aggregates, Joint Subcommittee on Unbound Granular Materials (with AKG00)

Session showcasing various stabilization techniques and performance characterization using different kinds of recycled products, coproducts, and byproducts.

Mechanical Strength and Micro-Structure of Alkali-Activated Copper Tailings Geopolymer Composites Applied to Semi-Rigid Base (TRBAM-25-00274) - B521
Hao Liu/Southeast University, Yang Zhang/Southeast University, Tao Ma/Southeast University, Conglin Chen/Southeast University

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Properties and Structural Contributions of Cold Recycled Materials Based on Mixture Composition Variation (TRBAM-25-00291) - B530
Ebubechukwu Al-Ihekwaba/University of New Hampshire, Eshan Dave/University of New Hampshire, Jo Sias/University of New Hampshire
Utilizing Recycled Concrete Aggregate Fines as Co-Additives in Low-Carbon Cement for Problematic Soil Stabilization (TRBAM-25-00917) - B519
Muddassir Sanei/Texas A&M University, College Station, Nripojyoti Biswas/Texas A&M University, College Station, Sopharith Chou/Texas A&M University, College Station, Anand Puppala/Texas A&M University, College Station
Recycled Asphalt Pavement, Comparison of Base Layers Bounded with Lean Portland Cement or Alkali-Activated Mortar. (TRBAM-25-01949) - B522
Johan Blom/University of Antwerp, Paulo Borges/University of Antwerp, Juliana Costa/University of Antwerp, Wim Van den bergh/University of Antwerp
Investigation of the Performance of Cement-Stabilized Magnesium slag as a Road Base Material (TRBAM-25-02006) - B523
Meng Gao/No Organization, Jun Dai/No Organization, Hongjun Jing/No Organization
Assessing the Use of Eggshell Waste for Soil Stabilization in Iowa (TRBAM-25-02403) - B524
Bo Yang/Transtec Group, Inc., Zexi Yin/Transtec Group, Inc., Araz Hasheminezhad/Transtec Group, Inc., Mohammad Ahmad Alsheyab/Transtec Group, Inc., Halil Ceylan/Transtec Group, Inc., Sunghwan Kim/Transtec Group, Inc.
Experimental Study on Improving Sand Stability Using Seaweed (TRBAM-25-06219) - B528
Yanhai Liu/Tennessee State University, Shihui Liu/Tennessee State University, Catherine K. Armwood-Gordon/Tennessee State University, Lin Li/Tennessee State University
Enhancing Engineering and Environmental Performance of Stabilized Titanium Gypsum Road Base (TRBAM-25-06350) - B529
Zeng Shimin/Southeast University, Sike Wang/Southeast University, Yanjun Du/Southeast University
Exploring the Resource Application of Red Clay Improved by Solid Waste Cementitious Materials in Highway Earthworks (TRBAM-25-05190) - B527
Hailin Wang/Tongji University, Xiaomin Li/Tongji University, Fuqiang Zhang/Tongji University
Polyester Fiber Reinforcement Effects on Cement-Stabilized Reclaimed Asphalt Pavement Base: Mechanical and Durability Characterization (TRBAM-25-04025) - B526
Rishi Singh Chhabra/Indian Institute of Technology, Roorkee, Chintada Chandrasekhar/Indian Institute of Technology, Roorkee, Gondaimei Rongmei Naga/Indian Institute of Technology, Roorkee
Evaluation of Full Depth Reclamation withEngineered Emulsion for Sustainable Pavement Recycling (TRBAM-25-02537) - B525
Farzad Khallaghi/University of Texas at El Paso, Rajib Mallick/University of Texas at El Paso
Investigation into Enhancing Frost Resistance of Cement-Stabilized Macadam Base Layers through Multi-Component Synergy (TRBAM-25-01160) - B520
Jiabo Liu/Southeast University, Qiao Dong/Southeast University, Shiao Yan/Southeast University, Zhou Zhou/Southeast University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Asphalt Binders: Advances in Physical and Chemical Characterization
Kamal Hossain, Carleton University, presiding
Panos Apostolidis, University of Texas, Austin, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement, Section - Materials

Production Temperatures of Warm Mix Modified Binders: Tribological Insights Considering Different Type of Plates (TRBAM-25-01902) - B532
Vivek Wagh/Indian Institute of Technology, Varanasi, Ankit Gupta/Indian Institute of Technology, Varanasi
Examining ΔT c : Variability Factors and Relationships with Other Rheological Shape Parameters (TRBAM-25-02080) - B548
Wes Cooper/Asphalt Institute, Jason Wielinski/Asphalt Institute, Kelly Senger/Asphalt Institute
Physical Performance and Rheological Properties of PU-SBS Composite Modified Asphalt (TRBAM-25-02205) - B545
Rui Zhang/Tongji University, Yuan Xu/Tongji University, Qun Yang/Tongji University

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Multiscale evaluation of moisture effects of polymeric asphalt binder (TRBAM-25-02988) - B537
Khaja Sameer Sadat/Arkansas State University, Zahid Hossain/Arkansas State University, Abu Akid/Arkansas State University, Mohammad Najmush Sakib Oyan/Arkansas State University
Assessing Low-temperature Behavior of Bitumen and Mastics using the Dresden Cryogenic Test in the DSR as an Alternative to the BBR Test (TRBAM-25-03110) - B536
Nicolas Carreño/No Organization, Mrinali Rochlani/No Organization, Gustavo Canon Falla/No Organization
Investigation of the Relationship Between Crude Oil and Asphalt Properties (TRBAM-25-03321) - B538
Yunze Pang/Harbin Institute of Technology, Liyan Shan/Harbin Institute of Technology, Zhou Tao/Harbin Institute of Technology
Synergistic Effects of Xinjiang Rock Asphalt and Organic Warm Additives on Binder Rheological Properties (TRBAM-25-04207) - B546
Bangyan Hu/Southeast University, Zhendong Qian/Southeast University, Qingqing Song/Southeast University, Long Cheng/Southeast University
Numerical and experimental evaluation of adhesion properties of asphalt-aggregate interfaces using molecular dynamics simulation and atomic force microscopy (TRBAM-25-04656) - B549
Bingyan Cui/Rutgers University, New Brunswick, Hao Wang/Rutgers University, New Brunswick
Impact of Softening Agents on the Comprehensive Rheological Performance of Highly Elastic Asphalt Binders (TRBAM-25-04791) - B558
Moayad Al Issa/Rowan University, Arunkumar Goli/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Danielle Kennedy/Rowan University
Detection and Quantification of Asphalt Binder Contaminants Using Portable Gas Chromatography and Mass Spectrometry. (TRBAM-25-04863) - B539
Namuundari Zorigtbaatar/Texas A&M University Transportation Institute, Hui Chen/Texas A&M University Transportation Institute, Fujie Zhou/Texas A&M University Transportation Institute, Pravat Karki/Texas A&M University Transportation Institute
Developing Interrelationships between Mechanical Properties and Chemical Characteristics of Unmodified and Modified Asphalt Binders (TRBAM-25-04998) - B559
Anil Baditha/Rowan University, Venkatsushanth Revelli/Rowan University, Caitlin Purdy/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University
Stability Evaluation of Emulsified Asphalt Based on Interfacial Rheological Behavior (TRBAM-25-05174) - B534
Jie Wu/Tongji University, Qian Xiang/Tongji University, Jin Li/Tongji University, Wentao He/Tongji University, Changshan Jiang/Tongji University, Jie Yuan/Tongji University, Feipeng Xiao/Tongji University
Characterizing Storage Stability of Emulsified Asphalts with Zeta Potential and Particle Size (TRBAM-25-05225) - B544
Zizhuang Yang/Tongji University, Changshan Jiang/Tongji University, Qian Xiang/Tongji University, Jie Wu/Tongji University, Jin Li/Tongji University, Feipeng Xiao/Tongji University
Investigation on Moisture Damage Resistance of Plastic Modified Asphalt Binder using SFE Technique (TRBAM-25-05279) - B531
Madhuri Biswas/Carleton University, Snahashish Paul/Carleton University, Kamal Hossain/Carleton University, Prashant Waghmare/Carleton University, Abrar Ahmed/Carleton University
Water Diffusion into Bio-Oil-Modified Bitumen, Co-diffusion of Organic Compounds with Water, and the Effects of Short-Term Aging, pH, and Salinity (TRBAM-25-05704) - B540
Albert Hung/Arizona State University, Farideh Pahlavan/Arizona State University, Peter Valdez/Arizona State University, Elham Fini/Arizona State University
On the Thixotropic Response of Recycled Bitumen Blends Containing Recycling Agent and Low Viscous Binder (TRBAM-25-05731) - B542
L Abinaya/Indian Institute of Technology, Madras, M. R. Nivitha/Indian Institute of Technology, Madras, Murali Krishnan/Indian Institute of Technology, Madras
Real-time Observations of Micro-Damage Evolution in Thin Film Strength Tests of Asphalt Binders (TRBAM-25-05917) - B543
Kiran Mohanraj/Transtec Group, Inc., Satyavati Komaragiri/Transtec Group, Inc., Miomir Miljkovic/Transtec Group, Inc., Amit Bhasin/Transtec Group, Inc.

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Evaluating the Repeatability of different Sample Preparation Techniques used for ATR-FTIR Spectroscopy from the RILEM 295-FBB TG1 Round Robin Test (TRBAM-25-00468) - B557
Johannes Mirwald/Vienna University of Technology, Sadaf Khalighi/Vienna University of Technology, Kristina Primerano/Vienna University of Technology, Aikaterini Varveri/Vienna University of Technology, Bernhard Hofko/Vienna University of Technology, Dheeraj Adwani/Vienna University of Technology, Augusto Cannone Falchetto/Vienna University of Technology, Michael Elwardany/Vienna University of Technology, Rita Kleizienė/Vienna University of Technology, Katarzyna Konieczna/Vienna University of Technology, Dominika Maliszewska/Vienna University of Technology, Peter Mikhailenko/Vienna University of Technology, Virginie Mouillet/Vienna University of Technology, Sayeda Nahar/Vienna University of Technology, Nathalie Piérard/Vienna University of Technology, Georgios Pipintakos/Vienna University of Technology, Kees Plug/Vienna University of Technology, Laurent Porot/Vienna University of Technology, Gerald Reinke/Vienna University of Technology, Aditi Sharma/Vienna University of Technology, Pej

Mechanistic Modelling and Experimental Validations of Pull-off Fatigue Damage at Bitumen-aggregate Interfaces (TRBAM-25-00643) - B541
Juntao Wang/Southeast University, Li'an Shen/Southeast University, Xue Luo/Southeast University, Yuqing Zhang/Southeast University

Understanding the Low-Temperature Fracture Behavior of Rejuvenated High Viscosity Modified Asphalt Utilizing a Combined Microstructure-Component Analysis (TRBAM-25-00999) - B535
Mingjun Hu/Dalian University of Technology, Shize Ji/Dalian University of Technology, Yiren Sun/Dalian University of Technology, Lijun Kou/Dalian University of Technology

The Microstructure and Adhesion Performance on Thermal-salt Erosion of Asphalts (TRBAM-25-01086) - B547
Hongyan Zhao/Tongji University, Lin Cong/Tongji University, Hongren Gong/Tongji University, Heyang Ding/Tongji University, Gang Li/Tongji University

Chemo-mechanical characterization of rejuvenated asphalt binder using data-driven approach and micro-mechanical models (TRBAM-25-01279) - B533
Yudi Wang/University of Illinois, Urbana-Champaign, Ramez Hajj/University of Illinois, Urbana-Champaign

Streamlining the Double-Edge-Notched Tension Test to Evaluate Asphalt Binder Resistance to Cracking at Intermediate Temperatures (TRBAM-25-01965) - B556
Michael Elwardany/FAMU-FSU College of Engineering, Patrick Laciuga/FAMU-FSU College of Engineering, Chukwunwike Okwuenu/FAMU-FSU College of Engineering, Ahmed Hassanien/FAMU-FSU College of Engineering, Adrian Andriescu/FAMU-FSU College of Engineering, David Mensching/FAMU-FSU College of Engineering

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Additives and Modifiers in Asphalt
Michelle Miller, Michigan Department of Transportation, presiding
Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design, Section - Materials

This poster session examines the effects of various additives and modifiers on the properties and performance of asphalt mixtures. It covers the use of fibers, chemical additives, and other materials to enhance moisture resistance, thermal cracking resistance, and overall durability.

Effect of Amine-based and Chemical WMA Additives on Moisture Damage Resistance of Asphalt Mixtures at Different Conditioning Protocols (TRBAM-25-04105) - B551
Ibrahim Elnaml/Louisiana Department of Transportation and Development, Louay Mohammad/Louisiana Department of Transportation and Development, Moses Akentuna/Louisiana Department of Transportation and Development, Mahesh Krishna Reddy Duvvuru/Louisiana Department of Transportation and Development, Sagar Parajuli/Louisiana Department of Transportation and Development, Samuel Cooper, III/Louisiana Department of Transportation and Development, Samuel Cooper, Jr/Louisiana Department of Transportation and Development

Laboratory Performance Evaluation of OGFC Mixtures with Epoxy-modified versus SBS-modified Asphalt Binders (TRBAM-25-02756) - B578
Fan Yin/National Center for Asphalt Technology (NCAT), Anurag Anand/National Center for Asphalt Technology (NCAT), Chen Chen/National Center for Asphalt Technology (NCAT), Raquel Moraes/National Center for Asphalt Technology (NCAT)

Towards Sustainable Pavement Construction: Use of Rejuvenator to Incorporate High Reclaimed Asphalt Pavement (RAP) in Asphalt Mixes with Balanced Mix Design Approach (TRBAM-25-05101) - B589
Sagar Ghos/University of Oklahoma, Syed Ali/University of Oklahoma, Musharraf Zaman/University of Oklahoma, Kenneth Hobson/University of Oklahoma, David Vivanco/University of Oklahoma

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Investigation on the Feasibility of Utilizing Recycling Agents in Cold In-Place Recycled Asphalt Materials (TRBAM-25-00402) - B577
Ebubechukwu Al-Ihekwaba/University of New Hampshire, Eshan Dave/University of New Hampshire, Jo Sias/University of New Hampshire, Daniel Wegman/University of New Hampshire, Mohammadreza Sabouri/University of New Hampshire
Reducing epoxy resin content in the thermosetting epoxy asphalt mixture: a feasible method to facilitate its application (TRBAM-25-04219) - B565
Jia Sun/Southeast University, Sang Luo/Southeast University, Wei Huang/Southeast University, Youheng Li/Southeast University
Impact of Mastic Modification on the Potential Performance of Stone-matrix Asphalt (SMA) (TRBAM-25-00893) - B575
Javier García Mainieri/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Evaluation of Laboratory-produced RPM Asphalt Mixtures using Different Types of Recycled Plastics (TRBAM-25-04646) - B588
Maede Mottaghi/National Center for Asphalt Technology (NCAT), Chen Chen/National Center for Asphalt Technology (NCAT), Fan Yin/National Center for Asphalt Technology (NCAT), Randy West/National Center for Asphalt Technology (NCAT), Adam Taylor/National Center for Asphalt Technology (NCAT)
Achieving Sustainable Moisture Resistance in Asphalt Binder Modified with Amine-1 Impregnated Zeolite and Plastic (TRBAM-25-01939) - B550
Unmona Aditi/California State University, Long Beach, Shadi Saadeh/California State University, Long Beach, MohammadJavad Kazemi/California State University, Long Beach, Elham Fini/California State University, Long Beach, Roger Khoudessian/California State University, Long Beach, Louay Mohammad/California State University, Long Beach
Investigation of epoxy resin effects on the stripping damage in bitumen-aggregate systems using their thermodynamic and mechanical characteristics (TRBAM-25-06284) - B579
Hossein Bahmani/University of Illinois, Chicago, Farideddin Peiravian/University of Illinois, Chicago, Hamed Khani Sanij/University of Illinois, Chicago
Development of Joint Materials for the Connection of Future Prefabricated Bridge Deck Asphalt Pavement (TRBAM-25-02048) - B573
Gang Liu/City University of Hong Kong, Guoyang Lu/City University of Hong Kong, Shiu Tong Thomas Ng/City University of Hong Kong, Zhendong Qian/City University of Hong Kong
Low-Temperature Cracking Assessment of High-RAP Mixtures Modified with Waste Plastics and Vegetable Oil (TRBAM-25-01390) - B562
Nitish Bastola/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln
Effect of Fibers (cellulose pellets, natural cellulose, banana and jute fibers) and Filler Materials (crusher dust and hydrated lime) on the Mechanical Performance of Stone Matrix Asphalt Mixtures (TRBAM-25-01580) - B553
Darshan N/No Organization, Aniket Kataware/No Organization
Evaluation of Asphalt Mixture Containing High Content of Reclaimed Asphalt Pavement (RAP) Materials with Epoxy Asphalt (TRBAM-25-01301) - B572
Ahmed elnihum/University of South Florida, Qing Lu/University of South Florida, Mohammad Alharthai/University of South Florida, Mohammed Alamri/University of South Florida, Can Chen/University of South Florida, Asad Elmagarhe/University of South Florida
Laboratory Evaluation of Mixture Performance of High-Content Rubber Asphalt Using Wet Process (TRBAM-25-02706) - B563
Meng Wu/Michigan Technological University, Kwadwo Boateng/Michigan Technological University, Lei Yin/Michigan Technological University, Zhanping You/Michigan Technological University, Dongzhao Jin/Michigan Technological University, Kai Xin/Michigan Technological University
A New Generation of Multi-Functional Asphalt Emulsions with Hydrophobic and Luminescent Properties (TRBAM-25-04885) - B587
Md Tanvir Ahmed Sarkar/Louisiana State University, Mostafa Elseifi/Louisiana State University
Assessment of Moisture Damage Resistance of Asphalt Mixtures containing Waste Plastic based on Physical-, Mechanical-, and Thermodynamical Binder-Particle Adhesion Methods (TRBAM-25-00733) - B552
Isabella Madeira Bueno/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln
Influence of Polyethylene Melting Characteristics on Volumetric Properties and Performance of Asphalt Mixtures (TRBAM-25-04130) - B569
Venkatsushanth Revelli/Rowan University, Anil Baditha/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Ben Cox/Rowan University, Sadie Casillas/Rowan University

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Effect of Laboratory Aging on the Performance of Asphalt Mixture Containing High RAP Content with the Rejuvenator-loaded Fiber (TRBAM-25-01865) - B567
Yuxuan Sun/Aalto University, Fan Zhang/Aalto University, Augusto Cannone Falchetto/Aalto University, Di Wang/Aalto University
Systematic Study on Modification Mechanism Model and Benefit of WER Emulsified Asphalt Based on the Efficacy Coefficient Method and LCA (TRBAM-25-03715) - B555
Junyi Shi/Tongji University, Qun Yang/Tongji University, Yonggang Liang/Tongji University, Yubin Zhang/Tongji University
Investigating the Effect of Field Sand Content, Binder Grade, and Hydrated Lime on Asphalt Mixture Stripping Potential (TRBAM-25-04478) - B586
Suhail Vaid/University of Texas, El Paso, Miguel Montoya/University of Texas, El Paso, Imad Abdallah/University of Texas, El Paso, Dr. Soheil Nazarian/University of Texas, El Paso, Travis Patton/University of Texas, El Paso
Evaluation of Warm Mix Asphalt Additives at Normal and Reduced Mixing and Compaction Temperatures (TRBAM-25-04083) - B554
Faustina Keuliyan Rodriguez/Heritage Research Group, Katie DeCarlo/Heritage Research Group
Exploring Cool Pavement Technologies: A Lab-based Experimental Analysis of Temperature and Reflectivity (TRBAM-25-00037) - B568
Sophie Stüwe/TU Wien, Bernhard Hofko/TU Wien
Optimizing High-performance Asphalt Concrete Modified with Polyethylene Terephthalate Fibre Using the Balanced Mix Design Principle (TRBAM-25-02676) - B574
Mohamed Saleh/University of Alberta, Nirob Ahmed/University of Alberta, Tala Odeh/University of Alberta, Leila Hashemian/University of Alberta
Assessment of the Aging Sensitivity of High Reclaimed Asphalt Pavement Asphalt Mixtures with Recycling Agents (TRBAM-25-02031) - B564
Emilio Turbay/North Carolina State University, Saqib Gulzar/North Carolina State University, Cassie Castorena/North Carolina State University, Benjamin Underwood/North Carolina State University, Jhony Habbouche/North Carolina State University, Ilker Boz/North Carolina State University, Kazuo Kuchiishi/North Carolina State University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Concrete Pavement Design, Modeling, and Performance
Tamim Khan, Ferrovial Construction US Corp., presiding
Sponsored By Standing Committee on Design and Rehabilitation of Concrete Pavements

Enhanced Method for Accurate Determination of TSD Deflection of Semi-Rigid Pavements (TRBAM-25-01114) - B603
Xiaoying Tong/Tongji University, Zhang Chen/Tongji University, Huailei Cheng/Tongji University, Lijun Sun/Tongji University
Prediction of Void Beneath Concrete Slabs Using Finite Element Modeling and Optimized BP Neural Network (TRBAM-25-01816) - B605
Bin Shi/Southeast University, Kaiwen Lei/Southeast University, Xing Hu/Southeast University, Kang Yao/Southeast University, Xiang Wang/Southeast University, Qiao Dong/Southeast University
Performance Prediction Models for Flexible and Rigid Pavements – State-of-the-Practice Review for Implementation (TRBAM-25-02897) - B590
Yongsung Koh/University of Illinois, Urbana-Champaign, Yujia Lu/University of Illinois, Urbana-Champaign, Robert Wiggins/University of Illinois, Urbana-Champaign, Youngdae Kim/University of Illinois, Urbana-Champaign, Issam Qamhia/University of Illinois, Urbana-Champaign, Erol Tutumluer/University of Illinois, Urbana-Champaign, Jeb Tingle/University of Illinois, Urbana-Champaign, Timothy Parsons/University of Illinois, Urbana-Champaign, Michael Harrell/University of Illinois, Urbana-Champaign
Fast Screening of Jointed Concrete Pavements for Weak Joint Detection with a Traffic Speed Deflectometer (TRBAM-25-03114) - B601
Martin Scavone LaSalle/ARRB Systems, Nathan Bech/ARRB Systems, Jerome Daleiden/ARRB Systems
Physics-Guided Machine Learning Approach for Roughness Prediction in Jointed Plain Concrete Pavements (TRBAM-25-04292) - B600
Tanvir Ahmed/University of Texas, Tyler, Mayzan Isied/University of Texas, Tyler, Mena Souliman/University of Texas, Tyler

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Year-Twenty Performance Review of the First 40-Year Design Life Jointed Plain Concrete Pavements in California (TRBAM-25-04840) - B602
Angel Mateos/University of California, Davis, Md Mostofa Haider/University of California, Davis, Somayeh Nassiri/University of California, Davis, Dulce Feldman/University of California, Davis, John Harvey/University of California, Davis, Jeremy Lea/University of California, Davis, Ali Butt/University of California, Davis
Lightweight Precast Concrete Pavement Slab based on Topology Optimization and Engineered Cementitious Composite: Design and Validation (TRBAM-25-05046) - B604
Yuxuan Xia/Tongji University, Jiading, Ke Cheng/Tongji University, Jiading, Dachen Gao/Tongji University, Jiading, Mengyuan Zeng/Tongji University, Jiading, Hongduo Zhao/Tongji University, Jiading
Evaluating the Effects of Vehicle Speed on Dynamic Strain Response in Concrete Pavements (TRBAM-25-05227) - B591
Michael Wallace/Minnesota Department of Transportation

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Modeling the Many Factors Impacting Flexible Pavement Design
Nam Tran, National Center for Asphalt Technology (NCAT), presiding
Nicole Elias, California State Polytechnic University, Pomona, presiding
Sponsored By Standing Committee on Design and Rehabilitation of Asphalt Pavements

This poster session includes a number of research papers exploring various factors that model the impacts of vehicular and climatic loading on asphalt pavement response.

Propagation Mode of Top-down Cracks in Asphalt Pavements Using XFEM: Considering the Aging Gradients in Field Cores (TRBAM-25-00093) - B597
Yulou Fan/Southeast University, Yunhong Yu/Southeast University, You Wu/Southeast University, Jun Yang/Southeast University
Evaluation of Potential Electric Vehicles (EV) Load-Induced Damage on Freight EV Corridors and Local Roads (TRBAM-25-00638) - B580
Mohamad Yaman Fares/Michigan State University, Ahmad Albdour/Michigan State University, Michele Lanotte/Michigan State University
Cracking Damage Mechanism-based Mechanistic Framework on Predicting Damage Evolution in Asphalt Pavements (TRBAM-25-00677) - B582
Hui Li/Southeast University, Yuqing Zhang/Southeast University, Xue Luo/Southeast University
Impact of Truck Platoon Rest Period on Mechanistic-Empirical Flexible Pavement Design (TRBAM-25-00688) - B585
Aravind Ramakrishnan/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign, Ashraf Alrajhi/University of Illinois, Urbana-Champaign, Hasan Ozer/University of Illinois, Urbana-Champaign
Technical Information Required in Managing and Predicting the Condition of Paved Road Network in Finland (TRBAM-25-00822) - B598
Anne Hämäläinen/Tampere University, Pauli Kolisoja/Tampere University, Kalle Vaismaa/Tampere University, Timo Saarenketo/Tampere University
Identifying Critical Fatigue Damage Positions in Semi-Rigid Perpetual Asphalt Pavements (TRBAM-25-01029) - B594
Zhen-Yang Wang/Tongji University, Lijun Sun/Tongji University
Impact of Equivalent Loading Frequencies on Flexible Pavement ME Distress Predictions (TRBAM-25-02291) - B599
Peng Chen/Michigan State University, Karim Chatti/Michigan State University, Bora Cetin/Michigan State University, Farhad Abdollahi/Michigan State University, Muhammed Kutay/Michigan State University
Impact of Hybrid Grid Reinforcement on Pavement Performance: Comprehensive Laboratory and Field Evaluation (TRBAM-25-01572) - B581
Tam Phan/Kunsan National University, Dae-Wook Park/Kunsan National University, Jae-Hyeong Yoon/Kunsan National University, Sarkar Nasim/Kunsan National University, Jeong-Hun Kim/Kunsan National University, Sung-Soo Lee/Kunsan National University

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Comparison of Field Damaged Dynamic Modulus Master Curves for Existing HMA Characterization at all PMED Rehabilitation Input Levels (TRBAM-25-02272) - B609
Faizan Lali/Michigan State University, Rahul Raj Singh/Michigan State University, Syed Haider/Michigan State University, Muhammed Kutay/Michigan State University, Karim Chatti/Michigan State University, Justin Schenkel/Michigan State University
Evaluation of Tack Coat Bonding Performance in Flexible Pavements (TRBAM-25-02534) - B608
Rita Nasr/Crafco, Inc., Adam Hand/Crafco, Inc., Elie Hajj/Crafco, Inc., Peter Sebaaly/Crafco, Inc., Gaylon Baumgardner/Crafco, Inc., Codrin Daranga/Crafco, Inc.
Multidisciplinary Approach to Pavement Performance under Elevated Temperature Using Dynamic Sensors and WIM Data (TRBAM-25-02697) - B584
Silas Henrique Barbosa de Carvalho Linares/University of Alberta, Malik Noor Ul Amin Awan/University of Alberta, Leila Hashemian/University of Alberta, Mohammad Shafiee/University of Alberta, Alireza Bayat/University of Alberta
Flexible Pavement Design Research Efforts for Maine (TRBAM-25-03381) - B606
Uma Maheswar Arepalli/SRM University AP, Cheritha Jonnalagadda/SRM University AP, Mohammadali Shirazi/SRM University AP
Investigation on Temperature Correction of the Asphalt Layer's Modulus Considering the Measured Temperature Field (TRBAM-25-03554) - B593
Ruikang Yang/Tongji University, Lijun Sun/Tongji University, Yue Hu/Tongji University, Tian Jin/Tongji University, Liping Liu/Tongji University
Calibration of Rutting and Fatigue Cracking Models for Flexible Pavement Design in Louisiana using AASHTOWare Pavement ME Design (TRBAM-25-04486) - B607
Hang Lu/Louisiana Department of Transportation and Development, Zhong Wu/Louisiana Department of Transportation and Development
Evaluation of the Impact of Super Heavy Load Movements on Flexible Pavement (TRBAM-25-04748) - B595
Zafrul Khan/Applied Research Associates, Inc., Hyung Lee/Applied Research Associates, Inc., Ahmad Alhasan/Applied Research Associates, Inc., Jamie Greene/Applied Research Associates, Inc., Hadi Nabizadeh/Applied Research Associates, Inc.
RIOHTrack Accelerated Loading Test and Pavement Performance Verification after One Hundred Million ESALs (TRBAM-25-05684) - B583
Guang Yang/Research Institute of Highway, Ministry of Transport, Xudong Wang/Research Institute of Highway, Ministry of Transport, Zhendong Qian/Research Institute of Highway, Ministry of Transport, Xingye Zhou/Research Institute of Highway, Ministry of Transport, Qian Xiao/Research Institute of Highway, Ministry of Transport
A Simplified Approach for Reliablity Analysis of Flexible Pavement Structures (TRBAM-25-06125) - B596
Deepthi Dilip/Birla Institute of Technology and Science, Dubai
Verification of the AASHTOWare PMED Design for Asphalt Pavement with Full-Depth Reclamation (TRBAM-25-03102) - B592
Xingdong Wu/Kansas State University, Mustaque Hossain/Kansas State University, Greg Schieber/Kansas State University

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Transportation and Community Impacts
Veronica Murphy, New Jersey Department of Transportation, presiding
Sponsored By Standing Committee on Community Resources and Impacts

Online Learning Models for Citizen Academies on Transportation (TRBAM-25-00026) - B401
Tia Boyd/USF Center for Urban Transportation Research, Jason Jackman/USF Center for Urban Transportation Research
Integrating Electric Scooters in Transportation Master Plan of a Midsize North American City: The Case of Oakville Masterplan, Ontario (TRBAM-25-00027) - B430
Tyler Hu/University of Toronto, St. George, Sk. Mashrur/University of Toronto, St. George, Saeed Shakib/University of Toronto, St. George, Eric Chan/University of Toronto, St. George, Khandker Nurul Habib/University of Toronto, St. George
Behavioural Insights into Transport Consumption: The Critical Role of Personality Traits and Socioeconomic Factors (TRBAM-25-00074) - B402
Md Shahin/University of New South Wales, Canberra, Milad Ghasri/University of New South Wales, Canberra, Alireza Abbasi/University of New South Wales, Canberra

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Modelling the Role of Supporting Infrastructure, Concerns, Beliefs, Risk Factors, And Perceived Safety on Pedestrians' Walking Tendency (TRBAM-25-00141) - B403
Anju E. C./India National Institute of Technology, Calicuta, Nishant Pawar/India National Institute of Technology, Calicuta, Ritvik Chauhan/India National Institute of Technology, Calicuta
Community-Driven Transportation Studies: A Review of Needs Assessments and Methodologies (TRBAM-25-00222) - B404
Miriam Pinski/Shared Use Mobility Center, Lauren McCarthy/Shared Use Mobility Center
Investigating Mode Choice Behavior for First and Last Mile Travel among Rail Users in Atlanta (TRBAM-25-00223) - B414
Seung Jae Lieu/Georgia Institute of Technology, Gulsah Akar/Georgia Institute of Technology
Spatial Accessibility of Quality Primary Care Physicians: A Case Study of Atlantic County, New Jersey (TRBAM-25-00296) - B413
Yingning Xie/Rutgers University, Michael Smart/Rutgers University
Framework for Developing an International Mobility (In)Justice Atlas (TRBAM-25-00546) - B412
Cyrine Kamoun/Technical University of Munich, David Duran-Rodas/Technical University of Munich
Developing a Community-Centered Bikeshare System for Small Cities: Lessons from Ride 4 SMILIES in Fort Smith, Arkansas (TRBAM-25-00563) - B473
Anindya Debnath/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville
Is "Small" Infrastructure the Next Factory for Accessibility? Evaluating the Regional Accessibility Effects of a Cycling-Centric Transport Policy in Zurich. (TRBAM-25-00592) - B492
Lukas Ballo/Swiss Federal Institute of Technology (ETH Zurich), Aurore Sallard/Swiss Federal Institute of Technology (ETH Zurich), Lucas Meyer de Freitas/Swiss Federal Institute of Technology (ETH Zurich), Kay Axhausen/Swiss Federal Institute of Technology (ETH Zurich)
Are Broadband, Computer and Transport Access Inequity Interrelated? (TRBAM-25-00968) - B411
Declan Gardiner/Trinity College, Dublin, Margaret O'Mahony/Trinity College, Dublin
Sufficientarianism and Accessibility Studies: Where Are We? (TRBAM-25-00971) - B420
Jose Arturo Jasso Chavez/McGill University, Noah Kelly/McGill University, Kevin Manaugh/McGill University
Factors Influencing the Business Use of Personal Vehicles: Evidence From the 2022 National Household Travel Survey (TRBAM-25-01046) - B474
Anindya Debnath/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville
Examining the Impact of Shared Micromobility on Urban Transportation Patterns: Insights from the Madrid Region (TRBAM-25-01111) - B450
Jose Cano-Leiva/Universidad Politécnica de Madrid, María Vega-Gonzalo/Universidad Politécnica de Madrid, Juan Gomez/Universidad Politécnica de Madrid, José Manuel Vassallo/Universidad Politécnica de Madrid
Unraveling Disparities in People's Activity Space Patterns at a National Scale Using Mobile Location Data (TRBAM-25-01254) - B506
Tanhua Jin/Ghent University, Jun Cao/Ghent University, Junxue Zhang/Ghent University, Kailai Wang/Ghent University, Long Cheng/Ghent University, Frank Witlox/Ghent University
Identifying Priority Communities for Electric Vehicle Investments (TRBAM-25-01406) - B421
Maha Shafaeen/University of California, Davis, Scott Hardman/University of California, Davis, Kelly Hoogland/University of California, Davis
A Rank-Based Model of Residential Location Preferences Before and After the COVID-19 Pandemic (TRBAM-25-01535) - B472
Dale Robbennolt/University of Texas, Austin, Angela Haddad/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
Assessing the Effects of Built Environment and Demographics on E-Scooter and E-Bike Usage on City Streets: A Case Study of Austin, TX (TRBAM-25-01565) - B422
Yiming Xu/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin
Introducing Augmented Accessibility: Space-Time Thresholds for Hybrid Environments (TRBAM-25-01741) - B423
Raúl Elizondo-Candanedo/Universidad Politécnica de Madrid, Aldo Arranz-López/Universidad Politécnica de Madrid, M. Eugenia López-Lambas/Universidad Politécnica de Madrid, Julio Soria-Lara/Universidad Politécnica de Madrid, Antonio Paez/Universidad Politécnica de Madrid
Hungry After Dark: Spatio-Temporal Analysis of Food Availability in a Dense City (TRBAM-25-03009) - B424
Bayi Li/Singapore University, Yunkyung Choi/Singapore University, Sarah Wong/Singapore University, Samuel Chng/Singapore University, Lynette Cheah/Singapore University
Redefining Urban Access: A Fresh Look at Accessibility and Equity in 20-Minute City (TRBAM-25-03305) - B431
Songmi Paek/Korea Advanced Institute of Science and Technology, Tiantian Chen/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology

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Exploring People's Support of 15-Minute City Policy Implementation and Its Intersection with the Concept's Perceived Benefits and Drawbacks (TRBAM-25-03393) - B432
Jessica Wei-Lin Lam/University of Saskatchewan, Ariel Arosemena/University of Saskatchewan, Ehab Diab/University of Saskatchewan
Explaining Heterogeneity in the Self-Reported Importance of Travel Mode Choice Factors (TRBAM-25-03578) - B433
Mahyar Vahedi Saheli/Utah State University, Patrick Singleton/Utah State University, Antje Graul/Utah State University
Public Transport Accessibility Index for Bangkok and Its Application (TRBAM-25-03636) - B434
Watcharapong Wongkaew/No Organization, Wachira Muanyoksakul/No Organization, Pongsun Bunditsakulchai/No Organization, Kongtup Wanichjaroenporn/No Organization, Nattakarn Surangsrirout/No Organization
Unveil Short-Term Traffic Change in Baltimore After Francis Scott Key Bridge Collapse (TRBAM-25-03646) - B451
Yaobang Gong/University of Maryland, College Park, Yi Zhang/University of Maryland, College Park, Kaitai Yang/University of Maryland, College Park, Sayantan Tarafdar/University of Maryland, College Park, Xianfeng Yang/University of Maryland, College Park, Di Yang/University of Maryland, College Park
The Efficacy of Decentralized Disaster Relief Resource Allocation Within Communities: The Role of Community-Based Sharing Captains (TRBAM-25-03647) - B440
Olivia Wang/University of Washington, Zhengyang Li/University of Washington, Cynthia Chen/University of Washington
Pathway to Sustainable Transportation for Island Communities: A case study from Kauai (TRBAM-25-03852) - B462
Cemal Akcicek/National Renewable Energy Laboratory (NREL), Yanbo Ge/National Renewable Energy Laboratory (NREL), Venu Garikapati/National Renewable Energy Laboratory (NREL), Sailesh Acharya/National Renewable Energy Laboratory (NREL)
Quality of Life Changes and User Satisfaction in Public Microtransit Systems (TRBAM-25-03921) - B441
Raisa Mehnaj/North Carolina State University, Eleni Bardaka/North Carolina State University, Christopher Mayhorn/North Carolina State University, Kai Monast/North Carolina State University, Munindar Singh/North Carolina State University
Electric Vehicle Carsharing in Underserved Communities: Understanding Financial Sustainability and Supportive Federal Policy Strategies (TRBAM-25-03932) - B442
Heather Richardson/Office of the Assistant Secretary for Research and Technology (OST-R), Joseph Reed/Office of the Assistant Secretary for Research and Technology (OST-R), Susan Shaheen/Office of the Assistant Secretary for Research and Technology (OST-R)
Assessing Grocery Store Quality at the Regional Scale: Implications for Food Access and Equity Analysis (TRBAM-25-04042) - B493
Joseph El Habr/University of Texas, Austin, Alex Karner/University of Texas, Austin
Reconnect South Park: A Case Study Evaluation of Infrastructure (in)Justice in The Reconnecting Communities Program (TRBAM-25-04299) - B512
Collin Yarbrough/Southern Methodist University, Janille Smith-Colin/Southern Methodist University
"I Lost It All. The Water Destroyed Everything": Transportation Resilience, Housing, and Displacement of Rural Homeless Communities (TRBAM-25-04436) - B443
Sarah Grajdura/Utah State University, Julia LanzDuret-Hernandez/Utah State University, Nat Robtoy/Utah State University, Dana Rowangould/Utah State University
Determinants of Speed Camera Location Choice (TRBAM-25-04439) - B484
Nebiyou Tilahun/University of Illinois, Chicago, Sajad Askari/University of Illinois, Chicago, David Levinson/University of Illinois, Chicago
Exploring the Mismatch of Walkability and Walking Behavior: From the Perspective of Zoning (TRBAM-25-04462) - B444
Dingyi Liu/University of Hawai'i, Manoa, Wei Zhai/University of Hawai'i, Manoa, Suwan Shen/University of Hawai'i, Manoa, Haoming Qin/University of Hawai'i, Manoa
How Public Perception Shape Transportation Policies: Integrating Socio-Geographic Monitoring Stations with National Databases (TRBAM-25-04608) - B452
H.M. Imran Kays/University of Oklahoma, Arif Mohaimin Sadri/University of Oklahoma, K.K. "Muralee" Muraleetharan/University of Oklahoma
Interactions Between Transportation Infrastructure and Dynamic Segregation Using Mobile Data: A Dallas Case Study (TRBAM-25-04612) - B513
Ehsan Poorvahedi/Southern Methodist University, Janille Smith-Colin/Southern Methodist University

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Developing and Validating a Multi-Criteria Approach for Locating Multimodal Mobility Hubs (TRBAM-25-04821) - B453
Eliana Duarte/University of Florida, Duanya Lyu/University of Florida, Anran Zheng/University of Florida, Louis Merlin/University of Florida, John Renne/University of Florida, Serena Hoermann/University of Florida, Xiang Yan/University of Florida
Is Salt Lake City Experiencing Displacement of Low-Income Households in Light Rail Corridors? (TRBAM-25-04956) - B454
Justyna Kaniewska/University of Utah, Reid Ewing/University of Utah
Unveiling Urban Inequities: Time-Denominated Access to Essential Services in Chicago (TRBAM-25-05302) - B500
Alireza Ermagun/George Mason University, Fatemeh Janatabadi/George Mason University, Frank Witlox/George Mason University
Urban Public Transportation Accessibility and Equity: Insights from Charlotte, North Carolina (TRBAM-25-05336) - B463
Muthumari Anbumani/University of Mississippi, Ninad Gore/University of Mississippi, Srinivas Pulugurtha/University of Mississippi
Understanding Accessibility Sufficiency, Activity Participation, and Quality of Life: Evidence from Austin, Texas (TRBAM-25-05343) - B494
Md Hamidur Rahman/University of Texas, Austin, Alex Karner/University of Texas, Austin
Social and Spatial Inequalities of Food Deserts in England and Wales: Examining Store and Online Food Access (TRBAM-25-05380) - B501
Fatemeh Janatabadi/George Mason University, Andy Newing/George Mason University, Alireza Ermagun/George Mason University
Community-Controlled Transportation: The Western New York E-Bike Library Network (TRBAM-25-05474) - B464
Marli Parish/National Renewable Energy Laboratory (NREL), Shane Paul/National Renewable Energy Laboratory (NREL), Alana Wilson/National Renewable Energy Laboratory (NREL)
Bridging the Gap with Highway Cap: Reshaping Urban Landscapes Without Gentrification (TRBAM-25-05539) - B502
Fatemeh Janatabadi/George Mason University, Alireza Ermagun/George Mason University
Linking Land Use and Pedestrian Safety on Arterial Roads in U.S. Cities (TRBAM-25-05560) - B400
Nicole Corcoran/Arizona State University, Deborah Salon/Arizona State University
Framework for Quantifying Benefits of Electric Vehicle Charging Infrastructure to Disadvantaged Communities (TRBAM-25-05699) - B507
Donya Negahbani/University of Nebraska, Lincoln, Li Zhao/University of Nebraska, Lincoln, Jason Hawkins/University of Nebraska, Lincoln, Nathan Huynh/University of Nebraska, Lincoln
Communities with No Access to Shelters Are More Vulnerable to Urban Flood Risks (TRBAM-25-05718) - B503
Alireza Ermagun/George Mason University, Virginia Smith/George Mason University, Fatemeh Janatabadi/George Mason University
Investigating Automated Shuttle Readiness for Rural Areas: A North Carolina Case Study (TRBAM-25-05765) - B510
Oladimeji Alaka/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University, Asad Khattak/North Carolina A&T State University
Housing Location Dissatisfaction, Travel Demand and Potential Implications of EVs, AVs and Remote Work (TRBAM-25-05880) - B508
Narges Ahmadnia/University of Vermont, Gregory Rowangould/University of Vermont
Mobility of Disadvantaged Communities Experiences Limited Disruption from Extreme Weather (TRBAM-25-05978) - B504
Ella Zhang/George Mason University, Alireza Ermagun/George Mason University
Evaluating Spatial, Temporal, and Social Disparities to Examine Pediatric Accessibility in Virginia (TRBAM-25-06097) - B505
Cecelia Meunier/George Mason University, Alireza Ermagun/George Mason University
Americans Meet Congestion Pricing: Reframing the Equity Debate Around CBD Tolling for Auto-dependent countries (TRBAM-25-06167) - B410
Matthew Palm/UNC Chapel Hill, Allie Thomas/UNC Chapel Hill
Spatiotemporal Analysis of Pre- and Post-COVID-19 Pedestrian Crashes: A City of Chicago Case Study (TRBAM-25-06204) - B482
Hiya Chetia/University of Illinois, Chicago, Farideddin Peiravian/University of Illinois, Chicago, Sajad Askari/University of Illinois, Chicago, Afshin Allahyari/University of Illinois, Chicago

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Measuring Healthcare Access: A Comparative Study of Macro and Micro-Level Measures in Urban and Rural Areas (TRBAM-25-06280) - B511
Komal Gulati/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University, Nithish Manikkavasagam/North Carolina A&T State University, Attilio Reginato/North Carolina A&T State University, Abhay Lidbe/North Carolina A&T State University, Sudhagar Nagarajan/North Carolina A&T State University
How Racial Segregation Contributes to Disparities in Pedestrian Safety? (TRBAM-25-06396) - B483
Sina Asgharpour/University of Illinois, Chicago, Afshin Allahyari/University of Illinois, Chicago, Xi Cheng/University of Illinois, Chicago, Amir Shafiee/University of Illinois, Chicago, Yimo Yan/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago
An Integrated Approach to Understanding Pedestrian Crash Risk in Minority and Disadvantaged Census Tracts in Florida (TRBAM-25-06469) - B509
Nasrin Nahar/University of Florida, Emre Tepe/University of Florida, Ilir Bejleri/University of Florida

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Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Dwight David Eisenhower Transportation Fellowship Program, Part 2 (Part 1, Session 2166; Part 3, Session 3155)
Latoya Jones, Federal Highway Administration (FHWA), presiding
Sponsored By Executive Committee

An opportunity to explore the topics undergraduate and graduate students are researching at institutions across the country. Dwight David Eisenhower Transportation Fellowship Program research presentations are selected by FHWA and are not reviewed by TRB standing committees.

Understanding mobility-related challenges for older adults. (P25-21278) - A100
Calvin Wong/California State Polytechnic University, Pomona
Vehicle Edge Computing For Future Intelligent Transportation Systems (ITS) (P25-21279) - A101
Rafael Trinidad/California State Polytechnic University, Pomona
Impacts of Passenger Rail Implementation Expansion in the Los Angeles Metropolitan Area on Air Quality Levels (P25-21280) - A102
Raphael Lin/California State Polytechnic University, Pomona
Deep Learning to Detect Roadway Distress (P25-21281) - A103
Ziliang Wang/California State Polytechnic University, Pomona
Investigating Correlation Between Pavement Quality and Crash Severity within Los Angeles County (P25-21282) - A104
Kirill Rogovoy/California State Polytechnic University, Pomona
Hot Spot Accident Analysis of US158 from Camden County line to NC168 (P25-21284) - A106
Jennifer Sawyer/Elizabeth City State University
Axial Bearing Capacity of Driven Piles - Comparison of Commonly Used Methods (P25-21285) - A107
Ahmed Migdady/Embry Riddle Aeronautical University
Estimating Freeway Capacity within Traffic Incident Management Areas (P25-21286) - A108
Nolan Metz
"Indigenous-led Transportation Solutions: A Pasefika framework of transportation planning in the Koʻolau Loa Moku of Oʻahu, Hawaiʻi" (P25-21287) - A110
Dylan Apelu/Georgia Institute of Technology
Developing Enzyme-Induced Carbonate Precipitation (EICP) to improve its feasibility of erosion control on sloping ground (P25-21288) - A111
Emilia Marmolejo/New Mexico State University
Culvert Asset Management Program (P25-21289) - A112
Ximena Martinez Gutierrez/New Mexico State University
All Aboard? Analyzing the Public Response to Rail Projects in Connecticut (P25-21290) - A113
Kevin Sullivan/New York University
Route Planning for Autonomous Vehicles (P25-21291) - A114
Byron Hall/North Carolina A&T State University
Mapping Racial Transit Equity in the Bay Area: Projecting Impacts of Failing to Address BART's Fiscal Cliff (P25-21292) - A115
Calvin Jordan/University of California, Berkeley

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Transit Efficiency Improvement through the Analysis of Dwell Time, Capacity, and Boarding Dynamics (P25-21293) - A116
Tak Chun Marcus Chan/University of California, Davis
Restorative Justice in Transportation Planning: Evaluating Equity and Freeway Redress Across Reconnecting Communities Projects in Pasadena and San Diego (P25-21294) - A117
Casey Chung/University of California, Los Angeles
Impact of warehouse growth on highway expansion in California (P25-21296) - A120
Mahtab Ahmed/University of California, Los Angeles
Being Followed Home: what the present street harassment means for suburban teenagers walking in the Los Angeles suburbs (P25-21297) - A121
Rebecca Saavedra Swint/University of California, Los Angeles
Public Transit Construction Delays and Time Cost to Riders (P25-21298) - A122
Ronald Giang/University of California, Los Angeles
Sawtelle Mobility Needs Assessment (P25-21299) - A123
Gema Martinez Castillo/University of California, Los Angeles
Are Discontinuities in Sidewalk Networks Creating Worse Barriers to Entry for Transit Use in Some Parts of the Denver Metropolitan Area? (P25-21300) - A124
Garrett Fardon/University of Colorado, Denver
Determinants of Transit Ridership Recovery Following the COVID-19 Pandemic (P25-21301) - A125
Karlyn Russell-Carlson/University of Colorado, Denver
Exploring the Mismatch of Walkability and Walking Behavior: From the Perspective of Zoning (P25-21302) - A126
Dingyi Liu/University of Hawaii
Transportation Accessibility for Individuals with Alzheimer's Disease in Hawai'i (P25-21303) - A127
Paul Mullins/University of Hawai'i, Manoa
Aiming to reduce tribal active transportation fatalities by evaluating current data management practices (P25-21304) - A128
Benson Long/University of New Mexico
SensorCycle: developing a data bike to improve multi-modal pathway safety, comfort, and accessibility. (P25-21305) - A130
Ben Garland/University of New Mexico
Flooded Pathways: Examining Mobility Challenges and Resilience in Mérida, Mexico (P25-21306) - A131
Helen Klass-Warch/University of North Carolina, Chapel Hill
Transit Employee Workforce Engagement (P25-21307) - A132
Bonnie Sullivan/University of North Carolina, Chapel Hill
Teaching Safety: Analyzing North Carolina's Driver Education Program and its Approach to Young Drivers' Perceptions and Interactions with Vulnerable Road Users (P25-21308) - A133
Annalisa Sims/University of North Carolina, Chapel Hill
Mode shift along Raleigh- Charlotte Rail Corridor (P25-21309) - A134
Sage Weatherwax/University of North Carolina, Chapel Hill
Mobilizing Mutual Aid: A toolkit for community resource exchange to minimize travel needs (P25-21310) - A135
Audrey Compiano/University of North Carolina, Chapel Hill
What do Applicants Really Need for the Grant Application Process? (P25-21311) - A136
Brooke Kongmany/University of North Carolina, Chapel Hill
What's the Fuss About the Bus?: How Parent Perceptions of Transit Affect Youth Transit Use in Chapel Hill, North Carolina (P25-21312) - A137
Rachel Oommen/University of North Carolina, Chapel Hill
Optimal Method for an Integrated Ride-sharing and Parking Allocation System (P25-21313) - A138
Tomás Pérez Romero/University of Puerto Rico, Mayaguez
An Analysis of Pedestrian Safety at Bus Stops Using FARS Data (P25-21314) - A140
Allison Rewalt/University of Tennessee, Knoxville
Determining Equitable Areas for EV Charging Stations within Bexar County (P25-21315) - A141
Salomon Mendoza/University of Texas, San Antonio
Feature Extraction from Vibration Signatures Acquired from Railroad Bearing Onboard Condition Monitoring Sensors (P25-21316) - A142
Diego Cantu/University of Texas, Rio Grande Valley

(continued)

3109

Tuesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Transportation Research Board Minority Student Fellows

Karen Febey, Transportation Research Board, presiding

Sponsored By Executive Committee, Standing Committee on Transportation Energy, Standing Committee on Alternative Fuels and Technologies, Standing Committee on Aircraft/Airport Compatibility, Standing Committee on Geographic Information Science, Standing Committee on Asphalt Mixture Evaluation and Performance, Standing Committee on Pavement Structural Testing and Evaluation, Standing Committee on Travel Survey Methods, Standing Committee on Concrete Pavement Construction and Rehabilitation, Standing Committee on Information Systems and Technology, Standing Committee on Traveler Behavior and Values, Standing Committee on Critical Transportation Infrastructure Protection, Standing Committee on Light Rail Transit, Section - Transportation Systems Resilience, Standing Committee on Equity in Transportation, Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity, Standing Committee on Workforce Development and Organizational Excellence, Standing Committee on Geospatial Dat

This session showcases the student scholars selected for the TRB Minority Student Fellows Program—a program that supports students from Minority-Serving Institutions to attend the Annual Meeting and present their research.

A Spatial and Temporal Analysis of Motor Vehicle Thefts in and around the North Carolina Central University Campus (TRBAM-25-00567) - A170

Le'Monna Cox/North Carolina Central University

Evidence-based Assessments of Electrified Transportation Evolvements for Future Sustainable Mobility (TRBAM-25-01285) - A171

Keoni Mabini/University of Hawai'i, Manoa, Guohui Zhang/University of Hawai'i, Manoa

The Environmental Effects of Light Rail Systems (TRBAM-25-01297) - A172

Kiersin Hines/North Carolina Central University, Rakesh Malhotra/North Carolina Central University

Analyzing Driver Behavior in Response to Traffic Safety Messages Broadcast by Roadside Units in Connected and Autonomous Environments (TRBAM-25-02082) - A176

Alireza Ansariyar/Morgan State University, Charles Dankwa/Morgan State University, Abolfazl Taherpour/Morgan State University, Di Yang/Morgan State University, Mansoureh Jeihani/Morgan State University, Derrick Cook/Morgan State University

Preliminary Analysis of Construction Work Zone on Roadways in Florida by Crash Severity (TRBAM-25-02425) - A177

Tatiana Deslouches/Florida A&M University, Doreen Regalado/Florida A&M University, Mohamed Khalafalla/Florida A&M University, Dr. Tejal Mulay/Florida A&M University

Optimized Test Procedures for Measurement of Aggregates and Asphalt Mixtures Friction Performance for Routine Test Purposes (TRBAM-25-02525) - A178

G. Sandeep Reddy/University of Texas, El Paso, Daren Perez/University of Texas, El Paso, Imad Abdallah/University of Texas, El Paso, Dr. Soheil Nazarian/University of Texas, El Paso, Richard Izzo/University of Texas, El Paso

Optimal Electric Charging Stations for Freight Trucks in California (TRBAM-25-02958) - A180

Benny Herrera/California State University, Long Beach, Shailesh Chandra/California State University, Long Beach

Strength and Durability Requirements of Full Depth Reclaimed Pavement Materials with Portland Cement for Airfield Runway Reconstruction (TRBAM-25-04142) - A181

Álvaro Rodríguez León/University of Puerto Rico, Mayaguez, Victor Garcia/University of Puerto Rico, Mayaguez

Evaluating Travel Survey Methodology and Trip Distribution Patterns at El Paso-Juarez Border Crossings: A Comparative Analysis of Periods and Place of Residence (TRBAM-25-04206) - A182

Missel Sanchez/University of Texas, El Paso, Jennifer Moreno/University of Texas, El Paso

Rapid Field-Testing Technique for Construction of Cement Stabilized Pavement Materials (TRBAM-25-04513) - A186

Pedro Chavez/University of Texas, El Paso, Victor Garcia/University of Texas, El Paso, Brendon Quon/University of Texas, El Paso

Using Artificial Intelligence for Road Construction Site Monitoring (TRBAM-25-04724) - A187

Yahaira Nava Gonzalez/California State University, Los Angeles, Mehran Mazari/California State University, Los Angeles

Innovative Practices and Unintended Consequences in Engineering Education: A Comprehensive Analysis of Project-Based Learning and System Design (TRBAM-25-05087) - A188

Bede Nnebedum/University of Maryland, Eastern Shore, ETAHE JOHNSON/University of Maryland, Eastern Shore

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Investigation of Drive-by Sensing for Understanding Urban Truck with Google Street View Images: A Case Study in Manhattan (TRBAM-25-05176) - A190
Kevin Villon/City College of New York, Yiqiao Li/City College of New York
Analyzing Employment Projections for Trends by Ethnicity, Gender, and Region for Civil Engineers in Transportation (TRBAM-25-05453) - A191
Azriel Olmedo/California State Polytechnic University, Pomona, Jeyoung Woo/California State Polytechnic University, Pomona, Yongping Zhang/California State Polytechnic University, Pomona
Navigating Inequities: Mobility Challenges Faced by the Hispanic/Latino Population in Southern California (TRBAM-25-05804) - A192
Diego Simmonds/California State Polytechnic University, Pomona, Yongping Zhang/California State Polytechnic University, Pomona, Priscilla Salgado Inzunza/California State Polytechnic University, Pomona
Identifying Disparities in Albuquerque's Bicycling Infrastructure Network (TRBAM-25-00912) - A196
Mauricio Pérez/University of New Mexico, Lisa Losada-Rojas/University of New Mexico
Understanding the Importance of Safe Routes to School: Observing School Safety in Lower-Income and Underserved Communities (TRBAM-25-02346) - A197
Kalyse Houston/Texas Southern University, Gwendolyn Goodwin/Texas Southern University
Bridging the Gap: Understanding Rural Commuting Patterns and Transportation Choices (TRBAM-25-02386) - A198
Demaya Jenkins/Florida A&M University, Janeroza Matyenyi/Florida A&M University, Thobias Sando/Florida A&M University, Doreen Regalado/Florida A&M University, Mohamed Khalafalla/Florida A&M University
Bridge the Distance: Surveying a Path Forward Post the Francis Scott Key Bridge Collapse (TRBAM-25-03584) - A200
Di Yang/Morgan State University, Tianyu Shen/Morgan State University, Mansoureh Jeihani/Morgan State University, Xianfeng Yang/Morgan State University, Shanjiang Zhu/Morgan State University, Beyah Baylor/Morgan State University
Portable Testing Techniques for Site Investigation of Austere Asphalt Pavements (TRBAM-25-04109) - A201
Waldemar Perez Torres/University of Puerto Rico, Victor Garcia/University of Puerto Rico
Developing New Robotic and Human-Data Interfaces to Collect Accident Site Critical Data for Emergency Preparation and Response (TRBAM-25-05226) - A202
Emelia Howe/University of New Mexico, Mahsa Sanei/University of New Mexico, Fernando Moreu/University of New Mexico
Demographics Analysis (TRBAM-25-05501) - A203
Avery Patrick/California State Polytechnic University, Pomona, Priscilla Salgado Inzunza/California State Polytechnic University, Pomona, Yongping Zhang/California State Polytechnic University, Pomona
Delivery Vehicle Routing Problem With Real-Time Parking Information (TRBAM-25-05911) - A204
Andre Flores-Fletes/North Carolina A&T State University, Ridwan Tiamiyu/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University, Tarun Rambha/North Carolina A&T State University
Study of Human-robot Interfaces for Emergency Response and Control (TRBAM-25-06472) - A205
Fabiola Reyes Rios/University of Puerto Rico
Comparing Rider Characteristics and Travel Patterns of Light Rail and Heavy Rail Systems: A Case Study of Atlanta and Seattle (P25-21137) - A206
Daniel Frolich/Florida International University

3110

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 103A
Automation, Cooperative Perception, and Sensors
Dawn Marshall, Driving Safety Research Insititute, presiding
Sponsored By Standing Committee on Human Factors of Infrastructure Design and Operations

A collection of presentations covering AI-based intelligent systems, advanced sensor analytics for rear-end conflicts, fusion of human and vehicle vision, vulnerable road users at intersections, a cooperative perception.

The Effect of Tunnel Portal Visibility on Driving Behavior in Freeway Tunnel Approach Zones: A Field Operational Test Study (TRBAM-25-00885)
Runzhao Bei/Wuhan University, Zhigang Du/Wuhan University, Nengchao Lyu/Wuhan University

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The Impact of Access Point Density on Driving Behaviors in Underground Loops: A Field Test Study (TRBAM-25-01190)
Ting Zhang/Tongji University, Feng Chen/Tongji University, Yanni Huang/Tongji University, Xiaonan Li/Tongji University, Zheng Chen/Tongji University
Impact of Built Environment Features on Physical and Physiological Responses of Micromobility Drivers (TRBAM-25-01282)
Jinwoo Kim/University of Texas, El Paso, Adeeba Raheem/University of Texas, El Paso, Davi Rodrigues/University of Texas, El Paso, Jaeyoon Kim/University of Texas, El Paso
Difference in Perception-Reaction Time of Plain and Plateau Drivers at Expressway Exit Ramps (TRBAM-25-01319)
Chenzhu Wang/University of Central Florida, Said Easa/University of Central Florida, Changjian Zhang/University of Central Florida, Fei Chen/University of Central Florida, Jianchuan Cheng/University of Central Florida

3111

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon C
Moving Automated Vehicle Research into Practice
Hao Liu, University of California, Berkeley, presiding
Claudio Roncoli, Katholieke Universiteit Leuven (KU Leuven), presiding
Sponsored By Standing Committee on Vehicle-Highway Automation

For this session, the Vehicle-Highway Automation Committee Paper Review Chairs selected 4 papers that stand out in a very crowded field for the relevance of their research in service to practice. Each paper will be briefly presented by its lead author, and then critically reviewed by an expert practitioner in the industry. Join us for this interactive session as we explore how to implement recently researched AV projects. For each paper there will be: 1) researcher presentation of research results 2) practitioner response towards implementation 3) audience discussion

Ethical Decision-Making in Autonomous Vehicles: A Reinforcement Learning Approach for Fair Risk Management (TRBAM-25-02092)
Linheng Li/Southeast University, Chengxi Zheng/Southeast University, Chen Qian/Southeast University, Jing Gan/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University
Conflict Resolution Behavior of Autonomous Vehicles at Intersections in Mixed Traffic Environment (TRBAM-25-03357)
Md Tanvir Ashraf/Michigan State University, Kakan Dey/Michigan State University
Personalized Autonomous Driving with Large Language Models: Field Experiments (TRBAM-25-00758)
Can Cui/Purdue University, Zichong Yang/Purdue University, Yupeng Zhou/Purdue University, Yunsheng Ma/Purdue University, Juanwu Lu/Purdue University, Lingxi Li/Purdue University, Yaobin Chen/Purdue University, Jitesh Panchal/Purdue University, Ziran Wang/Purdue University
Drive With Regulation: Ads Traffic Regulation Leveraging the Vision-Language Model (TRBAM-25-04081)
Xu Han/University of California, Los Angeles, Zhiwen Wu/University of California, Los Angeles, Xin Xia/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles

3112

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon A
Recent Advances in Traffic Flow Theory and Characteristics
Kenan Zhang, Ecole Polytechnique Federale de Lausanne, presiding
Sponsored By Standing Committee on Traffic Flow Theory and Characteristics

This session presents an overview of the different research topics covered by the ACP50 (TFTC) Committee. It showcases the recent advances in traffic flow theory from different angles.

Communications-free Distributed Control Algorithm for Autonomous Vehicles at Intersections (TRBAM-25-04193)
Alireza Soltani/University of Sydney, David Levinson/University of Sydney, Mohsen Ramezani/University of Sydney
Lane Changing Prediction in Urban Arterials with Detailed Traffic Data from Drones (TRBAM-25-05187)
Sohyeong Kim/Ecole Polytechnique Federale de Lausanne (EPFL), Nikolas Geroliminis/Ecole Polytechnique Federale de Lausanne (EPFL)

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Unpacking Density: Investigating Effects of Vehicle Arrangement on Traffic Flow (TRBAM-25-05066)
Victor Okoth/Northwestern University, Nachuan Li/Northwestern University, Hani Mahmassani/Northwestern University
Impact of Pre-training on Deep Reinforcement Learning Ramp Metering Systems (TRBAM-25-01884)
Callum Evans/Delft University of Technology, Marco Rinaldi/Delft University of Technology, Henk Taale/Delft University of Technology, Serge Hoogendoorn/Delft University of Technology
Stop-and-Go Waves Reconstruction Via Iterative Refinement (TRBAM-25-02977)
Junyi Ji/Vanderbilt University, Alex Richardson/Vanderbilt University, Derek Gloudemans/Vanderbilt University, Gergely Zachár/Vanderbilt University, Matthew Nice/Vanderbilt University, William Barbour/Vanderbilt University, Jonathan Sprinkle/Vanderbilt University, Benedetto Piccoli/Vanderbilt University, Daniel Work/Vanderbilt University

3113

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 102B
Long-Term Pavement Performance Program
Deborah Walker, Federal Highway Administration (FHWA), presiding
Ioannis Tsapakis, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Highway Traffic Monitoring

The Long-Term Pavement Performance (LTPP) Program Lectern Session will provide highlights and recent accomplishments made by the program in recent years. Ongoing pavement research at the Federal and State levels will be discussed. FHWA's new InfoPTF™ web portal will be introduced and the winners of the 2024 student data analysis contest winners will be recognized.

Welcome from Federal Highway Administration (P25-20388)
Jean Nehme/Federal Highway Administration (FHWA)
LTPP Program Highlights (P25-20389)
Jane Jiang/Federal Highway Administration (FHWA)
LTPP Program Recent Accomplishments (P25-20390)
Mohammed Elias/Federal Highway Administration (FHWA)
35 Years and Counting: WSDOT's Experience with LTPP WIM Data (P25-20433)
Mohamed Nimeri/Washington State Department of Transportation
Effect of WIM Sensor Array Design on Data Accuracy for Piezo Quartz Sensors (P25-20391)
Dean Wolf/Applied Research Associates, Inc.
InfoHighway™ Update – Introducing FHWA InfoPTF™ (P25-20392)
Jennifer Aponte Rivera/Federal Highway Administration (FHWA)
Presentation of 2024 LTIP Student Data Analysis Contest Awards (P25-20393)
Jean Nehme/Federal Highway Administration (FHWA), Jane Jiang/Federal Highway Administration (FHWA)
Presentation of 2024 LTIP Student Data Analysis Contest First-Place Award Winning Paper (Pavement): "Quantification of Post-Rainfall Moisture Content in Unbound Layers Using LTPP Data" (P25-20436)
Ruohan Li/University of Texas, Austin
Closing Remarks (P25-20431)
Nadarajah Sivaneswaran/Federal Highway Administration (FHWA)

3114

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Salon B
What Is New at the National Highway Traffic Safety Administration, Part 1 (Part 2, Session 3167)
Chou-Lin Chen, National Highway Traffic Safety Administration (NHTSA), presiding
Sponsored By Section - Safety

National Highway Traffic Safety Administration Highlights (P25-21167)
Sophie Shulman/National Highway Traffic Safety Administration (NHTSA)
Crash Investigation Sampling System Expansion: New Collections and Processes (P25-21168)
Mark Mynatt/National Highway Traffic Safety Administration (NHTSA)
Crash Investigation Sampling System Expansion: Analytic Considerations (P25-21169)
Jacob Enriquez/National Highway Traffic Safety Administration (NHTSA)

(continued)

Model Minimum Uniform Crash Criteria Law Enforcement Training: Status Update (P25-21170)
Joanna Reed/National Highway Traffic Safety Administration (NHTSA)
Motor Vehicle Crash Fatality & Fatality Rate Projections (P25-21171)
Rajesh Subramanian/National Highway Traffic Safety Administration (NHTSA)
National Highway Traffic Safety Administration Crash Data Tools (P25-21172)
Umesh Shankar/National Highway Traffic Safety Administration (NHTSA)
50 years of Motor Vehicle Safety Technologies – Societal Impacts (P25-21173)
Larry Blincoe/National Highway Traffic Safety Administration (NHTSA)

3115 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 150B
Travel Data Users Forum: Measuring Long-Distance Travel
Robert Schiffer, FuturePlan Consulting, LLC, presiding
Pragun Vinayak, LOCUS Inc., presiding
Michael Fontaine, Virginia Transportation Research Council, presiding
Sponsored By Standing Committee on Urban Transportation Data and Information Systems, Standing Committee on Statewide/National Transportation Data and Information Management, Subcommittee on Long Distance Travel

Long-distance passenger and freight travel have been recently garnering a lot of attention due to implications for electrification, sustainability planning, impacts on local communities, and intercity multimodal corridor planning. Measuring this type of travel, however, has been challenging due to lack of robust data. This interactive session will bring public agencies and practitioners together to unpack the data sources and methods currently used to understand long-distance travel, identify information that the agencies wish they had, and the potential of technology-enable data sources (such as passively collected big data) to address these needs.

National Perspective (P25-20067)
Tianjia Tang/Federal Highway Administration (FHWA)
Academic Perspective (P25-20068)
Lisa Aultman-Hall/University of Waterloo
State DOT Perspective (P25-20069)
Habte Kassa/Georgia Department of Transportation
Consultant Perspective (P25-20070)
Stacey Bricka/MacroSys Research and Technology
Data Perspective (P25-20071)
Michael Pack/University of Maryland, College Park

3116 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 151A
21st-Century Approaches to Transportation to Connect People to and Travel Within Parks
Benjamin Rasmussen, OST-R/Volpe Center, presiding
Sponsored By Standing Committee on Transportation Needs of National Parks and Public Lands, Rural Transportation Issues Coordinating Council, Standing Committee on Transit Data

In this session, attendees will learn about new approaches for connecting people to and within parks.This event will discuss: 1) data sources [e.g., big data, crowd sourcing, and artificial intelligence (AI)] that may be used to inform road closures, using Guilford Courthouse National Military Park as a case study; 2) park service areas for driving-only users drawing on connected vehicle (CV) data, with Pima County, Arizona as a case study; and 3) National Park Service efforts to improve transit information by developing General Transit Feed Specification (GTFS) information for ten park transit systems.

Balancing the Transportation Needs of National Parks and Local Residents via AI Applications□A Case Study of Guilford Courthouse National Military Park in Greensboro NC (TRBAM-25-05299)
Rongfang (Rachel) Liu/North Carolina A&T State University, Liu Lv/North Carolina A&T State University, William Evens/North Carolina A&T State University, Joanna Cockburn/North Carolina A&T State University

(continued)

Leveraging Connected-Vehicle Data to Identify Park Service Areas for Driving-Only Users (TRBAM-25-00314)
Xiaofeng Li/University of Hawai'i, Manoa, Hyunsoo Noh/University of Hawai'i, Manoa, Adrian Cottam/University of Hawai'i, Manoa, Qinzheng Wang/University of Hawai'i, Manoa
General Transit Feed Specification (GTFS) for National Park Service Transit Systems (TRBAM-25-03855)
Sophie Abo/U.S. National Park Service (NPS), Erica Cole/U.S. National Park Service (NPS)

3117

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 150A
Smart Card, Smartphone, and Data Fusion in Travel Data Collection
Joann Lynch, Ipsos, presiding
Zachary Patterson, Concordia University, presiding
Sponsored By Standing Committee on Travel Survey Methods, Standing Committee on Travel Survey Methods

This lectern session brings together a series of papers demonstrating cutting edge methods in the use of smartphone data, smart card data, and fusion with other data sources in travel-related data collection and analysis. If you come to any lectern session, make sure it's this one!

A Data Fusion Approach for Mobility Hub Impact Assessment: Integrating Actual Usage Data into a Large-Scale Mode Choice Model (TRBAM-25-01347)
Xiyuan Ren/New York University, Joseph Chow/New York University
Harnessing Household Travel Survey with Smart Card Data to Generate Spatiotemporally Heterogeneous Activity Plans for Transit Users (TRBAM-25-05810)
Khoa D. Vo/National University of Singapore, Eui-Jin Kim/National University of Singapore, Huichang Lee/National University of Singapore, Prateek Bansal/National University of Singapore
Toward Low-Burden Travel Survey: Identifying Travel Modes from GPS Tracks Fusing Individual Histories and Enumerated Annotations (TRBAM-25-01107)
Jiaqi Zeng/Zhejiang University, Xinyi Shen/Zhejiang University, Yulang Huang/Zhejiang University, Meng Zhang/Zhejiang University, Sheng Jin/Zhejiang University, Dianhai Wang/Zhejiang University
What Mobile Phone Data Reveal About Mobility Patterns of Teleworkers (TRBAM-25-02811)
Tianxing Dai/Northwestern University, Gretchen Bella/Northwestern University, Peeter Kivestu/Northwestern University, Ying Chen/Northwestern University, Yu Nie/Northwestern University, Amanda Stathopoulos/Northwestern University
Insights into Intra-City Mobility: A Deep Dive into Residents' Travel Behavior Using Mobile Phone Data (TRBAM-25-02462)
Saleh Ardameh/Imam Khomeini International University, Mehdi Rafati Fard/Imam Khomeini International University

3118 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 151B
Reimagining Mobility: Virtual Participation, Sustainable Travel, and Post-Pandemic Activity Choices
Mahmudur Fatmi, University of British Columbia, presiding
Venu Garikapati, National Renewable Energy Laboratory (NREL), presiding
Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices

This lectern session explores recent shifts in travel behavior and accessibility, focusing on the impacts of the pandemic and evolving post-pandemic trends. Topics include changes in leisure and shopping travel patterns, the impact of teleworking on travel, and the role of package delivery. The session also features studies about mobile app-based information's effectiveness in encouraging sustainable travel modes, the interplay between physical and virtual participation in activities, and the behavioral effects of Mobility-as-a-Service (MaaS) subscriptions on travel choices.

An Investigation of Physical Participation Dissonance and Virtual Activity Participation (TRBAM-25-01536)
Dale Robbennolt/University of Texas, Austin, Anna Beliveau/University of Texas, Austin, Chandra Bhat/University of Texas, Austin
Effectiveness of Health and Environmental Information Provision in Promoting Sustainable Travel Modes (TRBAM-25-02656)
Viswa Sri Rupa Anne/Georgia Institute of Technology, Md Gulam Kibria/Georgia Institute of Technology, Yifan Liu/Georgia Institute of Technology, Omar Asensio/Georgia Institute of Technology, Srinivas Peeta/Georgia Institute of Technology

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Exploring Subscription and Travel Choice Changes under Mobility-as-a-Service Bundles: Evidence from Experimental Economics (TRBAM-25-02994)
Meng Guo/Northwestern Polytechnical University, Jianing Liu/Northwestern Polytechnical University, Sisi Jian/Northwestern Polytechnical University, Gang Ren/Northwestern Polytechnical University, Chenyang Wu/Northwestern Polytechnical University
Trends in Leisure and Shopping Travel: From Pre-Pandemic to Post-COVID-19 Pandemic (TRBAM-25-01543)
Kailai Wang/University of Houston, Jonas De Vos/University of Houston

3119

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 152A
Advancing Moonshots: Preparing Agencies for Change
John Kaliski, Cambridge Systematics, Inc., presiding
Sponsored By Standing Committee on Strategic Management

During the past few years, the American Association of State Highway and Transportation Officials (AASHTO) and the Transportation Research Board have been collaborating to develop and advance a shared vision for the next generation of transportation in America. The AASHTO Board of Directors unanimously adopted a vision and seven "moonshot" concepts and invited state departments of transportation to serve as initial deployment states for one or more of these concepts. A total of 13 projects involving at least 20 states are now underway. During this session, the project managers for five of these initial deployments will share their progress to date and discuss the opportunities and challenges involved in advancing new roles for state DOTs.

Minnesota's Moonshot: Energy Transmission in Highway Rights of Way (P25-20351)
Jessica Oh/Minnesota Department of Transportation
Missouri's Moonshot: Improve I-70 (P25-20352)
Elizabeth Prestwood/Missouri Department of Transportation
New Jersey's Moonshot: Empowering ALICE Through Transportation (P25-20353)
Veronica Murphy/New Jersey Department of Transportation
Oklahoma's Moonshot: Mobility Management (P25-20354)
Dawn Sullivan/Oklahoma Department of Transportation
Texas' Moonshot: I-45 Innovation Corridor (P25-20355)
Erika Kemp/Texas Department of Transportation

3120 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 152B
Communicating Concepts to the Public Competition
Sarah Parkins, WSP, presiding
Sponsored By Standing Committee on Public Engagement and Communications

Why don't they understand? Transportation professionals often and it challenging to communicate critical transportation topics to a non-technical audience. Since 2007, the AJE 40 Committee's annual "Communicating Concepts with the Public" competition has highlighted real-life examples of new and innovative communication methods being used in transportation public engagement and outreach to communicate complex information to the public in "kitchen-table" terms they can easily understand. The competition seeks entries in three categories: planning & projects, policy, and operations. This session includes presentations from the competition winner and two runners-up entries.

Bloomington Safe Streets for All - "Safety Week" Engagement and Communications Blitz (P25-20413)
Karina Pazos/City of Bloomington, Indiana, Sara Schooley/Toole Design Group, LLC
SAFERoad Solutions Marketing Toolkit (P25-20414)
Jason Siwula/Kentucky Transportation Cabinet, Allen Blair/Kentucky Transportation Cabinet
Keep Georgia Safe: Empowering Students with Lifesaving Road Safety Skills. (P25-20415)
Katina Lear/Georgia Department of Transportation, Corie Stagner/Livingston Marketing

3121

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 202B

Gaps and Opportunities in Multimodal Innovation in Freight

Ian Williams, Venable, LLP, presiding

Ellen Partridge, Equiticity, presiding

Sponsored By Standing Committee on Emerging Technology Law

Different transportation modes offer different opportunities and challenges for freight transport. Are different modes in competition with each other, or can they be complementary? How might new technologies including electrification, connectivity, automation, and drones work in tandem with rail and traditional vehicles to improve freight transportation and bridge last mile challenges? Topics include: What challenges and opportunities currently exist in freight transport? The relationship between rail, trucking, and other modes: how they compete and how they can be complements. How do traditional and emerging technologies address the last mile? How have motor carriers and rail leveraged new technologies to find opportunities and bridge gaps?

Panel Member (P25-20898)

Melody Drummond Hansen/U.S. Department of Transportation, Allison Dane Camden/Office of the Secretary of Transportation (OST), Andrew Krum/Virginia Polytechnic Institute and State University

3122

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 156

Steel Bridge Topics

Brandon Chavel, American Institute of Steel Construction, presiding

Sponsored By Standing Committee on Steel Bridges

This session will cover various topics in steel bridge design including long-span bridges. The session will cover analysis, design and detailing of steel bridges, construction methods for steel bridges, and asset management of steel bridges.

Static Analysis of Long-span Suspension Bridges: Surrogate Model and Explicit Solutions (TRBAM-25-00870)

Erqiang Wang/Southeast University, Zhao Liu/Southeast University

Deployable Tool for the Installation of Cross-frames in Steel Girder Bridges: Measured Behavior of a Prototype Demonstration (TRBAM-25-03688)

Camila N Duarte/University of Notre Dame, Ashley Thrall/University of Notre Dame, David Byers/University of Notre Dame, Theodore Zoli/University of Notre Dame, Nikola I Gaydarov/University of Notre Dame

Main Cable Dehumidification Design Updates in North America (TRBAM-25-04209)

Jonathan Morey/WSP, Shekhar Scindia/WSP, Stuart Rankin/WSP, Marek Solski/WSP

Design and Detailing of Steel Girder Cross Frames (P25-20401)

Brandon Chavel/American Institute of Steel Construction

3123

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 207A

Recent Developments and Trends in Quality Assurance, Part 1 (Part 2, Session 3178)

Yunpeng Zhao, Engineering & Software Consultants, LLC.,, presiding

Sponsored By Standing Committee on Quality Assurance Management, Standing Committee on Concrete Pavement Construction and Rehabilitation

Illinois Tollway Specification Management and Resource Tool (TRBAM-25-02577)

Dr. Jose Rivera-Perez/WSP, Mahesh Anandan/WSP, John Richards/WSP, Raj Rajasekhar/WSP, Rick Young/WSP, Laura Thompson/WSP

Camera-Based Binocular Stereo Vision for Dynamic Assessment of Vibration Operations in Slipform Paving (P25-20866)

Xiangdong Yan/University of Pittsburgh, Megan Darnell/University of Pittsburgh, Julie Vandenbossche/University of Pittsburgh, Alessandro Fascetti/University of Pittsburgh

(continued)

Evaluating Expertise of Concrete Pavement Construction in Modern Large Language Models (P25-20867)
Mason Smetana/University of Pittsburgh, Igor Sukharev/University of Pittsburgh, Lev Khazanovich/University of Pittsburgh

3124

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 101
Bridging Water and Roads: Hydrology and Hydraulics in Transportation
Michael Perez, Auburn University, presiding
Sponsored By Standing Committee on Hydrology, Hydraulics, and Stormwater

Flood Response Efforts in the Carolinas (P25-21143)
Matt Dudley/ESP Associates, Inc.
High Performance Computational Fluid Dynamics Modeling for State DOTs (P25-21144)
Marta Sitek/Argonne National Laboratory, Steven Lottes/Argonne National Laboratory
NWS Precipitation Forecasting (P25-21145)
Ashton Robinson Cook/National Weather Service

3125

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 204AB
Aggregate and Pavement Foundation Unsaturated Mechanics
Ceren Aydin, Minnesota Department of Transportation, presiding
Sponsored By Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials

Prediction of Non-linear Moisture Profile in Pavement Foundation Using Machine Learning-based Method (TRBAM-25-02903)
Xiao chen/Rutgers University, Hao Wang/Rutgers University
Mechanical Analysis of Subgrades under Different Moisture Conditions (TRBAM-25-01385)
Tania Avila-Esquivel/University of Costa Rica
EVALUATION OF RESILIENT MODULUS PREDICTION MODELS FOR SATURATED PAVEMENT BASE AGGREGATES (TRBAM-25-04392)
Don Guy Biessan/Auburn University, Benjamin Bowers/Auburn University, J. Brian Anderson/Auburn University
Microstructure changes and unsaturated permeability across the entire suction range of bimodal SWCC in granite residual soil (TRBAM-25-03764)
Lingjie Li/Tongji University, Jianming Ling/Tongji University, Yu Zhang/Tongji University

3126

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 207B
Monitoring and Evaluation of Performance of Transportation Earthworks
Ramesh Neupane, Virginia Department of Transportation, presiding
S. Mustapha Rahmaninezhad, University of Texas, Rio Grande Valley, presiding
Sponsored By Standing Committee on Transportation Earthworks

Study on Compaction Quality Standard of Abutment Back of Earth-Rock Mixture Filler Based on Evd Value Control (TRBAM-25-01648)
Peng Hu/No Organization, Baicheng Liu/No Organization, Kun Wang/No Organization, Hongyu Ji/No Organization, Hongxi Hu/No Organization, Jiazhen Chen/No Organization
Enhanced Earthen Slope Monitoring with IoT-Enabled Systems (TRBAM-25-03882)
Rahul Debnath/Prairie View A&M University, Md Jobair Bin Alam/Prairie View A&M University, Ahmed Ahmed/Prairie View A&M University, Robi Sonkor Mozumder/Prairie View A&M University
Mechanically Stabilized Earth Walls with Intersecting Horizontal Obstruction (TRBAM-25-00907)
Md Asad Ahmad/Purdue University, Antonio Bobet/Purdue University
Structural Reliability Analysis of Soil Steel Grid Reinforced MSE Walls (TRBAM-25-01235)
Zaid Momani/University of Texas, Arlington, Eyosias Beneberu/University of Texas, Arlington, Nur Yazdani/University of Texas, Arlington

(continued)

Long-Term Performance Evaluation of Reinforced Embankment Test Sections Over Extremely, Soft Compressible Soil: A Case Study in Louisiana (TRBAM-25-04079)
Gavin Gautreau/Louisiana Transportation Research Center (LTRC), Masoud Nobahar/Louisiana Transportation Research Center (LTRC), Amirhossein Rahimi/Louisiana Transportation Research Center (LTRC)

3127

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 209AB
Pavement Condition Evaluation, Part 1: Innovative Technologies (Part 2, Session 3183)
Tim Miller, Kimley-Horn and Associates, Inc., presiding
Sponsored By Standing Committee on Pavement Condition Evaluation

Integrating Machine Learning, Remote Sensing, and GIS to Determine Road Surface Type and Construction Year from Time-Series, and Multispectral Aerial Imagery: A Case Study in Ames, Iowa (TRBAM-25-05463)
Farhad Aghasi/Iowa State University, Omar Smadi/Iowa State University, Inya Nlenanya/Iowa State University, Brian Gelder/Iowa State University
Impact Analysis of Image Offsets on Time-series Crack Analysis Variability Using 3D Pavement Imaging Data (TRBAM-25-05280)
Haolin Wang/Georgia Institute of Technology, Zhongyu Yang/Georgia Institute of Technology, Ryan Salameh/Georgia Institute of Technology, Mohsen Mohammadi/Georgia Institute of Technology, Yichang Tsai/Georgia Institute of Technology
Feasibility and Reliability Assessment of Inexpensive Solid-State LiDAR for Rutting Measurement in Asphalt Pavement (TRBAM-25-02482)
Ashkan Behzadian/University of Missouri, Columbia, Linlin Zhang/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia, William Buttlar/University of Missouri, Columbia
Parallel B-scan YOLO Plus A-scan Voting Method for Pavement Integrity Assessment Based on 3D GPR Data (TRBAM-25-05134)
Fukai Han/Indiana Department of Transportation, Mohammad Ali Notani/Indiana Department of Transportation, Seonghwan Cho/Indiana Department of Transportation, Dwayne Harris/Indiana Department of Transportation, John Haddock/Indiana Department of Transportation, James Krogmeier/Indiana Department of Transportation

3128

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 202A
Pavement Structural Evaluations: Implementation of Structural Data from Traffic Speed Deflection Devices
Dirk Jansen, Federal Highway Research Institute, presiding
Angeli Jayme, Arizona State University, presiding
Sponsored By Standing Committee on Pavement Structural Testing and Evaluation

Evaluating the Use of Traffic Speed Deflectometer-Based Pavement Structural Data in VDOT's Pavement Management Processes for Flexible Pavements (TRBAM-25-04918)
Angello Murekye/Virginia Polytechnic Institute and State University, Samer Katicha/Virginia Polytechnic Institute and State University, Eugene Amarh/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University, Brian Diefenderfer/Virginia Polytechnic Institute and State University
The Use of the Falkorr Traffic Speed Deflectometer Device (TSDD) at Autopista Fernão Dias: A Case History Study (TRBAM-25-04828)
Felipe Camargo/RoadRunner Engenharia, Caio Raul/RoadRunner Engenharia, Douglas Negrão/RoadRunner Engenharia, Noe Fernández/RoadRunner Engenharia, Rey Omar Adame Hernández/RoadRunner Engenharia, Celso Romeriro Junior/RoadRunner Engenharia, Gerardo Flintsch/RoadRunner Engenharia, André Vale/RoadRunner Engenharia
Inversion of Asphalt Pavement Properties from Slopes Reported by the Traffic Speed Deflectometer (TRBAM-25-04682)
Eyal Levenberg/Technical University of Denmark, Mehdi Kalantari/Technical University of Denmark
Enhanced AASHTO Cumulative Difference Approach (CDA) for Pavement Data Segmentation (TRBAM-25-04229)
Samer Katicha/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University

3129

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 206

Advances in Structures Maintenance and Inspection

Richard Dunne, Greenman-Pedersen, Inc., presiding

Sponsored By Standing Committee on Structures Maintenance

Presentation of the following Papers: TRBAM-25-05335 - Probabilistic Assessment of Bridge Capacity using UAV-Based Remote Sensing Data: TRBAM-25-04154 - Experimental Evaluation of Flexural Strengthening of Reinforced Concrete Girders with Near-surface Mounted Titanium-Alloy Straight Bars TRBAM-25-02263 - Development of a Vehicle-Mounted Infrared Inspection Technology for Bridge Decks with Asphalt Overlay

Probabilistic Assessment of Bridge Capacity using UAV-Based Remote Sensing Data (TRBAM-25-05335)

Philippe Kalmogo/University of New Hampshire, Ethan Payne Payne/University of New Hampshire, Gregory Chase/University of New Hampshire, Erin Bell/University of New Hampshire

Experimental Evaluation of Flexural Strengthening of Reinforced Concrete Girders with Near-surface Mounted Titanium-Alloy Straight Bars (TRBAM-25-04154)

Md Aminul Islam/Auburn University, Kadir Sener/Auburn University, Anton Schindler/Auburn University

Development of a Vehicle-Mounted Infrared Inspection Technology for Bridge Decks with Asphalt Overlay (TRBAM-25-02263)

Shungo Matsui/West Nippon Expressway Company, Shuhei Hiasa/West Nippon Expressway Company

3130

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 209C

Bridge Condition Forecasting and Effective Preservation Treatments

Michael Brown, Wiss, Janney, Elstner Associates, presiding

Sponsored By Standing Committee on Bridge Preservation

To effectively preserve and maintain highway bridges, practitioners require tools for assessing and forecasting conditions of bridge elements, as well as applicable treatments methods to preserve those bridge elements. This session will present a series of papers that discuss: - How NDE data can be processed using advanced techniques to forecast bridge component condition. - How chloride and related data can be selected and modeled to predict corrosion-related service life. - How deicing salt use and concrete sealers influence bridge deck condition. - How an UHPC overlay has been implemented on an existing bridge deck to extend useful service life.

Bridge Condition Forecasting via Temporal Graph Convolution Networks and Nondestructive Evaluation (TRBAM-25-02019)

Mozhgan Momtaz/Federal Highway Administration (FHWA), Hoda Azari/Federal Highway Administration (FHWA)

Determination of Hierarchy of Input Parameters for Service Life Modeling of Concrete Structures against Chloride Induced Corrosion (TRBAM-25-04767)

Zafrul Khan/Applied Research Associates, Inc., Ahmad Alhasan/Applied Research Associates, Inc., Rodrigo Antunes/Applied Research Associates, Inc.

First Complete UHPC Overlay on Cable-Supported Bridge Adds Decades to Deck Service Life (TRBAM-25-01970)

Michael McDonagh/WSP, Shekhar Scindia/WSP, Sam Boukaram/WSP, Abate Tewelde/WSP, Andy Foden/WSP

Impact of Concrete Sealer and Salt Usage on Concrete Bridge Deck Rating in Wisconsin (TRBAM-25-03060)

Hao Wang/Rutgers University, Danny Xiao/Rutgers University, Xiao chen/Rutgers University

3131

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 146B

Section 106 of the National Historic Preservation Act: Best Practices for Federal Undertakings with Multiple Federal and State Agencies

David Clarke, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Historic and Archeological Preservation in Transportation

Section 106 of the National Historic Preservation Act will mark its 60th year of efficacy next year. In this session panelists will present some of the best practices for Federal undertakings with multiple Federal and State agencies.

Panelist 1 (P25-21122)
Scott Williams/Federal Railroad Administration (FRA)
Panelist 2 (P25-21123)
Elizabeth Breiseth/Federal Transit Administration (FTA)
Panelist 3 (P25-21124)
Rachael Mangum/Advisory Council on Historic Preservation

3132 CM (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 146C

Insights on Vessel Bridge Strike Causes, Vulnerabilities, and Consequences to Safety, Supply Chain, Commuting, Community Resilience, and State and Federal Activities to Improve Resilience

Maria Pena, Gannett Fleming, Inc., presiding

Sponsored By Standing Committee on Critical Transportation Infrastructure Protection

The recent Frances Key Bridge in Baltimore collapse, due to a large vessel strike, brought a lot of attention to the current design of bridge to withstand such events, as well as the short and long-term potential impacts to the agency and the community, freight movement and riders. Many state/federal initiatives take place after such events in order to reduce future similar events and to reduce the potential impacts. This session will cover some of these topics related to vessel bridge strikes.

Cyber-Attacks and Potential to Cause Vessel Bridge Strikes (P25-20686)
Rick Tiene/Mission Secure
Bridge Collapse and Resilience of Interconnected Transportation Networks (P25-20687)
Igor Linkov/U.S. Army Corps of Engineers (USACE)

3133 CM (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 146A

Everything Everywhere All at Once: Accelerating the Transition to Zero-Emission Freight

Alycia Glide, Office of the White House, presiding

Sponsored By Section - Transportation and Sustainability, Standing Committee on Air Quality and Greenhouse Gas Mitigation, Standing Committee on Transportation Energy, Standing Committee on Alternative Fuels and Technologies

This session will highlight existing programs and policies that are supporting the transition to zero-emission goods movement. The session will cover success stories and opportunities in the transition to zero-emission rail and long-haul trucking, and the coordination of mode of transport with infrastructure that would facilitate interstate commerce.

Community Perspective on the Need for ZE Freight (P25-20978)
Maurissa Brown/The Greenlining Institute
Zero Emission Freight Corridor Strategy (P25-20760)
Kevin Miller/Joint Office of Energy and Transportation
US EPA Regulations and Incentives (P25-20761)
William Charmely/U.S. Environmental Protection Agency (EPA)
CARB Regulations and Incentives (P25-21517)
Bill Robertson/California Air Resources Board (CARB)

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Electrification of Port of Savannah (P25-21516)
Tom Ashley/Voltera
New Jersey ZE Trucks (P25-21085)
Dan Schweizer/Zeem Solutions
Getting the Port to Net Zero by 2040 (P25-21515)
Scott Whitehurst/Port of Virginia

3134 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 145B
Innovative Mobility Strategies for Rural Communities: Insights from Carsharing, Microtransit, and Ridepooling Systems
Will Rodman, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Public Transportation Planning and Development, Standing Committee on Rural, Intercity Bus, and Specialized Transportation

This session explores innovative mobility strategies designed to enhance transportation access in rural communities. Featuring insights from recent studies on carsharing, microtransit, and ridepooling, the session will discuss key determinants of demand, rider characteristics, and implementation opportunities and challenges. Find out how these emerging technologies have the potential to transform rural transportation, improve connectivity, and address the mobility needs of underserved populations

Stop Times and Key Determinants for Pick-Ups and Drop-Offs in Ridepooling Systems (TRBAM-25-00534)
Dennis Harmann/Technische Universitat Braunschweig, Jana-Sophie Trick/Technische Universitat Braunschweig, Lasse Bienzeisler/Technische Universitat Braunschweig, Bernhard Friedrich/Technische Universitat Braunschweig
Understanding Demand, Revenues, and Costs of Electric Carsharing in Underserved Rural and Suburban Areas (TRBAM-25-02365)
Brian Harold/University of California, Davis, Caroline Rodier/University of California, Davis
Microtransit in Rural and Small Urban Contexts: A Qualitative Analysis of System Characteristics, Benefits, and Challenges. (TRBAM-25-02302)
Adrianna Fragozo/University of New Mexico, Lisa Losada-Rojas/University of New Mexico
Determinants of Demand in Public Microtransit: Insights from Five Microtransit Systems in North Carolina (TRBAM-25-03802)
Subid Ghimire/North Carolina State University, Eleni Bardaka/North Carolina State University

3135

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 140
Visual Quality of Transit Spaces
Zipporah Yamamoto, Los Angeles County Transportation Authority (LACMTA), presiding
Sponsored By Standing Committee on Passenger Intermodal Facilities, Subcommittee on Art and Design Excellence in Transportation

This session explores how transit riders interact with and navigate transit spaces, emphasizing the role of art and design in shaping these experiences. It will be of interest to people involved in the planning and design of intermodal passenger facilities, as well as those interested in methodologies to measure the effectiveness of these designs.

Navigating transit spaces: An assemblage approach to daily travel (TRBAM-25-00109)
Sophie J. Lee/Oberlin College, Joshua Davidson/Oberlin College, Megan Ryerson/Oberlin College
Panel: The Role of Art and Design in Shaping the Experience (P25-20745)
Zipporah Yamamoto/Los Angeles County Transportation Authority (LACMTA)
Panel (P25-21391)
Barbara Luecke/Sound Transit
Panel (P25-21392)
Adam Light/Los Angeles County Transportation Authority (LACMTA)

(continued)

Panel (P25-21524)
TR Hickey

3136

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 144C
Emergence of International Standard High-Speed Rail in the United States
Karen Philbrick, Mineta Transportation Institute, presiding
Sponsored By Standing Committee on Passenger Rail Transportation

3137

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 144AB
Current Research, Trends, and Innovations in Transportation Safety Culture
Michael Coplen, TrueSafety Evaluation, LLC, presiding
Sponsored By Standing Committee on Rail Safety

This panel discussion will delve into the evolving landscape of safety culture within the transportation sector. Panelists will provide diverse perspectives on the subject, encompassing both academic research and practical applications. The session aims to provide attendees with a comprehensive understanding of the latest research, emerging trends, and innovative practices in safety culture that can significantly influence the safety protocols and practices within the transportation industry.

Transportation Safety Culture Discussion Panel (P25-20993)
Thomas Murta/Short Line Safety Institute, Mark Fleming/Saint Mary's University, Amanda Emo/Federal Railroad Administration (FRA), Stephen Popkin/OST-R/Volpe Center

3138

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 145A
Impact of Freight Policies and Advances in Freight Modeling
Zahra Pourabdollahi, WRA, presiding
Sina Bahrami, University of Michigan, Ann Arbor, presiding
Sushant Sharma, Texas A&M Transportation Institute, presiding
Sponsored By Standing Committee on Freight Transportation Planning and Logistics, Standing Committee on Urban Freight Transportation

This session examines improving freight policy through analysis of global economic impact and simulations, and presents some latest advances in compensation schedule design and agent-based simulation for urban freight modeling.

MASS-GT: An Empirical Model for the Simulation of Freight Policies (TRBAM-25-03610)
Michiel De Bok/Delft University of Technology, Lorant Tavasszy/Delft University of Technology, Sebastiaan Thoen/Delft University of Technology, Larissa Eggers/Delft University of Technology, Ioanna Kourouniotti/Delft University of Technology
A Novel Compensation Scheme Considering the Acceptance Probability of Occasional Couriers in Stochastic Crowdsourced Last-Mile Delivery (TRBAM-25-01199)
Shangming Lu/Southeast University, Lin Cheng/Southeast University, Jinyu Zhang/Southeast University, Minlei Qian/Southeast University
A Synthesis of Agent-Based Urban Freight Simulation Models: State of the Art, Challenges and Future Directions (TRBAM-25-02894)
Aaron Michael Salang/Tokyo University of Marine Science and Technology (TUMST), Takanori Sakai/Tokyo University of Marine Science and Technology (TUMST), Tetsuro Hyodo/Tokyo University of Marine Science and Technology (TUMST), Joseph Chow/Tokyo University of Marine Science and Technology (TUMST)
Strengthening Freight Policy Through Analysis of Global Economic Impacts: Focusing on South Korea Case (TRBAM-25-01903)
Woowon Kim/Hanyang University, Donghyeok Park/Hanyang University, Juneyoung Park/Hanyang University, Seung-oh Son/Hanyang University, Gunwoo Lee/Hanyang University

3139 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 143AB

Dissemination of Airport Development and Capacities Through Social Media Channels

Stephanie Atallah, WSP, presiding

Arya Alizadeh, Mead & Hunt, Inc., presiding

Sponsored By Aviation Group, Young Members Coordinating Council, Subcommittee on Young Members-Aviation, Standing Committee on Aviation Administration and Policy

Airports, as complex and multifaceted ecosystems, are continuously undergoing changes that affect how people use the variety of spaces and resources within the airport. The continuously changing and improving landscape creates the opportunity for engagement between an airport and its users, including flight crews, employees, passengers, and neighbors. Effective and regular dissemination of an airport's existing features, future plans, and ongoing goals to their users can offer a variety of benefits. In this session, organized by the Young Members Council - Aviation (YMC-A), representatives from airports and aviation organizations will discuss the dissemination of Airport Development and Capacities through Social Media Channels.

Social Media Activity: Perspective from a Large Hub Airport (P25-20624)

Amanda Ohbayashi/Metropolitan Washington Airports Authority (MWAA)

Tampa International Airport Perspective (P25-20619)

CJ Johnson/Tampa International Airport

Social Media Activity: Perspective from GA Airports (P25-20632)

Nick Sabo/Winchester Regional Airport Authority

Pittsburgh International Airport Perspective (P25-21375)

Rachel Carlson/Pittsburgh International Airport

3140 **CM** (1.75)

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 143C

Emerging Trends in Passenger Preferences in Airport Terminals

Dr. I. Richmond Nettey, Kent State University, presiding

Sponsored By Standing Committee on Airport Terminals and Ground Access

Major disruptions in commercial airline service caused by the black swan event of COVID-19 have had impacts on passenger preferences in airport terminals that are still evolving. This session will examine emerging trends in passenger preferences in airport terminals since the COVID induced disruptions in 2020, and how airports are responding to those trends. It will address multiple perspectives of how airports are responding to trends that include (i) planned construction of new terminal facilities at Columbus International Airport (ii) accommodation of passenger preferences in airport terminals at a leading international airport and (iii) selected examples of responses to trends at commercial service airports in Africa.

Construction and Development at Columbus International Airport: A Response to Emerging Trends in Passenger Preferences (P25-20734)

Chris Pollock/Columbus Regional Airport Authority

Responses to Emerging Trends in Passengers Preferences at Internationals Airports: Examples from Large Hub Airports in Africa. (P25-20828)

Caroline Marete/Purdue University

Holdroom Seating: Social Distancing is Here to Stay (P25-21393)

Allison Hawk/HNTB

Emerging Wayfinding Techniques for Passenger Movement in Airport Terminals (P25-21394)

Gideon D'Arcangelo/Arup

3141

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, 147B

Current Research in Port and Global Supply Chain Resiliency and Safety

Matthew Antonelli, Saul Ewing, LLP, presiding

Sponsored By Standing Committee on Ports and Channels

Assessing the Resilience of the Global Container Shipping Network through Port Community Analysis with Infomap Algorithm (TRBAM-25-00623)

Wang Nanxi/Nanyang Technological University, Kum Fai Yuen/Nanyang Technological University

Assessment of Port Terminal Work Site Accidents using Random Oversampling and XAI-informed Approaches (TRBAM-25-03157)

Hyeonseo Kim/Hanyang University, Nuri Park/Hanyang University, Yeji Sung/Hanyang University, Juneyoung Park/Hanyang University, Ling Wang/Hanyang University

A Port Resilience Index Focused on Climate Change: Results from Greek Ports' Living-Labs (TRBAM-25-03507)

Amalia Polydoropoulou/No Organization, Adonis Velegrakis/No Organization, Georgios Papaioannou/No Organization, Ioannis Karakikes/No Organization, Efstathios Bouhouras/No Organization, Helen Thanopoulou/No Organization, Dimitrios Chatzistratis/No Organization, Isavela Monioudi/No Organization, Konstantinos Moschopoulos/No Organization, Antonios Chatzipavlis/No Organization

3142

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Ballroom A

State DOT CEO Roundtable: Focusing on Infrastructure Law's Successes and Building Momentum for Reauthorization

Russell McMurry, Georgia Department of Transportation, presiding

Sponsored By Executive Committee

Now in the final stretch of the five-year Infrastructure Investment and Jobs Act or Bipartisan Infrastructure Law, this session will illustrate how state DOTs are hard at work translating federal resources from the IIJA into tangible benefits to advance safety, mobility, and access across the country. This session will also highlight innovative and effective public messaging approaches to improve the public's understanding of the benefits of the IIJA and build momentum for the next surface transportation bill—all in an ever-evolving political and media landscape.

Roundtable Discussion (P25-21242)

Michael Carroll/Pennsylvania Department of Transportation, Carlos Braceras/Utah Department of Transportation, Nancy Daubenberger/Minnesota Department of Transportation, Tracy Larkin Thomason/Nevada Department of Transportation, Bradley Wieferich/Michigan Department of Transportation

3143

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Freeway Operations Research

Chris Lee, University of Windsor, presiding

Sponsored By Standing Committee on Freeway Operations

Spatio-Temporal Prediction of Freeway Congestion Patterns Using Neural Networks (TRBAM-25-05990) - B492

Barbara Metzger/Technical University of Munich, Lisa Kessler/Technical University of Munich, Maximilian Kolb/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

A Safety Service Patrol Case Study in the Use of Vehicle-Mounted Message Boards to Promote Move Over Behavior (TRBAM-25-05436) - B493

Grady Carrick/Enforcement Engineering, Inc., Nithin Agarwal/Enforcement Engineering, Inc., Sivaramakrishnan Srinivasan/Enforcement Engineering, Inc., Abiral Aashish/Enforcement Engineering, Inc., Shraddha Sagar/Enforcement Engineering, Inc., Charles Brown/Enforcement Engineering, Inc.

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Assessing the Effectiveness of Emergency Pull-offs in Reducing the Impact of Stopped Vehicles on Mainline Traffic (TRBAM-25-04503) - B494
Mohammad Khojastehpour/University of Tennessee, Knoxville, Yangsong Gu/University of Tennessee, Knoxville, Jacob Tyer/University of Tennessee, Knoxville, Lee Han/University of Tennessee, Knoxville
Road User Survey of Driver Merging Behavior under Zipper Merge Lane Control (TRBAM-25-04012) - B507
Gagan Gupta/Michigan State University, Nischal Gupta/Michigan State University, Peter Savolainen/Michigan State University, Timothy Gates/Michigan State University
Driver Merging and Lane Utilization Behavior under Zipper Merge Lane Control (TRBAM-25-04011) - B506
Gagan Gupta/Michigan State University, Nischal Gupta/Michigan State University, Matin Mohammadpour/Michigan State University, Yazmin Dasgar/Michigan State University, Peter Savolainen/Michigan State University, Timothy Gates/Michigan State University, Surya Congress/Michigan State University
Evaluating the Heterogeneous Effects of Speed Limit Measures on Mountainous Freeways Using the Causal Forest Method (TRBAM-25-03618) - B505
Yesihati Azati/Tongji University, Xuesong Wang/Tongji University, Xiaohan Yang/Tongji University, Xuefang Zhang/Tongji University, Mohammed Quddus/Tongji University
Variable Speed Limit Control Strategy for Expressways under Foggy Conditions Based on Deep Reinforcement Learning (TRBAM-25-02975) - B504
Shuya Sun/People's Public Security University of China, Aolin Yu/People's Public Security University of China
Evaluation of Factors Influencing Ramp Metering Compliance Using Controller Event-Based Data (TRBAM-25-02910) - B503
Gabriel Geffen/University of Arizona, Adrian Cottam/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona
Analyzing Factors Influencing Incident Duration on Ohio State Routes and Interstates Using Quantile Regression: A Comparative Study (TRBAM-25-02834) - B502
Philip Balyagati/Cleveland State University, Jimoku Salum/Cleveland State University, Boni Kutela/Cleveland State University, Emmanuel Kidando/Cleveland State University, Abdul Ngereza/Cleveland State University
Research on Traffic Flow Determined by the Type of Inter-urban Expressway Lane Closure (TRBAM-25-01130) - B501
Mitsuaki Sakurai/Central Nippon Highway Engineering Tokyo Co., Ltd., Hiroyuki Oneyama/Central Nippon Highway Engineering Tokyo Co., Ltd., Yasuhiro Nonaka/Central Nippon Highway Engineering Tokyo Co., Ltd., Takashi Aoki/Central Nippon Highway Engineering Tokyo Co., Ltd.
Automated Statewide Estimation of Crash-Induced Delay and Queueing using Crowdsourced Data (TRBAM-25-00909) - B500
Abolfazl Karimpour/State University of New York (SUNY), Anthony Altieri/State University of New York (SUNY), Adrian Cottam/State University of New York (SUNY), Ellwood Hanrahan/State University of New York (SUNY)

3144

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Innovations in Design, Installation, and Assessment of Signing and Marking Materials
Scott Tison, Auburn University, presiding
Sponsored By Standing Committee on Traffic Control Devices

This session explores the latest advancements in traffic sign and pavement marking technologies aimed at enhancing road safety and performance. Presentations will cover topics such as retroreflectivity, friction characteristics, deep learning predictions for degradation, and the impact of material composition, offering insights into smarter and more effective solutions for safer travel experiences.

Influence of drop-on application method on the initial retroreflection and skid resistance of road markings (TRBAM-25-00908) - B530
Chiapei Chou/National Taiwan University, Yihsuan Tseng/National Taiwan University, Hao Tung/National Taiwan University
Comprehensive Assessment of Friction Characteristics and Durability of Common Pavement Markings and Materials under Simulated Traffic Conditions (TRBAM-25-01947) - B531
Jieyi Bao/Indiana Department of Transportation, Xiaoqiang Hu/Indiana Department of Transportation, Ayesha Shah/Indiana Department of Transportation, Yi Jiang/Indiana Department of Transportation, Shuo Li/Indiana Department of Transportation

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Preparation and Properties of Modified Long-afterglow Phosphor with Double-layer Silicon Coating (TRBAM-25-01785) - B532
Fusen Zheng/Chang'an University, Jianzhong Pei/Chang'an University, Xiaokang Zhao/Chang'an University, Qinshi Hu/Chang'an University
Evaluating the Impacts of Workmanship and Chemical Composition on Pavement Marking Performance (TRBAM-25-05623) - B533
Momen Mousa/Sam Houston State University, Richard Cooper/Sam Houston State University, Paul Carlson/Sam Houston State University, Douglas Dolinar/Sam Houston State University
Prediction of Pavement Marking Retroreflectivity Degradation through Artificial Neural Networks in National Routes of Argentina (TRBAM-25-02470) - B534
Emmanuel Pendones Fernandez/University de San Juan, Argentina, Aníbal Altamira/University de San Juan, Argentina, Marcelo Bustos/University de San Juan, Argentina
Application of Deep Learning Models in Predicting Traffic Sign Degradation (TRBAM-25-05119) - B535
Denis Ruganuza/South Carolina State University, Methusela Sulle/South Carolina State University, Paul Omulokoli/South Carolina State University, Judith Mwakalonge/South Carolina State University, Gurcan Comert/South Carolina State University, Saidi Siuhi/South Carolina State University
Traffic Sign Installation Angle Measurement Method Based On Yolov8 Algorithm And Binocular Vision Ranging (TRBAM-25-01842) - B536
Chi Zhang/Tongji University, Zhizhou Wu/Tongji University, Yunyi Liang/Tongji University
Visual Recognition Distance Prediction and Brightness Optimization Strategies for Active Luminous Guide Signs (TRBAM-25-05092) - B537
Yichang Shao/Southeast University, Yuhan Zhang/Southeast University, Jingwen Wang/Southeast University, Xiaomeng Shi/Southeast University, Yueru Xu/Southeast University, Zhirui Ye/Southeast University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Technologies, Strategies, and Tools to Improve Work Zone Safety
Kristian Pedersen, Danish Road Directorate, presiding
Sponsored By Standing Committee on Traffic Control Devices

This session examines the latest advancements in work zone management technologies, strategies, and tools to improve traveler and worker safety. Presentations will cover smarter work zone technologies like driveway assistance devices and speed feedback trailers, work zone analysis tools, and training and AI tools to provide insights into effective solutions for improved work zone safety and management.

Development of a Remote-Controlled Truck-Mounted Attenuator System for Enhanced Active Incident Management (TRBAM-25-03884) - B510
Shraddha Sagar/University of Florida, Charles Brown/University of Florida, Maynard Factor/University of Florida, Nithin Agarwal/University of Florida
Driver Comprehension of Driveway Assistance Devices (DAD) for Work Zones: Evidence from a Nationwide Survey (TRBAM-25-03842) - B511
Vahid Bahrami/Michigan State University, Austin Detweiler/Michigan State University, Sagar Keshari/Michigan State University, Nischal Gupta/Michigan State University, Jordan Hankin/Michigan State University, Meghna Chakraborty/Michigan State University, Timothy Gates/Michigan State University, Peter Savolainen/Michigan State University
Effect of Speed Feedback Trailer Positioning Relative to the Work Area within Freeway Work Zone Lane Closures (TRBAM-25-03888) - B512
Sakar Pahari/Michigan State University, Sagar Keshari/Michigan State University, Myles Overall/Michigan State University, Sarah Premo/Michigan State University, Md Shakir Mahmud/Michigan State University, John Racine/Michigan State University, Timothy Gates/Michigan State University, Peter Savolainen/Michigan State University
Evaluating Driver Response to a Speed Feedback Trailer at Median Crossovers within Freeway Work Zones (TRBAM-25-05517) - B513
Sakar Pahari/Michigan State University, Sagar Keshari/Michigan State University, Sarah Premo/Michigan State University, Magdalena Cavka/Michigan State University, Myles Overall/Michigan State University, Md Shakir Mahmud/Michigan State University, John Racine/Michigan State University, Timothy Gates/Michigan State University, Peter Savolainen/Michigan State University

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Effect of Speed Feedback Mechanism on Speed and Headway Distributions in Long Work Zones (TRBAM-25-06263) - B514
Pawan Neupane/University of Memphis, Sabyasachee Mishra/University of Memphis, Jason Quicksall/University of Memphis
Sensor-Based Intrusion Hazard Detection with Low False Alarm in Highway Work Zones (TRBAM-25-05148) - B515
Ayenew Yihune Demeke/North Dakota State University, Israt Sharmin Dola/North Dakota State University, Moein Younesi Heravi/North Dakota State University, Inbae Jeong/North Dakota State University, Youjin Jang/North Dakota State University, Chau Le/North Dakota State University
Review of Features and Functionalities of State DOTs Work Zone Specific Analysis Tools for Road User Cost Estimation Considering Analysts' Preference (TRBAM-25-05473) - B525
Norran Novat/Western Michigan University, Diana Al-Nabulsi/Western Michigan University, Valerian Kwigizile/Western Michigan University, Hexu Liu/Western Michigan University, Jun-Seok Oh/Western Michigan University
Work Zone Assistant: Customized ChatGPT for Work Zone Planning and Operations (TRBAM-25-05807) - B524
Zhu Qing/University of Missouri, Praveen Edara/University of Missouri
Implementation of Virtual Reality Technologies in Immersive Training for Work Zone Workers (TRBAM-25-00952) - B523
Rama Kolla/University of South Florida, Alvaro Lazaro Aguilar/University of South Florida, Zhengyu Wang/University of South Florida, Pei-Sung Lin/University of South Florida, Redwan M. Alqasemi/University of South Florida, Emmeth Duran/University of South Florida, Peter Hsu/University of South Florida
V2I Work Zone Communication through Pavement Signage Coded on Road Surface (TRBAM-25-05751) - B522
Apidej Sakulneya/University of Illinois, Urbana-Champaign, Jeffery Roesler/University of Illinois, Urbana-Champaign
An Attention-Based Multi-Context Convolutional Encoder-Decoder Neural Network for Work Zone Traffic Impact Prediction (TRBAM-25-05656) - B521
Qinhua Jiang/University of California, Los Angeles, Xishun Liao/University of California, Los Angeles, Yaofa Gong/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles
A Framework for Estimating Dynamic Critical Threshold and Conflict Probability Using Time to Collision Measure at Selected Work Zones on Urban Roads (TRBAM-25-06101) - B520
Kishan Chaudhari/Sardar Vallabhbhai National Institute of Technology, Surat, Vishal Patel/Sardar Vallabhbhai National Institute of Technology, Surat, Shriniwas Arkatkar/Sardar Vallabhbhai National Institute of Technology, Surat, Dipak Rathwa/Sardar Vallabhbhai National Institute of Technology, Surat

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Traffic Control Device Enhancements for Improving Driver and Pedestrian Behavior
Justice Appiah, Virginia Transportation Research Council, presiding
Sponsored By Standing Committee on Traffic Control Devices

This session explores the latest advancements in traffic signage and signalization aimed at improving driver and pedestrian behavior at intersections and along road segments. Poster topics include: visual and audible signals for leading pedestrian intervals, factors influencing pedestrian and driver behavior at crosswalks, driver compliance with dynamic NO TURN ON RED signs, driver adaptation to yellow clearance intervals, effectiveness of a slippery curve warning system, and effectiveness of variable message signs.

Is a 3-Second Leading Pedestrian Interval Effective? Exploring the Influence of Visual and Audible Signal Configurations on Pedestrian Behavior (TRBAM-25-02863) - B516
Masoud Ghodrat Abadi/California State University, Sacramento, Jessie Nguyen/California State University, Sacramento, Nicholas Ferenchak/California State University, Sacramento, Doug Maas/California State University, Sacramento
The Factors influencing Pedestrian Actuation and Driver Yielding at Marked Urban Crosswalks in North Carolina (TRBAM-25-05198) - B517
Raul Avelar/Insurance Institute for Highway Safety, Jessica Cicchino/Insurance Institute for Highway Safety
Observations of Driver Compliance with Dynamic No Right Turn on Red Signs at Signalized Intersections (TRBAM-25-03066) - B518
Yuhan Zhang/Iowa State University, Shoaib Mahmud/Iowa State University, Meenakshi Arya/Iowa State University, Pratik Sapkota/Iowa State University, Anuj Sharma/Iowa State University, Christopher Day/Iowa State University
Do Drivers Adapt to the New Yellow Intervals? An Analysis of Driver Violation Rates (TRBAM-25-02363) - B528
Pouya Jalali Khalilabadi/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona
(continued)

Evaluating Driver Response to a Slippery Curve Warning System at Rural Horizontal Curves (TRBAM-25-03896) - B527
Sagar Keshari/Michigan State University, Sakar Pahari/Michigan State University, Timothy Gates/Michigan State University, Peter Savolainen/Michigan State University
Effectiveness of Variable Message Signs on Utah Roadways (TRBAM-25-00209) - B526
Matthew Davis/Brigham Young University, Adam Hill/Brigham Young University, Grant Schultz/Brigham Young University, Gregory Snow/Brigham Young University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Safety Performance and Analysis Using Machine Learning or Artificial Intelligence
Jennifer Ogle, Clemson University, presiding
Sponsored By Standing Committee on Safety Performance and Analysis

Join the TRB Committee on Safety Performance and Analysis for a collection of papers assessing safety using machine learning techniques or artificial intelligence.

Ensemble-based Machine Learning Approach to Prioritize Driving Safety Indicators Using Connected Vehicle System Data for Proactive Safety Analytics (TRBAM-25-00443) - B430
Jeonghoon Jee/Hanyang University, Cheol Oh/Hanyang University
Investigating Resilience Features in Driving Safety: A Quantitative and Interpretable Machine Learning Approach (TRBAM-25-01011) - B431
Huansong Zhang/Southeast University, Yongjun Shen/Southeast University, Qiong Bao/Southeast University, Tianyuan Han/Southeast University, Rui Zhang/Southeast University, Miaomiao Yang/Southeast University
Generating Risky and Realistic Scenarios for Autonomous Vehicle Tests Involving Powered Two-Wheelers: A Novel Reinforcement Learning Framework (TRBAM-25-01181) - B432
Rui Zhou/Central South University, Zhiyuan Wei/Central South University, Helai Huang/Central South University
Integrating Road Network Characteristics in Traffic Crashes Analysis Based on Heterogeneous Graph Neural Networks (TRBAM-25-01335) - B433
Jiahui Zhao/Southeast University, Zhibin Li/Southeast University, Pan Liu/Southeast University
Identifying Autonomous Vehicle Crash Causality from Crash Narratives Using Sentence-Resampled BERT-CRF Model (TRBAM-25-01654) - B434
Xingyu Liang/Chang'an University, Quan Yuan/Chang'an University, Jing Chen/Chang'an University, Qian Liu/Chang'an University
Evolution Pattern Analysis Using a Rule-Based Road Chain Conflict Identification Algorithm (TRBAM-25-01767) - B440
Hao Zhong/Tongji University, Ling Wang/Tongji University, Zicheng Su/Tongji University, Guanjun Liu/Tongji University, Wanjing Ma/Tongji University
Driver's Injury Severity Prediction for Two-Vehicle Crashes: A Hybrid Approach Using Machine Learning Algorithms (TRBAM-25-02220) - B441
Sadia Mohsin/Bangladesh University of Engineering and Technology, Borhan Uddin Rabbani/Bangladesh University of Engineering and Technology, Fajle Rabbi Ashik/Bangladesh University of Engineering and Technology, B M Tazbiul Hassan Anik/Bangladesh University of Engineering and Technology, Md Asif Raihan/Bangladesh University of Engineering and Technology, Md. Mizanur Rahman/Bangladesh University of Engineering and Technology
Elaborate AI-Driven Methods for Imputing Missing Data from Vehicle Detection Systems: Considering Safety Aspects with Hard-Braking Records (TRBAM-25-02687) - B442
Nuri Park/Hanyang University, Juneyoung Park/Hanyang University
Exploring Spatial Variations in Factors Influencing Bicyclist Injury Severity in Traffic Crashes: A Spatial Machine Learning Approach (TRBAM-25-02793) - B400
Yanfang Su/University of Alabama, Zihe Zhang/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
ProSafeAV: Enhancing Proactive Safety Performance of AVs using World Model-Based Reinforcement Learning and Extreme Value Theory (TRBAM-25-03070) - B444
Yukai Wang/Korea Advanced Institute of Science and Technology, Tiantian Chen/Korea Advanced Institute of Science and Technology, Sikai Chen/Korea Advanced Institute of Science and Technology

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Analysis and Prediction of Traffic Accidents Based on Interpretable Spatial Machine Learning: A Case Study in California (TRBAM-25-03124) - B484
Xu Kang/No Organization, Dingxin Wu/No Organization, Wenyi Sha/No Organization, Kangru Song/No Organization, Shuqi Wang/No Organization
Beyond the Conventional: Exploring Pedestrian Safety on Interstates with Bayesian and Machine Learning Models (TRBAM-25-03146) - B411
Sheikh Muhammad Usman/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville
Enhancing Autonomous Vehicle Safety: A Hybrid Ensemble Learning-Logit Model for Accident Severity Prediction and Analysis (TRBAM-25-01619) - B450
Zhenyu Zhao/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Lanfang Zhang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Tingyu Liu/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Shuke Xie/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
Elderly Pedestrian Crash Severity: Exploringthe Role of Human Perceived Streetscape Design Using Explainable Ensemble Learning (TRBAM-25-03254) - B452
Kaihan Zhang/Korea Advanced Institute of Science and Technology, Reuben Tamakloe/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology
To Balance or Not to Balance? Applying a Machine Learning Technique to Oversample Severe Injury Crashes in Work Zones (TRBAM-25-03514) - B412
Muhammad Adeel/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville, Sabyasachee Mishra/University of Tennessee, Knoxville, Diwas Thapa/University of Tennessee, Knoxville
Generative AI for Class Imbalance in Crash Severity Estimation with Mixed Data Types (TRBAM-25-03619) - B414
Eun Jung Kim/University of Central Florida, Dong-Kyu Kim/University of Central Florida, Hyun-Seok Lee/University of Central Florida, Yang-Jun Joo/University of Central Florida
Exploration of Unsignalized Intersection Rear-end Conflict Risk determinants using Machine Learning Approach (TRBAM-25-04757) - B453
Parvathy S/Indian Institute of Technology, Bombay, Vinayaraj V S/Indian Institute of Technology, Bombay, Meenu Tomson/Indian Institute of Technology, Bombay, Kavitha Madhu/Indian Institute of Technology, Bombay
Comparative Geospatial Analysis of Weather-Related Impacts on Crash Frequency With Explainable Machine Learning: A Case for Kansas Census Tracts (TRBAM-25-04823) - B401
Nikesh Gyawali/Kansas State University, Aditya Jha/Kansas State University, H. M. Abdul Aziz/Kansas State University, Doina Caragea/Kansas State University, Eric Fitzsimmons/Kansas State University
Predicting Crash Severity and Unsafe Driver Behavior Hot Spots in South Carolina using Machine Learning Models and a GIS Framework (TRBAM-25-04952) - B402
Raymond Akuh/Clemson University, Pamela Murray-Tuite/Clemson University, Wayne Sarasua/Clemson University, Jennifer Ogle/Clemson University
Analyzing the Factors Behind Heavy Vehicle Crashes: A Deep Learning Approach (TRBAM-25-05032) - B454
Md Sadman Islam/Rowan University, Md. Arifuzzaman Nayeem/Rowan University, Deep Patel/Rowan University, Ahmed Sajid Hasan/Rowan University, Mohammad Jalayer/Rowan University
CrashLLM: Modeling Traffic Crash Patterns and Discovering Causal Factors with Multimodal Data and Foundation Models (TRBAM-25-05368) - B403
Pu Wang/Johns Hopkins University, Zhiwen Fan/Johns Hopkins University, Yang Zhao/Johns Hopkins University, Yibo Zhao/Johns Hopkins University, Juan Li/Johns Hopkins University, Hao Frank Yang/Johns Hopkins University
Spatial-Proximity Integration in Transformer Based Models for County-Level Collision Prediction (TRBAM-25-05485) - B404
Jing Ding/No Organization, Wen Cheng/No Organization, Kirill Rogovoy/No Organization, Chris Cheung/No Organization
Crash Injury Prediction of Different Vehicle Types Using Machine Learning (TRBAM-25-05668) - B410
Odilo Mdimi/Florida International University, Hellen Shita/Florida International University, Francisca Kasubi/Florida International University, Enock Mwambeleko/Florida International University, Priyanka Alluri/Florida International University
AI Conflict Observer: Severity and Scenario Identification for Multi-type Vehicle-to-Vehicle Conflict at Intersection Based on Transformer (TRBAM-25-05976) - B472
Xuesong Wang/Tongji University, Guangzhu Luo/Tongji University, Jingru Zang/Tongji University, Yang Zhou/Tongji University, Yajie Zou/Tongji University, Daiheng Ni/Tongji University
Prediction and Interpretation of Crash Severity Using Machine Learning Based on Imbalanced Traffic Crash Data (TRBAM-25-06131) - B462
Shuo Wang/Southeast University, Junlan Chen/Southeast University, Ziyuan Pu/Southeast University

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Causality Modeling and Analysis of Crash Risk during Interactions Between Motorized and Non-Motorized Vehicles Based on Double Machine Learning (TRBAM-25-06160) - B473
Zhangcun Yan/Tongji University, Duo Zhang/Tongji University, Nicolas Saunier/Tongji University, Lishengsha Yue/Tongji University, Jian Sun/Tongji University
Enhancing Crash Frequency Modeling with Mixed-Type Data Using a Hybrid VAE-Diffusion-Based Generative Approach (TRBAM-25-06171) - B463
Qijie He/Southeast University, Junlan Chen/Southeast University, Pei Liu/Southeast University, Wei Ma/Southeast University, Ziyuan Pu/Southeast University
Assessing Imbalanced Autonomous Vehicle Crash Severity Models: Using Unstructured Data by Latent Class and Applying Data Augmentation Techniques (TRBAM-25-03641) - B443
Songha Lee/Hanyang University, Nuri Park/Hanyang University, Hojae Kim/Hanyang University, Seunghwan Kim/Hanyang University, Juneyoung Park/Hanyang University
Enhancing Traffic Safety with Dense Video Captioning: A Parallel Framework for Comprehensive Event Analysis (TRBAM-25-04468) - B420
Maged Shoman/University of British Columbia, Dongdong Wang/University of British Columbia, Armstrong Aboah/University of British Columbia, Mohamed Abdel-Aty/University of British Columbia
Application of Machine Learning-based Sampling Method in Extreme Value Theory for Crash Risk Estimation of a Freeway Segment (TRBAM-25-04520) - B413
Israt Khan/Michigan State University, Md Tanvir Ashraf/Michigan State University, Kakan Dey/Michigan State University, Pranab Kar/Michigan State University, Sabyasachee Mishra/Michigan State University, Michelle Hunt/Michigan State University, Mihalis Golias/Michigan State University
Advanced Crash Causation Analysis for Freeway Safety: A Large Language Model Approach to Identifying Key Contributing Factors (TRBAM-25-05236) - B421
Ahmed Abdelrahman/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Samgyu Yang/University of Central Florida, Abdulrahman Faden/University of Central Florida
Relationship Exploration of Traffic Safety Risk Factors with Naturalistic Driving Data Via Unsupervised Learning Models (TRBAM-25-01359) - B474
Shu Han/Virginia Polytechnic Institute and State University, Feng Guo/Virginia Polytechnic Institute and State University
Tunnel Crash Severity and Congestion Duration Joint Evaluation based on Cross-stitch Networks (TRBAM-25-01426) - B422
Chenzhu Wang/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Lei Han/University of Central Florida, Chenzhu Wang/University of Central Florida
Dynamic Traffic Risk Assessment at Highway Tunnel Entrances Using Optimized Neural Network Models (TRBAM-25-02234) - B482
Jiacai Wang/No Organization, Yaqin Qin/No Organization, Jiming Xie/No Organization, Miao Guo/No Organization, Shilin Zhao/No Organization
Investigating the Contributing Factors to Crashes with and without the Presence of Work Zone Workers Using Machine Learning Techniques (TRBAM-25-04855) - B483
Isaac Baah/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
Spatiotemporal Prediction of Secondary Crashes by Rebalancing Dynamic and Static Data with Generative Adversarial Networks (TRBAM-25-05407) - B464
Chenyu Ling/Southeast University, Junlan Chen/Southeast University, Yiqun Li/Southeast University, Ziyuan Pu/Southeast University, Xiucheng Guo/Southeast University
Identifying Crucial Indicators of Task Complexity and Coping Capacity Associated with Crash Risk through Machine Learning Techniques: A Comparative Study using On-Road and Simulator Data (TRBAM-25-02616) - B424
Eva Michelaraki/National Technical University of Athens (NTUA), Thodoris Garefalakis/National Technical University of Athens (NTUA), Muhammad Wisal Khattak/National Technical University of Athens (NTUA), Muhammad Adnan/National Technical University of Athens (NTUA), Evita Papazikou/National Technical University of Athens (NTUA), Rachel Talbot/National Technical University of Athens (NTUA), Christelle Al Haddad/National Technical University of Athens (NTUA), Constantinos Antoniou/National Technical University of Athens (NTUA), Tom Brijs/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
The Impact of Electric Vehicle's Strong Acceleration Performance on Traffic Safety Risks at Signalized Intersections (TRBAM-25-02912) - B451
Shuke Xie/Tongji University, Jie Qing/Tongji University, Ting Fu/Tongji University, Qiangqiang Shangguan/Tongji University, Junhua Wang/Tongji University

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Improving Autonomous Vehicle Crash Data by Data Mining and Artificial Intelligence Tools (TRBAM-25-04418) - B423
Arsalan Esmaili/University of Washington, Seattle, Soheil Keshavarz/University of Washington, Seattle, Mohammad Mehdi Oshanreh/University of Washington, Seattle, Amelia Regan/University of Washington, Seattle

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Advances in Artificial Intelligence for Traffic Management and Safety
Khaled Abdelghany, Southern Methodist University, presiding
Sponsored By Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session showcases a broad array of cutting-edge AI techniques for traffic management and safety. From attention mechanisms and deep reinforcement learning to transformers, LSTM, physics-informed models, and graph convolutional networks, it delves into innovative approaches to address critical challenges in transportation. Attendees will explore topics such as anomaly detection, traffic state estimation, ramp metering, vehicle routing, collision risk assessment, and vehicle trajectory modeling. The session aims to offer valuable insights into how these advanced methods are enhancing real-time decision-making, predictive analytics, and the overall efficiency and safety of traffic systems.

From Detection to Reidentification: Machine Learning-Based Optimization Framework for Reidentifying Vehicles at a Signalized Intersection (TRBAM-25-00010) - A120
Pramesh Pudasaini/University of Arizona, Henrick Haule/University of Arizona, Yao-Jan Wu/University of Arizona
Pedestrian Trajectory Prediction and Collision Risk Assessment through a Long Short-Term Memory Network (TRBAM-25-00373) - A138
Shanglian Zhou/University of Hawai'i, Manoa, Hao Xu/University of Hawai'i, Manoa, Igor Lashkov/University of Hawai'i, Manoa, Guohui Zhang/University of Hawai'i, Manoa, Tianwei Ma/University of Hawai'i, Manoa, Yin Yang/University of Hawai'i, Manoa
AI-Driven Framework for Real-Time Prediction of Microscopic and Macroscopic Driving Risk Using Holistic Data (TRBAM-25-00817) - A110
Dimitrios Tselentis/National Technical University of Athens (NTUA), Thodoris Garefalakis/National Technical University of Athens (NTUA), Dimitrios Nikolaou/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Deep Learning Model of Stacked Sparse Autoencoders Powered by Feature Analysis and Selection for Predicting Traffic Accident Severity on Mountainous Highways (TRBAM-25-00848) - A128
Jingyang Li/Kunming University, Fengxiang Guo/Kunming University, Wenchen Yang/Kunming University, Yunpeng Wu/Kunming University
Are State-of-the-Art Deep Learning Traffic Prediction Models Truly Effective? (TRBAM-25-00904) - A127
Yifan Zhang/City University of Hong Kong, Qishen Zhou/City University of Hong Kong, Jianping Wang/City University of Hong Kong, Anastasios Kouvelas/City University of Hong Kong, Michail Makridis/City University of Hong Kong
Assessing Traffic Incident Persistence in Real-Time: Bayesian Network Approach for Duration Probability Distribution Modelling (TRBAM-25-00953) - A126
Tal Katz Ratz/Rekor, Aviv Gruber/Rekor, William Mills/Rekor
Multi-Agent Reinforcement Learning for Unmanned Aerial Vehicle Routing in Traffic Monitoring Management (TRBAM-25-00984) - A125
Yuanzhi Xie/Southwest Jiaotong University, Fangfang Zheng/Southwest Jiaotong University, Xiaobo Liu/Southwest Jiaotong University, Kangning Hou/Southwest Jiaotong University, Linhan Bai/Southwest Jiaotong University, Can Liu/Southwest Jiaotong University
CTSG-Net: A Lane-Level Intersection Queue Length Prediction Model at a Network Scale (TRBAM-25-01520) - A100
Xingyi He/Tsinghua University, Qingquan Liu/Tsinghua University, Ke Zhang/Tsinghua University, Meng Li/Tsinghua University
Intention-Based Deep Reinforcement Learning Network for Multi-Agent Trajectory Prediction (TRBAM-25-01833) - A124
Yaotao Zhao/Beijing Jiaotong University, Li Peikun/Beijing Jiaotong University, Hao Wang/Beijing Jiaotong University
Speed Harmonization Based on Multi-Agent Reinforcement Learning for Mitigating Traffic Congestion under Mixed Traffic Environment (TRBAM-25-01909) - A134
Seung-Hyeon Lee/Seoul National University, Seung Woo Ham/Seoul National University, Hyunsoo Yun/Seoul National University, Dong-Kyu Kim/Seoul National University

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Physical Depth-Aware Early Accident Anticipation: A Multi-Dimensional Visual Feature Fusion Framework (TRBAM-25-01933) - A123
Hongpu Huang/Southeast University, Wei Zhou/Southeast University, Runyu Zhang/Southeast University, Chen Wang/Southeast University
Detecting Abnormal Vehicle Behavior: A Method Based on Dynamic and Static Feature Generation (TRBAM-25-02228) - A133
Zhiyu Wang/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Bin Ran/Southeast University
Short-Term Traffic Prediction Under Special Events Using Hierarchical Trend Graph Attention Network (HTGAT) (TRBAM-25-02614) - A122
Yuxin Ding/Shenzhen Technology University, Tian Lei/Shenzhen Technology University, Qiuyue Huang/Shenzhen Technology University, Jingpeng Wen/Shenzhen Technology University, Xiaohong Yin/Shenzhen Technology University, Lei Gong/Shenzhen Technology University
Physics-Informed Neural Network for Cross-Dynamics Vehicle Trajectory Stitching (TRBAM-25-02941) - A131
Keke Long/University of Wisconsin,Madison, Xiaowei Shi/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison
A Deep Reinforcement Learning Approach with Decision Mamba for Crash Avoidance Behavior Modeling (TRBAM-25-02985) - A121
Qingwen Pu/Old Dominion University, Kun Xie/Old Dominion University, Hongyu Guo/Old Dominion University, Yuan Zhu/Old Dominion University
Effective Image Discriminative Feature Extraction for Traffic Sign Detection in Road Inspection (TRBAM-25-03093) - A113
Zhihao Tang/Chang'an University, Xuan Zhou/Chang'an University, Yu Hu/Chang'an University, Haitao Zhang/Chang'an University, Sen Wei/Chang'an University, Yuanqing Wang/Chang'an University
Unsupervised Knowledge Distillation for Traffic Infrastructure Anomaly Detection (TRBAM-25-03395) - A136
Xin Guo/Southeast University, Jiankun Peng/Southeast University, Jiaxuan Zhou/Southeast University, Chunye Ma/Southeast University
Enhancing Instant Delivery Efficiency: Adaptive Battery Swapping Decisions for Autonomous Delivery Vehicles Based on Reinforcement Learning (TRBAM-25-03416) - A114
Ke Zhang/No Organization, Miaojia Lu/No Organization
Dynamic Target Trajectory Prediction Model for Traffic with Fusion of Multi-View Visual Features (TRBAM-25-03420) - A137
Shuangzhi Yu/Southeast University, Chunye Ma/Southeast University, Shaojie Wang/Southeast University, Jiankun Peng/Southeast University
Real Time Non-Recurrent Event Detection in Urban Road Networks Using Unsupervised Learning and an LSTM-Based Autoencoder (TRBAM-25-03446) - A115
Aikaterini Papadatou/National Technical University of Athens (NTUA), Panagiotis Fafoutellis/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)
Using Attention Mechanism to Improve the Performance of Reinforcement Learning Based Ramp Metering Strategy (TRBAM-25-03476) - A116
Shixuan Yu/Southeast University, Yu Han/Southeast University
SWencoder: A Succinct Shockwave Diagram Encoding Method for Traffic Pattern Learning to Enhance AI Efficiency and Assurance (TRBAM-25-03734) - A117
Chenlu Pu/University of Florida, Lili Du/University of Florida, Dale Thompson/University of Florida
Real-Time Traffic Speed Prediction at a Network Level Using Graph Transformer LSTM Model (TRBAM-25-03790) - A118
Jiechao Zhang/University of Central Florida, Samiul Hasan/University of Central Florida, Md Mobasshir Rashid/University of Central Florida
A Trajectory-Based Real-Time Conflict Risk Prediction Based on Deep Learning Generation Approach (TRBAM-25-03871) - A135
Xinyu Yang/Southeast University, Junlan Chen/Southeast University, Yang Liu/Southeast University, Hongyi Zhao/Southeast University, Xiucheng Guo/Southeast University
A Physics-Informed Traffic State Estimation Model for Freeways under Sparse Observation Data (TRBAM-25-03941) - A108
Shuaiming Chen/Chang'an University, Ximing Ji/Chang'an University, Haipeng Shao/Chang'an University

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Traffic Oscillations Mitigation With Physics Enhanced Residual Learning (Perl)-Based Predictive Control (TRBAM-25-03960) - A130
Keke Long/University of Wisconsin,Madison, Zhaohui Liang/University of Wisconsin,Madison, Haotian Shi/University of Wisconsin,Madison, Lei Shi/University of Wisconsin,Madison, Sikai Chen/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison
An Integrated Framework for Highway Traffic Anomalies Detection Using Vehicle Trajectories (TRBAM-25-04050) - A107
Zhirui Wang/Southeast University, Anfeng Jiang/Southeast University, Zhen Zhou/Southeast University, Hongzhe Liu/Southeast University, Zhiyuan Liu/Southeast University, Ziyuan Gu/Southeast University
Analyzing Car-Following Behavior Using an Empirical Prior Statistical Learning Framework (TRBAM-25-04257) - A111
Kaitai Yang/University of Maryland, College Park, Yuan-Zheng Lei/University of Maryland, College Park, Xianfeng Yang/University of Maryland, College Park
CRM-DSTGC: A Coordinated Ramp Metering Method Integrated with Dynamic Spatial-Temporal Graph Convolutional Model (TRBAM-25-04783) - A106
Qinghai Lin/Tongji University, Guilong Li/Tongji University, Mengmeng Zhang/Tongji University, Chunting Nie/Tongji University
Transformers with Spatial-Temporal Dependencies for Traffic Data Imputation (TRBAM-25-04797) - A105
Jongho Kim/Korea Advanced Institute of Science and Technology, Kitae Jang/Korea Advanced Institute of Science and Technology
Goal-Based Neural Physics Vehicle Trajectory Prediction Model (TRBAM-25-05024) - A132
RUI GAN/University of Wisconsin, Madison, Haotian Shi/University of Wisconsin, Madison, Pei Li/University of Wisconsin, Madison, Keshu Wu/University of Wisconsin, Madison, Bocheng An/University of Wisconsin, Madison, Linheng Li/University of Wisconsin, Madison, Junyi Ma/University of Wisconsin, Madison, Chengyuan Ma/University of Wisconsin, Madison, Bin Ran/University of Wisconsin, Madison
Spatiotemporal Implicit Neural Representation as a Generalized Traffic Data Learner (TRBAM-25-05043) - A101
Tong Nie/Tongji University, Guoyang Qin/Tongji University, Yuewen Mei/Tongji University, Wei Ma/Tongji University, Jian Sun/Tongji University
Comparative Analysis of Sampling Methods in Physics-Informed Neural Networks for Traffic State Estimation in Large-Scale Road Networks (TRBAM-25-05067) - A104
Eunhan Ka/Purdue University, Satish Ukkusuri/Purdue University
Data Augmentation using a Semi-Reflective Generative Model to Improve Automated Detection of Impairment (TRBAM-25-05200) - A103
Ryan Miller/Grinnell College, Irene Agusti/Grinnell College, Timothy Brown/Grinnell College
A Physics-Informed Deep Learning Framework for Urban Traffic Network State Data Imputation (TRBAM-25-06042) - A112
Siyuan Chen/Southeast University, Shaoyang Qin/Southeast University, De Zhao/Southeast University, Wei Wang/Southeast University
Curriculum Adaptation for Open-World Aerial Visual Semantic Segmentation in Large-Scale Traffic Systems (TRBAM-25-06213) - A102
Yang Zhao/Johns Hopkins University, Pu Wang/Johns Hopkins University, Junyue Jiang/Johns Hopkins University, Hao Frank Yang/Johns Hopkins University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Travel Forecasting Methods and Theory
Yoram Shiftan, Technion - Israel Institute of Technology, presiding
Sponsored By Standing Committee on Transportation Demand Forecasting

This session addresses topics related to travel forecasting methods and theory and will discuss large-scale traffic forecasting methods, choice modeling, crowd forecasting, mode choice, and transit ridership predictions.

PREMIXER: MLP-BASED PRE-TRAINING ENHANCED MLP-MIXERS FOR LARGE-SCALE TRAFFIC FORECASTING (TRBAM-25-01752) - A155
Tongtong Zhang/Beihang University, Zhiyong Cui/Beihang University, Bingzhang Wang/Beihang University, Yilong Ren/Beihang University, Haiyang Yu/Beihang University, Yinhai Wang/Beihang University

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Transformation-Based Flexible Error Structures for Choice Modeling (TRBAM-25-00591) - A158
Chandra Bhat/University of Texas, Austin
METiS - Multiagent Estimation of Time-Use and Scheduling (TRBAM-25-06351) - A162
Anna Reiffer/ETH Zurich, Peter Vortisch/ETH Zurich
Evaluation of Machine and Deep learning models for Multi-Horizon Crowd Forecasting at Scheveningen Beach, Netherlands (TRBAM-25-04700) - A166
Theivaprakasham Hari/Delft University of Technology, Winnie Daamen/Delft University of Technology, Sascha Hoogendoorn-Lanser/Delft University of Technology, Jeroen Steenbakkers/Delft University of Technology, Serge Hoogendoorn/Delft University of Technology
A Univariate Probability Density Model based on Partially Monotone Neural Network — An Application to Time-of-day Choices of Shopping Activities (TRBAM-25-03113) - A153
Kun Huang/Tongji University, Xin Ye/Tongji University, Shuguang Geng/Tongji University
Transit Ridership Prediction for Student□Centric Communities (TRBAM-25-04701) - A167
Tak Chun Marcus Chan/University of California, Davis, Kari Watkins/University of California, Davis
Causation versus Prediction in Travel Mode Choice Modeling (TRBAM-25-00301) - A168
Rishabh Chauhan/Princeton University, Uttara Sutradhar/Princeton University, Anton Rozhkov/Princeton University, Sybil Derrible/Princeton University
An Extension of Multiple Discrete-Continuous Extreme Value Model with Ordered Preferences (MDCEV-OP): Considering Non-monotonic Preference in Episode-level Time-use Behaviors (TRBAM-25-03307) - A170
Mengyi Wang/Tongji University, Xin Ye/Tongji University, Ke Wang/Tongji University
Understanding Randomness of Activity-Based Model Applications by the Variance-to-Mean Ratio (TRBAM-25-02664) - A171
John Gibb/DKS Associates, Inc.
A Bivariate Probability Density Model based on Partially Monotone Neural Network for Joint Modeling of Activity Time-of-Day and Duration Choices — An Application to Recreational Activities (TRBAM-25-03115) - A154
Kun Huang/Tongji University, Xin Ye/Tongji University
A Comparison of the Continuous Logit Model and the Finite Mixture Continuous Logit Model for Workand Recreation Activities Start Times (TRBAM-25-06084) - A152
Shuguang Geng/Tongji University, Xin Ye/Tongji University
Can Large Language Models Capture Human Travel Behavior? Evidence and Insights on Mode Choice (TRBAM-25-02555) - A172
Tianming Liu/University of Michigan, Ann Arbor, Manzi Li/University of Michigan, Ann Arbor, Yafeng Yin/University of Michigan, Ann Arbor
Estimate then Predict: Convex Formulation for Travel Demand Forecasting (TRBAM-25-02477) - A176
Youngseo Kim/Cornell University, Gioele Zardini/Cornell University, Samitha Samaranayake/Cornell University, Soroosh Shafiee/Cornell University
Using Entropy Balancing to Decompose Changes in Observed Commuting Mode Choice over Time in Repeated Cross-Sections (TRBAM-25-02047) - A177
Nicole Reinfeld/Frankfurt University, Tobias Hagen/Frankfurt University
Achieving fairness of spatiotemporal travel demand modeling with dynamic weighting (TRBAM-25-02932) - A178
Xiaojian Zhang/University of Florida, Xilei Zhao/University of Florida
Integrating Choice and Predictive Theories: A Comparative Study of Set Generation and Machine Learning in Consideration Set Modeling (TRBAM-25-02608) - A180
Vasileios Volakakis/Northwestern University, Maher Said/Northwestern University, Ying Chen/Northwestern University, Hani Mahmassani/Northwestern University
Positional-aware Spatio-Temporal Network for Large-Scale Traffic Prediction (TRBAM-25-01958) - A181
Runfei Chen/Tongji University, Shuyang Jiang/Tongji University
A Novel Three-Phase Model for Intercity Travel Mode Choice Behavior in Urban Agglomerations (TRBAM-25-05899) - A182
Zhixi Cheng/Chang'an University, Daniel Jian Sun/Chang'an University, Yangyang Zhao/Chang'an University, Hui Peng/Chang'an University
Integrating Macro and Micro Level Transportation Network Company (TNC) Destination Choice Behavior (TRBAM-25-02727) - A186
Dewan Ashraful Parvez/SRF Consulting Group, Inc., Tanmoy Bhowmik/SRF Consulting Group, Inc., Naveen Eluru/SRF Consulting Group, Inc.
Joint Behaviour Modelling Using A Deep-Copula Approach (TRBAM-25-03028) - A151
Kimia Kamal/Toronto Metropolitan University, Bilal Farooq/Toronto Metropolitan University

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Flexible Modelling of Stochastic Frontiers for Activity Time-Space Prism Vertices (TRBAM-25-04986) - A187
Ke Wang/South China University of Technology, Xin Ye/South China University of Technology, Xin Guan/South China University of Technology, Qian Zhang/South China University of Technology, Hongcheng Gan/South China University of Technology, Mingyang Pei/South China University of Technology
Enhancing Accuracy and Reliability of Origin-Destination Matrix Estimation Using Ensemble Empirical Mode Decomposition (TRBAM-25-01637) - A188
Eui-Jin Lee/Seoul National University, Donggyu Min/Seoul National University, Seung Woo Ham/Seoul National University, Dong-Kyu Kim/Seoul National University
Choice Set Generation in Work Destination Choice Modeling with Variational Autoencoders (TRBAM-25-04452) - A150
Houman Haghi/No Organization, Zachary Patterson/No Organization, Bilal Farooq/No Organization
Improved Destination Choice Models Using the Neural Network Method (TRBAM-25-06273) - A161
Qian Zhang/Tongji University, Xin Ye/Tongji University, Ke Wang/Tongji University
A Spherical Parameterization-Based Multivariate Ordered Probit Analysis of Shanghai Commuters' Non-Work Activity Frequency Distributions Constrained by Fixed Work Schedules (TRBAM-25-03700) - A160
Xin Guan/Tongji University, Xin Ye/Tongji University, Kun Huang/Tongji University, Ying Liu/Tongji University
Pathways to Equity in Travel Demand Modeling: An Evaluation of Auto ownership Outcomes Using Choice Set Modeling (TRBAM-25-06038) - A190
Tat Srisan/University of California, Los Angeles, Tierra Bills/University of California, Los Angeles
Semi-Supervised Variational Embedding for Data-Fusion to Generate Activity Schedules (TRBAM-25-05672) - A215
Huichang Lee/Ajou University, Prateek Bansal/Ajou University, Khoa D. Vo/Ajou University, Eui-Jin Kim/Ajou University
Cross-City Traffic Prediction in Scenarios with Spatiotemporal Data Missing (TRBAM-25-03227) - A191
Junqi Shao/Tsinghua University, Ke Zhang/Tsinghua University, Meng Li/Tsinghua University, Shen Li/Tsinghua University
Road capacity as a fundamental determinant of vehicle travel (TRBAM-25-00920) - A192
Adam Millard-Ball/University of California, Los Angeles, Michael Rosen/University of California, Los Angeles
Evaluating Feature Selections for Machine Learning Based AADT Prediction Models (TRBAM-25-00705) - A196
Deo Chimba/Tennessee State University, Subash Gupta/Tennessee State University, David Lee/Tennessee State University
Interactive Evolutionary Optimization of Neural Network in Discrete Choice Modelling (TRBAM-25-05218) - A197
Hamid Hasanzadeh/No Organization, Bobin Wang/No Organization, Rayane Badji/No Organization, Aditya Verma/No Organization, Mikael Rönnqvist/No Organization
Customized Deep Generative Models to Resolve the Sampling Bias in Population Synthesis (TRBAM-25-04742) - A198
Donghyun Kwon/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology
Enhancing E-Scooter Demand Prediction in Sparse Data Scenarios: A Deep Learning Model with Finite Mixture Distribution (TRBAM-25-06368) - A200
Gyeongjae Lee/HongIk University, Sujae Kim/HongIk University, Jahun Koo/HongIk University, Yoojin Park/HongIk University, Sangho Choo/HongIk University
An Attention-based Approach for Complementary Feature Learning in Traffic Prediction Models (TRBAM-25-05771) - A201
Adway Das/Pennsylvania State University, Agnimitra Sengupta/Pennsylvania State University, S. Ilgin Guler/Pennsylvania State University
Probabilistic Forecasting of Bus Travel Time with a Bayesian Hidden Markov Mesh Model (TRBAM-25-01217) - A202
Xiaoxu Chen/McGill University, Zhanhong Chen/McGill University, Lijun Sun/McGill University
A Hybrid Optimization and Microsimulation Modeling Framework for Simulating Weekly Travel Activities (TRBAM-25-06275) - A157
MD Jahedul Alam/Dalhousie University, Rifat Bhuiyan/Dalhousie University, Venkata Vijaya Rama Raju Mandapati/Dalhousie University, Muhammad Habib/Dalhousie University
Study on Travel Characteristics of Spatial Interaction based on Adaboost Method (TRBAM-25-00698) - A203
Chao Sun/Southeast University, jian lu/Southeast University
A GENERATIVE ADVERSARIAL NETWORK FOR SPATIO-TEMPORAL TRAVEL TIME ESTIMATION (TRBAM-25-06100) - A204
Mark Amo-Boateng/University of Missouri, Yaw Adu-Gyamfi/University of Missouri, Lan Uong/University of Missouri

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Modelling the Joint Decisions of Activity Start-time and Duration for Different Activity-based Tour – A Copula-based Approach (TRBAM-25-02090) - A205
Hasan Shahrier/Dalhousie University, Xinming Li/Dalhousie University, Muhammad Habib/Dalhousie University
Comparing Gaussian Processes and OD-Matrix Sampling for Activity Location Prediction in Synthetic Population Generation (TRBAM-25-03550) - A206
Federico Bigi/University of Luxembourg, Giovanni Tataranno/University of Luxembourg, Francesco Viti/University of Luxembourg
A Pool-based Approach to Population Synthesis in Transport Modeling (TRBAM-25-01765) - A207
Duc Minh La/Monash University, Hai Vu/Monash University
Deep Neural Networks for Choice Analysis: Enhancing Behavioral Regularity with Gradient Regularization (TRBAM-25-02759) - A208
Siqi Feng/University of Florida, Rui Yao/University of Florida, Stephane Hess/University of Florida, Ricardo Daziano/University of Florida, Timothy Brathwaite/University of Florida, Joan Walker/University of Florida, Shenhao Wang/University of Florida, Shenhao Wang/University of Florida
Deep-Learning-based Fair Travel Choice Prediction with Provable and Flexible Guarantees (TRBAM-25-04945) - A210
Zhiwei Chen/Georgia Institute of Technology, Yufei Xu/Georgia Institute of Technology, Srinivas Peeta/Georgia Institute of Technology
Analyzing sequential activity and travel decisions with interpretable deep inverse reinforcement learning (TRBAM-25-03168) - A211
Yuebing Liang/University of Florida, Shenhao Wang/University of Florida, Jiangbo Yu/University of Florida, Zhan Zhao/University of Florida, Jinhua Zhao/University of Florida, Sandy Pentland/University of Florida, Shenhao Wang/University of Florida
Metro Passenger Flow Prediction by Graph Neural Networks Considering Time Periods (TRBAM-25-00616) - A212
Yanyan Chen/Beijing University of Technology, Yuezhe Gao/Beijing University of Technology, Anran Li/Beijing University of Technology, Hanqiang Qian/Beijing University of Technology, Ye Zhang/Beijing University of Technology, Yan Zhang/Beijing University of Technology, Miao Shi/Beijing University of Technology
An End-to-end Smart Predict-then-Optimize Framework for Vehicle Relocation in Large-scale Crowd Sensing (TRBAM-25-03206) - A213
Xinyu Wang/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University
A Smart-Predict-then-Optimize Solution Framework for Vehicle Rebalancing Problem (TRBAM-25-03858) - A214
Yuhang Guo/Tongji University, Enming Liang/Tongji University, Zicheng Su/Tongji University, Chen Zhong/Tongji University, Peng Li/Tongji University, Kun An/Tongji University, Wanjing Ma/Tongji University
Development of Synthetic Population and Their Baseline Mobility Tool Ownership for the Province of Nova Scotia (TRBAM-25-04434) - A156
Arunakirinathan Vajeeran/Dalhousie University, Muhammad Habib/Dalhousie University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Developing Useful Transportation Analysis Tools
Pedro de Camargo, Argonne National Laboratory, presiding
Sponsored By Standing Committee on Transportation Demand Forecasting

This session addresses topics related to developing useful transportation analysis tools. A wide range of presentations will discuss visual diagnosis frameworks, passenger flow predictions for urban rail networks, four-step models, and pedestrian trip generation models. The session will also examine case studies from the Olympic Green Station of Beijing Metro and the Link21 Project in Northern California.

A Visual Diagnosis Framework for Travel Demand Model Calibration and Validation (TRBAM-25-02304) - A140
Zihao Jin/Boston Region MPO, Martin Milkovits/Boston Region MPO, Dahai Han/Boston Region MPO
Passenger Flow Prediction for Urban Rail Networks under Station Closure Conditions: A Case Study on Olympic Green Station of Beijing Metro (TRBAM-25-03163) - A141
Yibo He/Tongji University, Ruihua Xu/Tongji University, Feng Zhou/Tongji University
My First Four-Step Model: a Simple and Accessible Tool to Teach Travel Demand Modeling (TRBAM-25-02374) - A142
Matthew Bhagat-Conway/University of North Carolina
(continued)

Expert Interview for Developing a Travel Demand Model Capturing Uncertainties of Transportation Revolutions: A Case Study of the Northern California Megaregion (TRBAM-25-00173) - A143
Tho Le/Purdue University, Xiaodong Qian/Purdue University, Giovanni Circella/Purdue University
Spatial Transferability of Pedestrian Trip Generation Models (TRBAM-25-03547) - A144
Fatemeh Nourmohammadi/University of New South Wales, Taha Rashidi/University of New South Wales, Meead Saberi/University of New South Wales
Identification of Priority Zones for Regional Dynamic Travel Demand Modeling in Areas Exhibiting Rural-Urban Continuum (TRBAM-25-04905) - A145
B. Anish Kini/Indian Institute of Technology, Palakkad, Bhavathrathan B. K./Indian Institute of Technology, Palakkad, Tom Mathew/Indian Institute of Technology, Palakkad
Strategic Modeling Framework for Evaluation of Large-Scale Transit Projects – Application to the Link21 Project in Northern California. (TRBAM-25-04362) - A146
Ilya Chistyakov/Steer, Arushi Chopra/Steer, Noah Larson/Steer, Liliana Pereira/Steer, Andrew Tang/Steer
Comparison of Approaches for Estimating Induced VMT Effects of Highway Projects (TRBAM-25-02741) - A147
Jeffrey Ang-Olson/ICF, Stephanie Kong/ICF, Haifeng Xiao/ICF, Jonathan Ehrlich/ICF
Understanding the Decision-making Process of Choice Modellers (TRBAM-25-06057) - A148
Gabriel Nova/Delft University, Sander van Cranenburgh/Delft University, Stephane Hess/Delft University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Vehicles: Why They Are Picked and How They Are Used
Like Liu, Kittelson & Associates, Inc., presiding
Sponsored By Standing Committee on Transportation Demand Forecasting

This session examines vehicle ownership, preferences, and usage. Presentations will explore challenges in understanding what vehicle users want, consumers' intention to purchase electric vehicles, ride-hailing drivers' preferences for electric vehicles, and users' adoption of light-duty vehicles.

The Challenge of Understanding What Vehicle Users Want: Inconsistent Renewal Preferences and Customer Profiles (TRBAM-25-03045) - A217
Jiacai Wang/No Organization, Bijun Wang/No Organization, Yaqin Qin/No Organization, Shilin Zhao/No Organization, Yulan Xia/No Organization, Jiming Xie/No Organization
Predicting Consumer's Intention to Purchase Electric Vehicles: An Explainable Machine Learning Approach (TRBAM-25-04599) - A218
Sagar Bhandari/Dalhousie University, Muhammad Habib/Dalhousie University
Joint Analysis of Vehicle Usage and Vehicle Ownership in California – Lessons for Electrification and Adoption of Light-Duty Vehicles (TRBAM-25-06250) - A227
Anuj Dhole/University of California, Davis, Siddhartha Gulhare/University of California, Davis, Yongsung Lee/University of California, Davis, David Bunch/University of California, Davis, Giovanni Circella/University of California, Davis
Micro-simulation of Vehicle Ownership within an Agent-based Integrated Urban Model: An Event-based Hybrid of Continuous and Discrete Time Simulation Approach (TRBAM-25-06123) - A228
Md Shahadat Hossain/University of British Columbia, Mahmudur Fatmi/University of British Columbia, Mohamad Khalil/University of British Columbia
Eliciting Ridehailing Drivers' Preferences for Electric Vehicles by Learning Decision Rules from Eye-tracking Data (TRBAM-25-05575) - A216
Jinghai Huo/National University of Singapore, Vladimir Maksimenko/National University of Singapore, Ding Jiaxuan/National University of Singapore, Prateek Bansal/National University of Singapore

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

State Department of Transportation Research: High-Value Project Winners

Rebecca Ridenour, Montana Department of Transportation, presiding

Jenni Hosey, Missouri Department of Transportation, presiding

Sponsored By Standing Committee on Research Innovation Implementation Management

This event highlights the 16 High Value Research (HVR) awards voted on by the four AASHTO Research Advisory Committee (RAC) regions.

Optimizing of MassDOT's High Performance Asphalt Overlay (HPOL) Mixtures (P25-20168) - A237
Austin Sanders/Massachusetts Department of Transportation, Walaa Mogawer/University of Massachusetts, Dartmouth
Advanced Reinforced Concrete Materials for Transportation Infrastructure (P25-20169) - A236
Matthew Bandelt/New Jersey Institute of Technology, Matthew Adams/New Jersey Institute of Technology
SMART Intersections (P25-20170) - A235
Patrick McVeigh/Pennsylvania Department of Transportation
Optimizing Wildlife Structure Size: A Meta-analysis of Literature to Determine Optimal Wildlife Crossing (P25-20166) - A234
Stephen Cohn/Colorado Department of Transportation
Conserving Pollinators and Identifying Roadside Management Strategies (P25-20167) - A233
Julie Hausknecht/Idaho Transportation Department
Working with Autonomous Trucks to Improve Routine Maintenance Operations (P25-20171) - A232
Katelyn Kasberg/Texas Department of Transportation
Developing a Prototype System for Establishing Passing and No-Passing Zones of Two-Lane Highways (P25-20172) - A231
Imran Reza/University of Wyoming
Florida Slab Beam Bridge with Ultra-High Performance Concrete Joint Connections - Full-Scale Testing and Analysis of Results (P25-20181) - A230
David Garber/Federal Highway Administration (FHWA)
Impacts to Traffic Behavior from Queue Warning Truck: Current Pilot Project (P25-20182) - A245
Darcy Bullock/Purdue University, Rahul Suryakant Sakhare/Purdue University
Development of a Geotechnical Asset Management Collection and Rating Program for Missouri Department of Transportation (P25-20192) - A226
Aine Mines/Landslide Technology
Evaluating the Impact of Anti-Icing Solutions on Concrete Durability (P25-20193) - A225
Tirupan Mandal/Wisconsin Department of Transportation
Snowplow Driver Assist System (P25-20200) - A224
Brian Davis/University of Minnesota
Best Practices for Highway Project Scoping (P25-20208) - A223
Jeff Jasper/Kentucky Transportation Cabinet, Robin Baskette/Kentucky Transportation Cabinet
Predicting Roadway Washout Locations During Extreme Rainfall Events (P25-20483) - A222
Barbara Doll/North Carolina State University, Jack Kurki-Fox/North Carolina State University
A Framework for Quantitative Assessment of the Environmental, Social, and Economic Benefits of TDOT Infrastructure Projects – A Decision Oriented Approach (P25-20490) - A221
Ignatius Fomunung/University of Tennessee, Chattanooga
Safety Evaluation of Alternatives for Installing Pedestrian Signals Under Side Street Green Operation (P25-20684) - A220
Olin Green/University of Connecticut, John Ivan/University of Connecticut, Kai Wang/University of Connecticut, Marisa Auguste/University of Connecticut

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

State Department of Transportation Research: Supplemental Research Award Winners

Rebecca Ridenour, Montana Department of Transportation, presiding

Jenni Hosey, Missouri Department of Transportation, presiding

Sponsored By Standing Committee on Research Innovation Implementation Management

This session highlights AASHTO Research Advisory Committee's (RAC) Supplemental High Value Research Awards. This year's areas are Safety and Maintenance, Management, and Preservation.

Improving Roadway Debris Clearance for CHART Responders (P25-20175) - A255

Xianfeng Yang/University of Maryland, College Park

Asphalt Pavement Pothole Repair for Enhanced Performance and Environmental Sustainability (P25-20178) - A262

Hao Wang/Rutgers University

Wildlife Vehicle Collisions Data Gathering and Best Management Practices (P25-20284) - A261

Deirdre Nash/New Hampshire Department of Transportation

Traffic Safety Toolbox -- Addressing Speeds (P25-20179) - A260

Dana Rowangould/University of Vermont

Assessing the Effects of Traffic Control Devices in Deterring Wrong-Way Driving by Alcohol-Impaired Drivers: A Driving Simulator Study (P25-20173) - A254

Edwin Yeung/California Department of Transportation

Experimental Validation of Repair Methods for Earthquake-Damaged Bridges Incorporating ITD's Precast Pier System (P25-20174) - A253

Mustafa Mashal/Idaho State University

Effectiveness of Highway Safety Public Education at Montana Motor Vehicle Registration Stations by Streaming a Variety of Safety Content (P25-20177) - A252

Jaime Sullivan/Western Transportation Institute (WTI)

Algorithm-Driven Predictive Modeling for Maintenance Highway Asset Management: Enhancing Decision-Making in Washington State (P25-20180) - A251

Kishor Shrestha/Washington State University

Impacts of Autonomous Vehicles on Minnesota Roads (P25-20176) - A250

Victor Lund/St. Louis County Minnesota

New Bridge Deck Fascia Repairs (P25-20202) - A243

Michael Townley/Michigan Department of Transportation

Design and Evaluation of Missouri Asphalt Mixtures with Ground Tire Rubber and Waste Plastics (P25-20203) - A242

Punyaslok Rath/University of Missouri, William Buttlar/University of Missouri

Safe and Cost-Effective Reduction of Load Postings for South Carolina Bridges (P25-20204) - A241

Terry Swygert/South Carolina Department of Transportation, Li Ai/University of South Carolina

Cost of Congestion Due to Incidents on Freeways (P25-20206) - A240

Chien-Lun Lan/Virginia Transportation Research Council, Mo Zhao/Virginia Department of Transportation

Speed Enforcement in Work Zones and Synthesis on Cost-Benefit Assessment of Installing Speed Enforcement Cameras on INDOT Road Network (P25-20223) - A244

Darcy Bullock/Purdue University, Daniel McCoy/Indiana Department of Transportation, Jijo Mathew/Purdue University, Jairaj Desai/Purdue University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Highlighting Projects in Research Innovation Implementation Management

Shenghua Wu, University of South Alabama, presiding

Marwa Hassan, Louisiana State University, presiding

Sponsored By Standing Committee on Research Innovation Implementation Management

This session includes posters solicited by TRB's AJE35 Research Innovation Implementation Management (RIIM) committee. We accepted eight of the 15 applications received.

Clear Roads Brings Snow-and-Ice Problem Solving to All Agencies (P25-20136) - A266

Jed Falgren/Minnesota Department of Transportation, Sheila Johnson/Minnesota Department of Transportation, Brian Hirt/CTC and Associates LLC, Gregory Waidley/CTC and Associates LLC

Evidence Based Research in the Potential of 'SMART' Mobility Measures to Reduce Traffic Emissions (CO2, NOx) (P25-20137) - A258

Gerben Bootsma/RiJkswarterstaat (Dutch Ministry of Infrastructure and Water Mangement), Ernst van Ark/Dutch Research Institute on Applied Science

Building a Competency Model for Diverse Work Environments (P25-20138) - A257

Garrett Wheat/Louisiana Department of Transportation and Development

Fostering Local Government-University-Industry Collaboration for Low-Carbon Asphalt Solutions in Florida (P25-20139) - A256

Abeeb Oyelere/University of South Alabama, Sajid Karim/University of South Alabama, Shenghua Wu/University of South Alabama, Charles Cotton/Walton County Public Works, Chance Powell/Walton County Public Works, Krishna Srinivasan/Sripath Technologies, LLC

Extending Signal Cabinet Service in the Face of Environmental Challenges (P25-20140) - A248

Winston Inoway/Utah Department of Transportation, Cameron Kergaye/Utah Department of Transportation

Innovation Dashboard Provides Real-Time Implementation and Efficiency Awareness (P25-20141) - A247

Winston Inoway/Utah Department of Transportation, Cameron Kergaye/Utah Department of Transportation

Developing and Maintaining a Culture of Innovation within DOTs (P25-20142) - A246

Cameron Kergaye/Utah Department of Transportation, Kirsten Seeber/CTC and Associates LLC

Talking to Data: Developing a GPT for Asset Management (P25-20143) - A238

Matt Versdahl/Washington State Department of Transportation

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Dwight David Eisenhower Transportation Fellowship Program, Part 3 (Part 1, Session 2166; Part 2, Session 3108)

Latoya Jones, Federal Highway Administration (FHWA), presiding

Sponsored By Executive Committee

An opportunity to explore the topics undergraduate and graduate students are researching at institutions across the country. Dwight David Eisenhower Transportation Fellowship Program research presentations are selected by FHWA and are not reviewed by TRB standing committees.

Uncovering the rise of SUVs in the US auto market (P25-21322) - A267

Nicole Corcoran/Arizona State University

Whose street is it anyway? The role of car-centric biases in opposition to bicycle infrastructure (P25-21323) - A268

Hayley Wiers/Arizona State University

Characterization and Categorization of PAEB Pulses in the modern fleet (P25-21324) - A270

Maitland Witmer/Drexel University

Enhancing Pedestrian and Cyclist Safety in Rural Florida through Computer Vision-Based Crosswalk Illumination (P25-21325) - A271

Jayson Francois/Florida A&M University

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Examining How Different Preferences in Grocery Shopping Affect Food Accessibility, Racial Equity, the Transportation System, and the Environment (P25-21351) - A303
Montana Reinoehl/University of California, Irvine
The Missing Bus: Use of School Bus and Student Transit Programs in California (P25-21352) - A304
Samuel Speroni/University of California, Los Angeles
Mobility and Racial-Spatial Isolation in Suburbs: A Quantitative Exploration (P25-21353) - A305
Madeline Wander/University of California, Los Angeles
An Examination of Legally Codified Racism in Transportation and a Roadmap for Reparations (P25-21354) - A310
Tamika Butler/University of California, Los Angeles
Beyond the Vehicle: AI and LiDAR Analytics for Understanding Interactions Among All Road Users (P25-21355) - A311
Iris La/University of Colorado, Denver
Analyzing Network Effects through Complete Streets Projects Implementations. (P25-21356) - A312
Yazan Abulaimoun/University of Colorado, Denver
Level of Traffic Stress Framework for Urban and Freight-Centric Communities (P25-21357) - A313
Logan Sirbaugh/University of Memphis
Mathematical Models of Curb Space Dynamics: Infrastructure, Policies, and User Interactions (P25-21358) - A314
Jisoon Lim/University of Michigan
Historical Trajectories and Decision-Making Processes of the Roosevelt Boulevard Subway (P25-21359) - A315
Jay Arzu/University of Pennsylvania
Bridge Structural Health Monitoring Using Neural Network Approaches (P25-21360) - B610
Brian Reyes-Santiago/University of Puerto Rico, Mayaguez
Characteristics of unhoused individuals using public transportation as shelter in Los Angeles (P25-21361) - B611
Jordy Coutin/University of Southern California
A Cluster Analysis of Demand Response Transit Travel: Findings from Rural Tennessee (P25-21362) - B612
Matthew Davis/University of Tennessee, Knoxville
Cybersecurity of AI-Powered Traffic Signal Control (P25-21363) - B613
Mark Hernandez/University of Texas, Rio Grande Valley
Distributed Shared Autonomous Electric Vehicle Dispatch with Mobility and Distribution System Resilience Benefits (P25-21364) - B614
Jake Robbennolt/University of Texas, Austin
A comparative study on travel experience in Austin and Boston. (P25-21365) - B615
Minyu Situ/University of Texas, Austin
Evaluation of Viscoelastic Structural Model of a Full-Scale Electrified Pavement (P25-21366) - B616
Hector Cruz/University of Texas, El Paso
Use of Distributed Fiber Optic Sensing (DFOS) for Structural Health Monitoring of Asphalt Pavements (P25-21367) - B617
Sebastian Morales/University of Texas, El Paso
Measuring access to transportation: Exploring the connection between demographics and travel behavior to understand disadvantages. (P25-21368) - B618
Andrea Ruiz/Vanderbilt University
Meta-Heuristic-Driven Continuous Path Optimization for Area Coverage in Unmanned Aerial Vehicle-based Infrastructure Inspection (P25-21334) - A284
Pouya Almasi/New Mexico State University
Advanced Air Mobility Operations Optimization in a Multi-Airport Network with Agent-Based Simulation (P25-21384) - B619
Zhenglei Ji/New York University
Evaluation of the BeeLine Microtransit Service (P25-21400) - B546
Matthew Liu/University of California, Davis
Understanding Links Between Young New Drivers' Skills and Driver Training, Economic Conditions, and Home Neighborhood Urbanicity: Evidence from the State of Ohio (P25-21407) - A277
Jasmine Siyu Wu/University of Pennsylvania
Sex and Travel Complexity: The Case of Trip Chaining (P25-21508) - B547
Yu Hong Hwang/University of California, Los Angeles
Electrifying Pavements Through Thermoelectric Concrete Battery Technology (P25-21509) - B548
Moboluwaduro Akande/University of Texas, Arlington

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CAN-Based Naturalistic Driving Fleet Deployment, Monitoring, and Dataset Synthesis (P25-21510) - B549
Alex Richardson/Vanderbilt University
Finite-Element Impact Damage Assessment of Prestressed Concrete Girder Bridges (P25-21546) - B538
Seth Cathey/University of North Carolina, Charlotte

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Public Transportation Market Research and Fare Policies: Results and Implications for Practice
Abubakr Ziedan, CDM Smith, presiding
Sponsored By Standing Committee on Public Transportation Marketing and Fare Policy

It is critical for public transit operators to understand travel behavior and how customers respond to new transit services, planned or unplanned disruptions, new fare policies, and other system changes. This session will present customer research on transit loyalty, transit path choice, user perceptions during transit service disruptions, and social media use on rail systems. Innovative transit fare policy and finance topics will also be highlighted, including research on bus rider subsidies, fare-free transit, and fare allocations for buses and autonomous vehicles.

Dependence or Preference? Navigating Public Transit Loyalty across Heterogeneous Levels of Transit Dependence (TRBAM-25-04605) - B600
Sina Asgharpour/University of Illinois, Chicago, Sajad Askari/University of Illinois, Chicago, Charles Abraham/University of Illinois, Chicago, Abolfazl Mohammadian/University of Illinois, Chicago
Integrating Neural Networks and Latent Class Choice Model to Analyze Transit Path Choice: Understanding Likely Users of Branded or Premium Transit Routes (TRBAM-25-04718) - B603
Kwangho Baek/University of Minnesota, Twin Cities, Alireza Khani/University of Minnesota, Twin Cities
The Impact of Political Factors on User Experiences and Perceptions of Transit Service Disruptions: The Case of Hong Kong during an Urban Social Movement (TRBAM-25-06412) - B604
Sylvia He/Chinese University of Hong Kong, Xueying Chen/Chinese University of Hong Kong, Ellen Shiau/Chinese University of Hong Kong, Murat Es/Chinese University of Hong Kong, Sui Tao/Chinese University of Hong Kong
Revealing the Performance of a Rail-Transit System using Social-Media Data: The Case of the Munich S-Bahn (TRBAM-25-05934) - B608
Allister Loder/Technical University of Munich, Antonios Tsakarestos/Technical University of Munich, Yannick Elsten/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Public Transport through Time and Space: Novel Indicators for Mobility Policy Assessment (TRBAM-25-04017) - B607
Martin Schlett/Technical University of Munich, Allister Loder/Technical University of Munich
From Technical Improvements to User Experience: Rethinking Urban Public Transportation Systems (TRBAM-25-01414) - B606
Shadi Omidvar Tehrani/Vanderbilt University, Chandra Ward/Vanderbilt University, Paul Speer/Vanderbilt University, Abhishek Dubey/Vanderbilt University, Philip Pugliese/Vanderbilt University
Towards a Better Understanding of Changes in Subsidy Per Pider for Bus Routes Before and After the COVID-19 Pandemic in Montréal, Canada (TRBAM-25-00962) - B601
Lancelot Rodrigue/McGill University, Kevin Manaugh/McGill University, Ahmed El-Geneidy/McGill University
Barriers to Utilization of Fare-Free Transit by Students (TRBAM-25-00144) - B605
Danielle Del Conte/Marquette University, Margaret McNamara/Marquette University
Modal Split and Bus Fare Allocation for a Congested Bottleneck: Autonomous Vehicles and Buses (TRBAM-25-04149) - B602
Rhian Paterson/University of Calgary, Mohammad Amin Ashena/University of Calgary, Sumaya Nsair/University of Calgary, Saeid Saidi/University of Calgary, Lina Kattan/University of Calgary

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A

Electric Bus Fleet Planning, Scheduling, and Charging

Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Sponsored By Standing Committee on Bus Transit Systems

Papers will cover electric bus fleet planning, scheduling, and charging research.

Sustainable Transition to Zero-Emissions Fleet Requires Both Electric and Hybrid Buses in the Near-Term (TRBAM-25-04891) - B562
Mahsa Arabi/University of Massachusetts, Amherst, Tolu Oke/University of Massachusetts, Amherst, Jimi Oke/University of Massachusetts, Amherst

Electrification Opportunities and Challenges of School Bus Transportation: A Case Study of Atlanta Public Schools (TRBAM-25-04124) - B587
Geyu Lyu/Georgia Institute of Technology, Huiying Fan/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Mandani Tennakoon/Georgia Institute of Technology, Kalyani Bhosale/Georgia Institute of Technology, Matthew Hawkins/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology

A Semi - "Smart Predict then Optimize" (Semi-SPO) Method for Electric Bus Scheduling Optimization (TRBAM-25-00797) - B586
Chengcheng Yang/Zhejiang University, Xinxin Xing/Zhejiang University, Sheng Jin/Zhejiang University, Congcong Bai/Zhejiang University, Jérémie Alagbé/Zhejiang University

Charging Infrastructure Planning, Energy and Battery Electric Bus Scheduling: a Holistic Solution (TRBAM-25-01144) - B588
Arsalan Najafi/Chalmers University of Technology, Kun Gao/Chalmers University of Technology, Omkar Parishwad/Chalmers University of Technology

Multi-Stage, Multi-School Electric Bus Routing and Scheduling Optimization Using Metaheuristics (TRBAM-25-05284) - B584
Megh Bahadur KC/University at Buffalo, SUNY, Ziqi Song/University at Buffalo, SUNY

Network-Flow Practical Approach for Scheduling of Battery Electric Public Transport Buses (TRBAM-25-01265)
Nick Davaritorshiz/Melbourne University, Neema Nassir/Melbourne University, Avishai (Avi) Ceder/Melbourne University, Lu Aye/Melbourne University

Prescriptive Analysis of Electric Bus Battery Allocation with the Plackett-Luce Model (TRBAM-25-03287) - B583
Haotian Wang/Southeast University, Di Huang/Southeast University, Jinyu Zhang/Southeast University, Zhiyuan Liu/Southeast University

Optimal Electric Bus Charging Scheduling with Multiple Types of Vehicles and Chargers Considering Compatibility (TRBAM-25-00199) - B564
Mingye Zhang/Southeast University, Min Yang/Southeast University, Jiahui Zhao/Southeast University, Wenbo Lu/Southeast University

Charging Strategy Planning for Electric Buses with Intermediate Station Battery Swapping Services Considering Battery Degradation (TRBAM-25-02079)
Kun Jin/Southeast University, Wei Wang/Southeast University

A Comparative Analysis of In-Motion and Overnight Charging Infrastructure Design for E-Buses (TRBAM-25-06116) - B567
Abu Nasar/Indian Institute of Technology, Delhi, Aman Sharma/Indian Institute of Technology, Delhi, N. Nezamuddin/Indian Institute of Technology, Delhi

Electric Bus Charging Station Location Selection Problem under Inter-Station Travel Time Uncertainties (TRBAM-25-01973) - B568
Konstantinos Gkiotsalitis/National Technical University of Athens (NTUA), Androniki Dimitriadou/National Technical University of Athens (NTUA)

An Agent-based Optimization Framework for Smart Electric Bus Charging with Operational Strategies (TRBAM-25-03181) - B569
Jônatas Augusto Manzolli/Keimyung University, Wooseok Do/Keimyung University, Carlos Henggeler Antunes/Keimyung University, Luis Miranda-Moreno/Keimyung University, João Pedro F. Trovão/Keimyung University

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Shared Charging Strategies at Electric Bus Depot: An Integrated Optimization Model (TRBAM-25-02993) - B582
Zhou Jia/Southeast University, Di Huang/Southeast University, Zhiyuan Liu/Southeast University, Zhitao Hu/Southeast University
Charging Electric Buses with Solar Power under Various Environmental Temperatures and Sunlight Conditions (TRBAM-25-06246) - B581
Jiacheng Liu/Tongji University, Xiuyu Hu/Tongji University, Chi Xie/Tongji University
Strategic Allocation of Battery Electric Bus Chargers under Stochastic Demand: A Chicago Case Study Using Metaheuristic Approaches (TRBAM-25-02593) - B590
Sadjad Bazarnovi/Argonne National Laboratory, Taner Cokyasar/Argonne National Laboratory, Omer Verbas/Argonne National Laboratory, Abolfazl Mohammadian/Argonne National Laboratory
Resilience and Environmental Benefits of Electric School Buses as a Backup Power Solution During Outages (TRBAM-25-04334) - B572
Shanshan Liu/University of Illinois, Urbana-Champaign, Eleftheria Kontou/University of Illinois, Urbana-Champaign
Integrated Optimized Charging and Economic Analysis of V2G Enabled School Bus System (TRBAM-25-05323) - B585
Megh Bahadur KC/University at Buffalo, SUNY, Ziqi Song/University at Buffalo, SUNY
Joint Optimization of Electric Bus Infrastructure Planning, Fleet Composition, and Charging Schedule with Multiple Charging Modes (TRBAM-25-02771) - B565
Yihua Guo/Southeast University, Min Yang/Southeast University, Mingye Zhang/Southeast University, Bicheng Zhang/Southeast University
An Integrated Machine Learning Framework for Real-Time Prediction of Electric Bus Energy Consumption (TRBAM-25-02973) - B573
Changyin Dong/Southeast University, Zhuozhi Xiong/Southeast University, Ni Li/Southeast University, Chenyang Wu/Southeast University, Ye Li/Southeast University, Ning Xie/Southeast University, Hao Wang/Southeast University
Electric Bus Charging Schedule Optimization at En-route Layovers Using A Decomposition Heuristic model (TRBAM-25-06400) - B574
Behnaz Naeimian/York University, Ghazaleh Mohseni Hosseinabadi/York University, Mehdi Nourinejad/York University, Peter Park/York University
Charging an Electric Bus Fleet with Conventional and Renewable Electricity Sources (TRBAM-25-02200) - B580
Xiuyu Hu/Tongji University, Chi Xie/Tongji University, Hailong Li/Tongji University
Cost-Benefits Analysis of Electrified Regional Bus Network Based on the Joint Optimization of Scheduling and Fleet. (TRBAM-25-02177) - B575
Suyang Xu/Southeast University, Ran Tu/Southeast University
The Potential and Limits of Public Transport Electrification in Developing Countries (TRBAM-25-01737) - B577
Angel Aparicio/Universidad Politecnica de Madrid
Energy Forecasting and Scenario Planning for Sustainable Decision-Making in Urban Rail Transit Systems (TRBAM-25-06340) - B563
Zhuo Han/University of Massachusetts, Amherst, Eleni Christofa/University of Massachusetts, Amherst, Eric Gonzales/University of Massachusetts, Amherst, Jimi Oke/University of Massachusetts, Amherst
Co-Hub Planning for Electric Bus and Paratransit: An Investigation on Shared Charging Scheme with Fuzzy Multi-Objective Optimization (TRBAM-25-03278) - B578
Bingkun Chen/Monash University, Zhuo Chen/Monash University, Xiaoyue Liu/Monash University, Ran Wei/Monash University, Arman Malekloo/Monash University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Bus Transit Systems Operations Topics
Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Sponsored By Standing Committee on Bus Transit Systems

See the latest research around bus stops, bus reliability, and service disruption recovery.

Illuminating Issues in Bus Stop Lighting: A Case Study of Los Angeles (TRBAM-25-01434) - B540
Monisha Reginald/Massachusetts Bay Transportation Authority (MBTA)

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Bus Stop Classification by Users, Operations, Socioeconomic, and Land Use Characteristics for Introducing Bus Stop-based Smart Mobility Service (TRBAM-25-04948) - B541
Yeonghyeon Lee/Chungbuk National University, Tai-jin Song/Chungbuk National University, Yongil Jung/Chungbuk National University, Hyorim Han/Chungbuk National University
Bus Arrival Time to Bus Stops Prediction Model Using Machine Learning (TRBAM-25-03123) - B542
Viduni Medawatte/University of Moratuwa, Loshaka Perera/University of Moratuwa, Amila Jayasinghe/University of Moratuwa, Sagara Sumathipala/University of Moratuwa
Measuring Transit Service Reliability at the Route Level? Exploring the Relationship between Reliability Measures and Ridership (TRBAM-25-01367) - B543
Meisam Ghasedi/University of Saskatchewan, Jinhyung Lee/University of Saskatchewan, Scott Bell/University of Saskatchewan, Ehab Diab/University of Saskatchewan
Large Language Model-Enhanced Reinforcement Learning for Generic Bus Holding Control Strategies (TRBAM-25-03300) - B544
Jiajie Yu/Hong Kong Polytechnic University, Yuhong Wang/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University
Restoring Accessibility during Urban Rail Disruptions via Bus Network Redesign (TRBAM-25-06402) - B545
Zihao GUO/Institut Polytechnique de Paris, Andrea Araldo/Institut Polytechnique de Paris, Mounîm El Yacoubi/Institut Polytechnique de Paris

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Bus Transit Systems Planning Topics
Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Sponsored By Standing Committee on Bus Transit Systems

Topics include bus schedules, network design, and integrating flexibility to improve bus service.

Best Practices on Football Game Days: A Review of Transit Planning and Operations Strategies in College Towns (TRBAM-25-01350) - B550
Brett Kohring/University of Tennessee, Knoxville, Patrick Leppold/University of Tennessee, Knoxville, Candace Brakewood/University of Tennessee, Knoxville
Reinforcement Learning-based Timetabling for Bus Transit Subject to Oversaturation (TRBAM-25-03327) - B551
Zongjie Pan/Southwest Jiaotong University, Wenbo Fan/Southwest Jiaotong University, Zhiyuan Zheng/Southwest Jiaotong University
Human-in-the-Loop Strategies for Bus Scheduling: Adapting to Diverse Driver Types and Workforce Regulations (TRBAM-25-04789) - B552
Chenlong Xu/Tongji University, Yu Shen/Tongji University, Tianshu Chu/Tongji University, Yuxiong Ji/Tongji University, Yuchuan Du/Tongji University
Evaluation of Urban Public Transportation Supply and Demand Coupling under the Perspective of Equalization (TRBAM-25-03813) - B553
Zhonghao Li/Southeast University, Wei Wang/Southeast University, Yingjian He/Southeast University, Jun Chen/Southeast University
Optimal Design of Emergency Public Transit Feeder: A Case Study of Rear-end Disastrous Accident of Beijing Subway Changping Line (TRBAM-25-03844) - B554
Hong Ji/Beijing Jiaotong University, Sida Luo/Beijing Jiaotong University, Jinglu Niu/Beijing Jiaotong University, Yunyu Zhang/Beijing Jiaotong University, Xinyun Gao/Beijing Jiaotong University, Chunfu Shao/Beijing Jiaotong University
Analysis of Service Area and Fare for Synergistic Fixed- and Flex-Route Transit Operation (TRBAM-25-00315) - B555
Rongrong Guo/Southeast University, Yu Jiang/Southeast University, Wenquan Li/Southeast University
Multiobjective Joint Fixed and Demand Responsive Transit Network Design: The Benefits of Flexibility (TRBAM-25-05594) - B556
Filippos Alogdianakis/University of Cyprus, Loukas Dimitriou/University of Cyprus
Evaluating the Use of Transfers and Optimizing Demand Responsive Transit (DRT) Systems through Clustering and Zoning Strategies using K-mean: Case Study of Kalamazoo metro (TRBAM-25-05603) - B557
Diana Al-Nabulsi/Western Michigan University, Jun-Seok Oh/Western Michigan University, Valerian Kwigizile/Western Michigan University
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Developing an ML-based Publicly Accessible Tool for Estimating Transit Ridership Based on Agencies' Network and Operational Data (TRBAM-25-04939) - B558
Jorge Diaz-Gutierrez/Pennsylvania State University, Helia Mohammadi-Mavi/Pennsylvania State University, Andisheh Ranjbari/Pennsylvania State University

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Automated Bus Transit Systems Topics
Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Sponsored By Standing Committee on Bus Transit Systems, Standing Committee on Transit Management and Performance, Standing Committee on Public Transportation Planning and Development

This poster session covers transit systems design and scheduling considerations for autonomous vehicle fleets.

Autonomous Shuttles in the Public Eye: Mediators on the Path to Successful Expansion (TRBAM-25-03412) - B598
Panick Kalambay/University of Washington, Tacoma, Norris Novat/University of Washington, Tacoma, Boni Kutela/University of Washington, Tacoma, Abimbola Ogungbire/University of Washington, Tacoma, Angela Kitali/University of Washington, Tacoma, Emmanuel Kidando/University of Washington, Tacoma
Public Transport Goes Autonomous: Defining Functional Requirements for Automated Bus Transit Systems Based on Human Driver Tasks (TRBAM-25-03479) - B609
Johannes Lindner/Technical University of Munich, Martin Margreiter/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Are Autonomous Shuttles Ready to Provide Regular Transit Service? (TRBAM-25-01720) - B599
Mohaddese Salehian/University of Florida, Victoria Zorbas/University of Florida, Pruthvi Manjunatha/University of Florida, Xiang Yan/University of Florida, Lily Elfeteriadou/University of Florida, Kristin Gladwin/University of Florida

3161

Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
Priority Treatments for Bus Transit Systems
Chun-Hung Peter Chen, Santa Clara Valley Transportation Authority (VTA), presiding
Jennifer Frost, Dallas Area Rapid Transit (DART), presiding
Sponsored By Standing Committee on Bus Transit Systems

Topics include bus rapid transit strategies, like bus lanes, transitways, and crossings.

Spatial Assessment of Bus Rapid Transit Stations: Towards A Transit-Oriented Development (TRBAM-25-01647) - B593
Abdallah A. Almomani/Yarmouk University, Anne Gharaibeh/Yarmouk University, Ahmad Alomari/Yarmouk University
A Cost-Efficient Framework for Automated Enforcement of Bus-Only Lanes and Crossings (TRBAM-25-03007) - B592
Yahia Abrini/University of Calgary, Bilal Dawood/University of Calgary, Curtis Eck/University of Calgary, Zaid Mujtaba/University of Calgary, John Abo/University of Calgary, Kyle Hasan/University of Calgary, Pedram Akbari/University of Calgary, Saeid Saidi/University of Calgary, Muhammad Asim/University of Calgary, Merkebe Getachew Demissie/University of Calgary
Bit by Bit: A Method for Using Bus Data to Develop Plan Bus Priority Interventions in Portland, Oregon (TRBAM-25-00957) - B591
Paul Redelmeier/McGill University, Miles Crumley/McGill University, Ahmed El-Geneidy/McGill University
Investigating Combinations of Signal Preferential Treatments for Bus Rapid Transitway (TRBAM-25-05432) - B594
Wattana Laosinwattana/Florida International University, Md Mahmud Hasan Mamun/Florida International University, Nattakarn Surangsrirout/Florida International University, Mohammed Hadi/Florida International University, MD Sultan Ali/Florida International University

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An Arterial Bus Signal Priority Strategy Considering Coordination of Social Vehicles (TRBAM-25-03974) - B595
Changjian Wu/Southeast University, China, Qi Cao/Southeast University, China, Gang Ren/Southeast University, China, Chen Weihan/Southeast University, China, Yue Deng/Southeast University, China
Collaborative Optimization of Intersection Signals and Speed Guidance for Buses Run on Overlapping Route Segments under Connected Environment (TRBAM-25-00799) - B596
Chengcheng Yang/Zhejiang University, Xinxin Xing/Zhejiang University, Sheng Jin/Zhejiang University
Comprehensive Evaluation of Next-Generation Transit Signal Priority Systems using Emerging Data Sources: A Case Study from Portland, Oregon (TRBAM-25-00990) - B597
Burak Cesme/Kittelson & Associates, Inc., Jorge Barrios/Kittelson & Associates, Inc., Peter Koonce/Kittelson & Associates, Inc., Mark Haines/Kittelson & Associates, Inc., Christopher Bame/Kittelson & Associates, Inc., Nemanja Dobrota/Kittelson & Associates, Inc.

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Tuesday, 01:30 p.m. - 03:15 p.m., Convention Center, Hall A
CANCELLED—Advances in Rail Operating Technologies
Earl Jackson, City and County of Denver, presiding
Sponsored By Standing Committee on Railroad Operating Technologies

2095

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Ballroom A
U.S. Department of Transportation: Advisory Committee on Human Trafficking Recommendations
Carol (Annie) Petsonk, U.S. Department of Transportation Office of the Under Secretary for Policy, presiding
Sponsored By Executive Committee

Transportation is a critical connector that can both facilitate and prevent human trafficking. Human traffickers exploit roadways, railways, waterways, and airways in urban, rural, and Tribal communities across the United States to recruit and transport their victims. This session will highlight recommendations from the USDOT Advisory Committee on Human Trafficking's 2024 report and underscore best practices for the transportation sector in combating human trafficking with immediate, actionable steps for stakeholders.

Panel Presentation (P25-21403)
Rabbi David Saperstein/Religious Action Center on Reform Judaism, Esther Goetsch/Truckers Against Trafficking, Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design, Michael Krumm/Michigan State Police, Shamere McKenzie/Sun Gate Foundation

3163

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 103A
Evaluations of Road User Behavior to Improve Understanding of Attention and Safety
Jared Young, OST-R/Volpe Center, presiding
Sponsored By Standing Committee on Road User Measurement and Evaluation

Microscopic Driver Behavioral Fundamental Diagram Analysis Using Computer Vision Techniques: Implications for Human Driving Responses to Visual Stimuli (TRBAM-25-06410)
Bowen Geng/Rutgers University, New Brunswick, Peter Jin/Rutgers University, New Brunswick
Validating Bicycle Simulators Activate Steering in a CAVE Virtual-Reality environment (TRBAM-25-04077)
Tian Zheng/Technical University of Munich, Mathias Pechinger/Technical University of Munich, Johannes Lindner/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
Driver Distraction Detection Based on Large Kernel Convolution and Attention Mechanism (TRBAM-25-03027)
Tao Wang/Guilin University of Electronic Technology, Jiachen Wang/Guilin University of Electronic Technology, Shiyi Chen/Guilin University of Electronic Technology, Jun Chen/Guilin University of Electronic Technology, Quan Yuan/Guilin University of Electronic Technology, Chen Wang/Guilin University of Electronic Technology

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Large-scale Driver Identification Based on Driving Behavior Feature in a Multilayer Perceptron Model (TRBAM-25-01603)
Jinhe Zeng/Wuhan University, Ying Zhou/Wuhan University, Nengchao Lyu/Wuhan University
Derivation of Promising Simulated Driving Behavior Indicators for Road Safety Assessment (TRBAM-25-01570)
Aram Jung/Hanyang University, Hyunjin Park/Hanyang University, Donghyeok Park/Hanyang University, Juneyoung Park/Hanyang University, Cheol Oh/Hanyang University

3164

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 102B
Freeway Operations Trends and Opportunities for Innovation
Darren Henderson, GHD, Inc., presiding
Jeffrey Adler, Kapsch TrafficCom USA, Inc., presiding
Sponsored By Standing Committee on Freeway Operations

This session will explore current trends and future opportunities for research and innovation in Freeway Operations. We will have 4 short presentations folllowed by round table discussion and Q&A from Audience

State of the Practice in Freeway Management - FHWA Perspective (P25-20103)
Valerie Briggs/Federal Highway Administration (FHWA)
Innovations in Freeway Operations - AASHTO Perpective (P25-20104)
Jianming Ma/Texas Department of Transportation
Freeway Operations and Utah DOT - A State Perspective (P25-20105)
Grant Farnsworth/Utah Department of Transportation
Managed Motorways and Network Optimisation (P25-20106)
Matthew Hall/Victoria Department of Transport and Planning

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon C
Improving Resiliency Through Managing and Maintaining Our Traffic Signal Assets
Kevin Balke, Consensus Systems Technologies, presiding
Sponsored By Standing Committee on Traffic Signal Systems

This session focuses on tools and techniques that agencies are using to improve resiliency through better management and maintenance of their traffic signal assets. In the session, speakers will present information on best practices related to inspection techniques, tools for managing and prioritizing improvements, and performance metrics for quantifying effectiveness.

Applying Transportation Asset Management to Traffic Signals (P25-20313)
Jospeh Gregory/Federal Highway Administration (FHWA)
Traffic Signal Condition Assessment: Cabinet and Control Components (P25-20314)
Ryan Fries/Southern Illinois University, Edwardsville
Managing Storm Response and Resiliency for Austin's Transportation Network (P25-21112)
Lance Ballard/Kimley-Horn and Associates, Inc.

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon A
Simulation for Connected and Autonomous Vehicles
Andrew Berthaume, OST-R/Volpe Center, presiding
Sponsored By Standing Committee on Traffic Simulation

There has been a significant increase in the number of papers on simulation for connected and autonomous vehicles. This trend will likely continue.

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Can Human Drivers and Connected Automated Vehicles Co-exist in Lane-Free Traffic? A Microscopic Simulation Perspective (TRBAM-25-06256)
Arslan Ali Syed/Technical University Munich, Majid Rostami-Shahrbabaki/Technical University Munich, Klaus Bogenberger/Technical University Munich
Simulation Modelling Framework for Heterogeneous Traffic Flow in On-Ramp Areas with Connected and Automated Technology (TRBAM-25-00481)
Wenzhang Yang/Southeast University, Xu Chen/Southeast University, Chen Wang/Southeast University, Yuxuan Hou/Southeast University, Hao Wang/Southeast University
Human-like Lane Changing Decision Model Considering Short-term and Long-term Driving Style Characteristics (TRBAM-25-04987)
Yi He/Wuhan University of Technology, Le Jia/Wuhan University of Technology, Bo Cao/Wuhan University of Technology, Lixin Yan/Wuhan University of Technology, Jianhua Yin/Wuhan University of Technology
A Co-simulation Survey in Intelligent Transportation Systems (TRBAM-25-02860)
Sima Ashayer/University of Tennessee, Chattanooga, Firas Elhag/University of Tennessee, Chattanooga, Mina Sartipi/University of Tennessee, Chattanooga

3167

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Salon B
What Is New at the National Highway Traffic Safety Administration, Part 2 (Part 1, Session 3114)
Nanda Srinivasan, National Highway Traffic Safety Administration (NHTSA), presiding
Sponsored By Section - Safety

Data Visualization of Bicyclist Fatalities (P25-21184)
Robert Selden/National Highway Traffic Safety Administration (NHTSA)
Child Passenger Safety (P25-21185)
Kathy Vu/National Highway Traffic Safety Administration (NHTSA)
Speed and Behavior (P25-21187)
Stacy Jeleniewski/National Highway Traffic Safety Administration (NHTSA)
Cannabis Reports to Congress (P25-21188)
Randolph Atkins/National Highway Traffic Safety Administration (NHTSA)
History and Future of the National Roadside Survey of Drinking and Drug Use (P25-21189)
Amy Berning/National Highway Traffic Safety Administration (NHTSA)
Consideration of Prehospital Blood Transfusion (P25-21190)
Jeremiah Kinsman/National Highway Traffic Safety Administration (NHTSA), Ian O'Dowd/National Highway Traffic Safety Administration (NHTSA)

3168

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 150B
Geographic Information Systems in Traffic Flow Analysis
Yangsong Gu, University of Tennessee, Knoxville, presiding
Natalia Zuniga-Garcia, Argonne National Laboratory, presiding
Sponsored By Standing Committee on Geographic Information Science

Spatial analysis and GIS tools play an integral and growing role in transportation study as traffic data are typically geospatially referenced. This session highlights the innovative spatial analysis and GIS tools that facilitate the transportation research and practice. The featured studies contribute to the enhancement of geospatial tools and models, spatial data extraction, roadway geometry identification, and the analysis of spatial accessibility in the context of natural disasters. These advancements demonstrate the growing importance of spatial methodologies in addressing transportation challenges.

Assessing Flood-Induced Accessibility Disruptions to Critical Facilities Using Remote Sensing and GIS: A Case Study of Yueyang City, China (TRBAM-25-00774)
Mingyang Chen/Changsha University of Science and Technology, Wei Hao/Changsha University of Science and Technology, Wei Peng/Changsha University of Science and Technology

(continued)

FlowHC: A Major Flow Trends Extraction Method Applied to Broad-Scale Mobility Data (TRBAM-25-02382)
Yunhe Cui/University of Connecticut, Xiang Chen/University of Connecticut, Chuanrong Zhang/University of Connecticut
Combining Geospatial Tools and Traffic Models to Evaluate Flood Effects on Rural Transportation. (TRBAM-25-04074)
Attilio Reginato/Florida Atlantic University, Boca Raton, Evangelos Kaisar/Florida Atlantic University, Boca Raton

3169 **CM** (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 151A
Case Studies in Urban and Multimodal Transportation Planning
Emily Lindsey, Denver Regional Council of Governments (DRCOG), presiding
Sponsored By Standing Committee on Transportation Planning Policy and Processes, Standing Committee on Public Transportation Planning and Development

This session will discuss urban and multimodal transportation planning case studies, including multimodality of transportation supply, a statewide program for active transportation, the implementation of urban polycentricity, and explain how, The methodology can be used to assess the multimodality level of transport supply by zones How California DOT's Active Transportation Program can provide a model for interested government agencies in implementing a similar program and provide implementation guidance on stakeholder engagement, innovation, coordination and promoting social equity and How polycentric development can be implemented in urban areas to promote transit ridership and active transportation and reduce vehicle miles traveled.

Ten Years Forward: An Evaluation of California's Active Transportation Program (TRBAM-25-05971)
Mario Carbajal/San Diego State University, Bruce Appleyard/San Diego State University, Madison R.E. Swayne/San Diego State University, Megan Honey/San Diego State University, Negar Ahangarfabrik/San Diego State University
Regional Policies, Practices, Tools, and Strategies to Implement Polycentric Development: Comparative Case Studies of Portland, Seattle, and Denver (TRBAM-25-06044)
Justyna Kaniewska/University of Utah, Reid Ewing/University of Utah
Defining and Measuring the Multimodality of Transport Supply (TRBAM-25-04707)
Jana Abou Taam/Polytechnique Montreal Departement des Genies Civil Geologique et des Mines, Catherine Morency/Polytechnique Montreal Departement des Genies Civil Geologique et des Mines

3170

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 150A
Generative Artificial Intelligence and the Future of Travel Surveys
Bilal Farooq, Toronto Metropolitan University, presiding
Zachary Patterson, Concordia University, presiding
Sponsored By Standing Committee on Travel Survey Methods

In recent years, the field of travel surveys has rapidly evolved by taking advantage of advancements in digital technologies such as smartphone apps, virtual reality, and multi-modal big data. Another new technology, Generative AI, has shown great progress in creating new multi-modal content. Several LLMs are now commercially available and can generate human-like content, based on input prompts. The session will explore the potential of Generative AI in the context of survey design, generation of new data, augmentation of existing stated and revealed preference data, and spatiotemporal transferability of existing surveys. Potential challenges, pitfalls, sustainable adoption strategies, and key future directions will be identified.

LLMs in Travel Behavior Model Development (P25-20072)
Chandra Bhat/University of Texas, Austin
Exploring the Role of LLM Agents in Activity-Based Microsimulation (P25-20073)
Yafeng Yin/University of Michigan
Generative AI Models for Activity-Based Travel Surveys (P25-20074)
Tim Hillel/University College London
Generative AI in Stated Preference Surveys (P25-20075)
Tareq Alsaleh/Toronto Metropolitan University

3171 **CM** (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 151B

Modernizing the National Environmental Policy Act: Innovation and Tools

Meridith Krebs, Kimley-Horn and Associates, Inc., presiding

Kris Gade, Pima County Department of Conservation Lands and Resources, presiding

Sponsored By Standing Committee on Environmental Analysis and Ecology

As projects become complex, NEPA documents have become difficult to navigate, requiring multiple review cycles before publication. The U.S. DOT has prioritized improving the process via the Modernizing NEPA Challenge to encourage using web-based, interactive platforms to make NEPA documents accessible and transparent to the public, agencies, and historically under-represented populations. The Modernizing NEPA Challenge also sought examples that incentivize collaborative, real-time reviews to save time and improve the quality of NEPA documents. The session also highlights the South Carolina DOT's I-526 Lowcountry West Environmental Impact Statement's progress on implementing and tracking innovative environmental justice mitigation measures.

DOT Modernizing NEPA Challenge Grant (P25-20244)

Michelle Ethun/Office of the Secretary of Transportation (OST), Samuel Waitt/OST-R/Volpe Center

I-526 Lowcountry Corridor West EIS: Environmental Justice Community Mitigation Implementation and Tracking (P25-21094)

Carolyn Nelson, P.E./Pipeline and Hazardous Materials Safety Administration (PHMSA), Amy Sackaroff/Stantec, Sean Connolly/South Carolina Department of Transportation

3172

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 152B

Leveraging the Use of Tools and Technology in Asset Management Decision Making

Trisha Stefanski, Minnesota Department of Transportation, presiding

Sponsored By Standing Committee on Transportation Asset Management

Data, information systems, and everything related to tools and technology are key components of every asset management program. This session will focus on examples of different agencies and their use of various tools for the management of their assets. The presentations highlight current practices, lessons learned, and the successful implementation of tools for the management of infrastructure assets. The topics include data collection, requirements gathering, data analysis, integration approaches, framework and process exploration, and tool development for decision-making purposes.

Pennsylvania DOT's Asset Management Journey (P25-20590)

Justin Bruner/Pennsylvania Department of Transportation

Michigan DOT TAM Data Assessment - An Implementation of the Digital Application of NCHRP 08-115 Guidebook) (P25-20591)

Lina Chapman/Michigan Department of Transportation, William Duke/Spy Pond Partners, LLC

District DOT's Tunnel Asset Management System Technology Assessment and the Use of GIS (P25-20592)

Sean Burke/GeoDecisions, a Division of Gannett Fleming

3173

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 152A

Implementation of Artificial Intelligence Papers

Giri Venkiteela, New Jersey Department of Transportation, presiding

Sponsored By Standing Committee on Research Innovation Implementation Management, Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session is intended to highlight what is needed to implement a ready-to-implement paper. The Artificial Intelligence and Advanced Computing Committee (AED50) has provided four papers reviewed by their committee. Respondents have been recruited to present their interest in the papers and what is needed to actually use the results provided in the papers in their organizations.

Know Unreported Roadway Incidents in Real-time: Early Traffic Anomaly Detection (TRBAM-25-05021)
Haocheng Duan/Carnegie Mellon University, Hao Wu/Carnegie Mellon University, Sean Qian/Carnegie Mellon University
State DOT Respondent (P25-20424)
Giri Venkiteela/New Jersey Department of Transportation
TitanBot: Customizing Large Language Models for Enhanced Infrastructure Performance Analytics and Visualization in Transportation Agencies (TRBAM-25-03120)
Neema Jakisa Owor/University of Missouri, Columbia, Connor Joyce/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia
State DOT Respondent (P25-20423)
Jesse Newberry/HNTB
Independent Mobility GPT (IDM-GPT): A Self-Supervised LLM Framework for Customized Traffic Mobility Analysis Using Machine Learning Models (TRBAM-25-05633)
Fengze Yang/University of Utah, Xiaoyue Liu/University of Utah, Lingjiu Lu/University of Utah, Bingzhang Wang/University of Utah, Chenxi Liu/University of Utah
State DOT Respondent (P25-20425)
Matt Versdahl/Washington State Department of Transportation
Accurate Detection of Pedestrian Crosswalks from Aerial Imagery Using Deep Learning and High-Performance Computing (TRBAM-25-02952)
Zubin Bhuyan/University of Massachusetts, Lowell, Yuanchang Xie/University of Massachusetts, Lowell, AngkeaReach Rith/University of Massachusetts, Lowell, Jimi Oke/University of Massachusetts, Lowell, Atanas Apostolov/University of Massachusetts, Lowell, Chengbo Ai/University of Massachusetts, Lowell
FHWA Respondent (P25-20422)
David Kuehn/Federal Highway Administration (FHWA)

3174

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 202B

Risk Allocation in Contracts

Christine Ryan, Nossaman LLP, presiding

Sponsored By Standing Committee on Contract Law

This panel will present trends in risk allocation for contracts for variety of project delivery models, as well as best practices for risk allocation for mega-projects delivered through alternative delivery models.

Risk Allocation in Contracts (P25-20527)
John Carlson/Sundt Construction, Inc.
Risk Allocation-Progressive Delivery and Risk Mitigation Practices (P25-20528)
Kenneth Beehler/WSP
Risk Allocation for Alternative Delivery Methods-The MnDOT Experience (P25-20532)
Ryan Gaulke/Minnesota Department of Transportation

3175

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 156

2024 Amendments to Federal Rules Governing Real Property Acquisition and Relocation for Federal and Federally Funded Projects

Christopher Kramer, Nossaman LLP, presiding

Sponsored By Standing Committee on Eminent Domain and Land Use

On May 3, 2024, FHWA issued its Final Rule amending 24 CFR part 42, the regulations governing the implementation of the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, 42 USC 4601, et seq. (as amended). The regulations govern relocation and real property acquisition for federal and federally funded projects. The panel will discuss the changes in the regulations with including a discussion regarding potential implications for project management, including procedures, schedules and budgets.

Panel (P25-20920)

Drew Gilmore/Ohio Department of Transportation, Arnold Feldman/Federal Highway Administration (FHWA)

3176

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 209C

Understanding and Advancing the Seismic Resilience of Highway Bridges

Ty Stokes, HDR, presiding

Sponsored By Standing Committee on Seismic Design and Performance of Bridges

Cyclic performance of self-centering bridge bent with stretch length anchors: experiments and numerical analysis (TRBAM-25-00483)

Suman Neupane/University of Utah, Chris Pantelides/University of Utah

Holistic Benefit Cost Analysis of Bridge Seismic Retrofitting Coupled with AI-Based Maintenance Policy (TRBAM-25-01384)

Alireza Ghavidel/University of Texas, San Antonio, Ao Du/University of Texas, San Antonio, Sabarethinam Kameshwar/University of Texas, San Antonio

Improving Seismic Resiliency With Super-Elastic Materials In Bridge Columns “From Research To Implementation” (TRBAM-25-01608)

Bijan Khaleghi/FIU ABC-UTC

Finite Element Analysis of Reinforced Concrete Columns Under Sequential Vehicle Impact and Seismic Loads: A Case Study (TRBAM-25-01635)

Jinghui Jiang/Texas A&M University, Andrew Sorensen/Texas A&M University

Quantifying the Seismic Resilience of a Highway Bridge Network using Artificial Neural Network (TRBAM-25-04683)

Vahid Aghaeidoost/University of Calgary, AHM Muntasir Billah/University of Calgary

3177

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 201

Tunnel Case Studies: Lining Crack Detection, Light Penetration, Fixed Fire Fighting and Emergency Ventilation Systems, and Traffic Flow Management

Brian Leshko, HDR, presiding

Sponsored By Standing Committee on Tunnels and Underground Structures

AKB60 Standing Committee on Tunnels and Underground Structures presents our 2025 Lectern Session on various Tunnel Case Studies: TRBAM-25-06052 - "An Effectiveness Analysis of Tunnel Traffic Flow Management Method Based on A Virtual Reality Environment Experiment Using A Driving Simulator" by Do-Gyeong Kim TRBAM-25-04674 - "Quantifying Light Penetration in Short Tunnels: Development and Validation of a Numerical Model" by Tien Yee TRBAM-25-01223 - "A Novel Block-Level Approach for Tunnel Lining Crack Detection" by Feng Guo, Ph.D. TRBAM-25-00428 - "Fixed Fire Fighting and Emergency Ventilation Systems for Highway Tunnels" by Matthew Bilson, Ph.D.

(continued)

Fixed Fire Fighting and Emergency Ventilation Systems for Highway Tunnels (TRBAM-25-00428)
Matthew Bilson/WSP, Hasan Raza/WSP, William Connell/WSP
A NOVEL BLOCK-LEVEL APPROACH FOR TUNNEL LINING CRACK DETECTION (TRBAM-25-01223)
Pei Niu/Shandong University, Lei Kou/Shandong University, Feng Guo/Shandong University
Quantifying Light Penetration in Short Tunnels: Development and Validation of a Numerical Model (TRBAM-25-04674)
Tien Yee/Kennesaw State University, Jidong Yang/Kennesaw State University, Joachim James/Kennesaw State University, Shihan Ma/Kennesaw State University, Joseph Marsh/Kennesaw State University
An Effectiveness Analysis of Tunnel Traffic Flow Management Method Based on A Virtual Reality Environment Experiment Using A Driving Simulator (TRBAM-25-06052)
Sooyeon Park/University of Seoul, Dongju Ka/University of Seoul, Do-Gyeong Kim/University of Seoul

3178

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 207A
Recent Developments and Trends in Quality Assurance, Part 2 (Part 1, Session 3123)
Dr. Jose Rivera-Perez, WSP, presiding
Sponsored By Standing Committee on Quality Assurance Management, Standing Committee on Production and Use of Asphalt

Asphalt Concrete Density Prediction by Roller-Mounted GPR and DPS (P25-20868)
Yihan Chen/University of Illinois, Urbana-Champaign, Lama Abufares/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Evaluation of Pavement Markings Friction for Acceptance in Quality Assurance (P25-20869)
Osama Aljarrah/University of Maryland, College Park, Dimitrios Goulias/University of Maryland, College Park
Use of Quality Assurance Data Analysis as a Leading Indicator of Pavement Performance: A Retrospective Analysis (P25-20870)
Chetana Rao/Rao Research and Consulting, LLC, Leslie Titus-Glover/Consultant, Ramon Bonaquist/Advanced Asphalt Technologies, LLC
Recommendations for the Integration of Quality Assurance and Construction Data for Infrastructure Performance Management and Investment Decisions: A Forward-Looking Approach (P25-20871)
Chetana Rao/Rao Research and Consulting, LLC
Evaluation of Pavement Markings Friction for Acceptance in Quality Assurance (TRBAM-25-03104)
Osama Aljarrah/University of Maryland, College Park, Dimitrios Goulias/University of Maryland, College Park

3179

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 101
Stormwater Management in Transportation: Best Practices and Emerging Technologies
Andrew McDaniel, North Carolina Department of Transportation, presiding
Sponsored By Standing Committee on Hydrology, Hydraulics, and Stormwater

State DOT Practices for Inspecting and Maintaining Post-Construction Stormwater BMPs (TRBAM-25-01163)
Jarrell Whitman/University of Tennessee, Knoxville, Michael A Perez/University of Tennessee, Knoxville
Stormwater Recharged: Innovating with Electrical Flocculation (P25-20505)
Megan Armstrong/Auburn University, Michael Perez/Auburn University, Barry Fagan/Fagan Consulting LLC
Characterization of highway runoff from segments of hot-mix asphalt and open-graded friction course pavements in Massachusetts (P25-20509)
Alana Spaetzel/U.S. Geological Survey, Kirk Smith/U.S. Geological Survey, Phillip Woodford/USGS
Chemical 6PPD-Q from Vehicle Tires (P25-21164)
Kelly Grant/California Department of Toxic Substances Control

3180

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 207B

Landslides and the Built Environment

Vanessa Bateman, U.S. Army Corps of Engineers (USACE), presiding

Sponsored By Standing Committee on Engineering Geology

Landslides, Road Networks and Disaster Loss (P25-20864)

Nathan Wood/U.S. Geological Survey, Aleeza Wilkins/U.S. Geological Survey

Integrated Hydrological Model and GIS-based Model to Map Landslides Risks within the Anacostia Watershed of Maryland (TRBAM-25-02875)

Atieh Hosseinizadeh/Morgan State University, Fauziyah Isola/Morgan State University, Zhuping Sheng/Morgan State University, Yi Liu/Morgan State University, Oludare Owolabi/Morgan State University, Sunil Lamsal/Morgan State University, Adebayo Olude/Morgan State University, Ben Walrath/Morgan State University, Nazah Nova Nur/Morgan State University

A Preliminary Evidence-Based Approach for Forecasting Cut Slope Deterioration (TRBAM-25-04728)

Keara Werley/Colorado School of Mines, Gabriel Walton/Colorado School of Mines, Mark Vessely/Colorado School of Mines

Integrating InSAR and LiDAR for Effective Monitoring of Geotechnical Assets (TRBAM-25-06241)

Rakesh Salunke/Jackson State University, Sadik Khan/Jackson State University, Rahul Biswas/Jackson State University, Ian La Cour/Jackson State University

3181

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 204AB

Effects of Moisture on Mechanical Properties of Soils and Aggregates

Affan Habib, Virginia Department of Transportation, presiding

Sponsored By Standing Committee on Mechanics and Drainage of Saturated and Unsaturated Geomaterials

A Coupled Fluid-Solid Simulation Method for Matric Suction and Resilience Modulus of Subgrade Under Moisture Variation (TRBAM-25-00681)

Zesong Zeng/Zhejiang University, Xue Luo/Zhejiang University

An Empirical Prediction Model of Wetting-induced Deformation for Compacted Granite Residual Soil (TRBAM-25-01002)

Xiang Li/China Construction Eighth Engineering Division, Xinran Chen/China Construction Eighth Engineering Division, Jianming Ling/China Construction Eighth Engineering Division, Jie Yuan/China Construction Eighth Engineering Division, Zengyi Wang/China Construction Eighth Engineering Division

Experimental investigation and predictive model of entire suction range for undisturbed granite residual soil (TRBAM-25-03805)

Lingjie Li/Tongji University, Jianming Ling/Tongji University, Yu Zhang/Tongji University

Geotechnical Characterization of a Highly Collapsible Soil (TRBAM-25-05359)

Muhammad Abdur Rahman/University of Hawaii, Phillip Ooi/University of Hawaii, Julia Hammer/University of Hawaii

3182

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 202A

Making Asphalt Cool

Fan Yin, National Center for Asphalt Technology (NCAT), presiding

Sponsored By Standing Committee on Asphalt Materials Selection and Mix Design, Standing Committee on Production and Use of Asphalt, Standing Committee on Binders for Flexible Pavement

Asphalt is one of the four construction materials that has been identified for federal funding aimed at lowering its embodied carbon. Consequently, a common strategy to lower embodied carbon is to reduce the production temperatures of asphalt mixtures. This can be achieved by producing low-temperature warm mix asphalt (WMA) or taking it one step further by removing all heat and producing cold central plant recycling (CCPR) mixtures. This session will feature presentations from both the state and contractor perspective, discussing various projects on reducing the production temperature for asphalt mixtures. We will explore the challenges and opportunities that lie ahead in making asphalt cool.

The Road to Lower Asphalt Production Temperatures: Insights from Industry and Agency Surveys (P25-20052)
Brett Williams/National Asphalt Pavement Association
WMA Integration into ODOT's BMD Framework: Effects on Pavement Performance and Environmental Impact (P25-20053)
David Vivanco/Oklahoma Department of Transportation
Contractor Perspective on Reducing Temperatures (P25-20054)
Eric Spicer/Wiregrass Construction Company
Current and Future Agency Research and Application of CCPR (P25-20149)
Brian Diefenderfer/Virginia Transportation Research Council

3183

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 209AB

Pavement Condition Evaluation, Part 2: Innovative Applications (Part 1, Session 3127)

Nathan Bech, ARRB Systems, presiding

Sponsored By Standing Committee on Pavement Condition Evaluation

This section presents a series of innovative approaches for using emerging pavement condition evaluation technologies for making more effective pavement asset management.

Efficient Mechanistic-Empirical Analysis of Traffic Speed Deflectometer Device (TSDD) Data for Network-Level Pavement Evaluation (TRBAM-25-02489)
Eyoab Zegeye/Minnesota Department of Transportation, Lev Khazanovich/Minnesota Department of Transportation, Eleanor Smith/Minnesota Department of Transportation, Michele Lanotte/Minnesota Department of Transportation, Shongtao Dai/Minnesota Department of Transportation
Isolating Surface Moisture in GPR Signals for Accurate Asphalt Concrete Density Prediction (TRBAM-25-00240)
Lama Abufares/University of Illinois, Urbana-Champaign, Yihan Chen/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Comparing Network Level Structural Measures Impact on Pavement Performance Models (TRBAM-25-01471)
Bryan Smith/Virginia Department of Transportation, Brian Smith/Virginia Department of Transportation
Pavement Performance Prediction Models Based on Deep Learning Physics-Informed Neural Network (PINN). (TRBAM-25-04940)
Ali Taheri/Florida A&M University-Florida State University, John Sobanjo/Florida A&M University-Florida State University, Michael Elwardany/Florida A&M University-Florida State University

3184

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 206

Innovative Use of Emerging Data and Criteria for Maintenance Management

Charles Pilson, Mott MacDonald, LLC, presiding

Sponsored By Standing Committee on Maintenance Management Systems

(continued)

Inequity Averse Pavement M&R Budget Allocation Incorporating Gini Index and Social Vulnerability (TRBAM-25-04065)
Md Al Amin/Texas Department of Transportation, Randy Machemehl/Texas Department of Transportation
Research on the Improved Prediction Model of Pavement Minor Maintenance Quantity under Small Sample Data (TRBAM-25-04946)
Xinfang Guan/Tongji University, Hongchao Zhang/Tongji University, Xiyu Zhang/Tongji University
Spatiotemporal Analysis of Pavement Roughness using Connected Vehicle Data for Asset Management (TRBAM-25-01326)
Jijo Mathew/Purdue University, Jairaj Desai/Purdue University, Rahul Suryakant Sakhare/Purdue University, Jeremy Hunter/Purdue University, Darcy Bullock/Purdue University
Evaluating the Robustness of MDSS Maintenance Forecasts Using Connected Vehicle Data (TRBAM-25-02443)
Gregory Brinster/Purdue University, Jairaj Desai/Purdue University, Myles Overall/Purdue University, Christopher Gartner/Purdue University, Rahul Suryakant Sakhare/Purdue University, Jijo Mathew/Purdue University, Nick Evans/Purdue University, Darcy Bullock/Purdue University

3185 **CM** (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 146B
Forging Pathways for More Equitable and Sustainable Mobility for All in Developing Countries
Lynn Scholl, Inter-American Development Bank, presiding
Charles Rivasplata, San Jose State University, presiding
Sponsored By Standing Committee on Transportation in the Developing Countries, International Coordinating Council

In the context of the growing climate crisis and widening disparities in accessibility to opportunities amongst vulnerable groups in developing countries, addressing barriers to access and promoting sustainable mode choice are of critical importance. This session explores key topics related to sustainable and equitable access to mobility for all in developing countries. We will discuss a range of topics including barriers and enablers to first-last mile access, determinants of mode choice, transit fare equity, and walkability, in developing countries.

Bridging the Gap: First-Mile and Last-Mile Travel Issues and Transport Equity in a Developing Country (TRBAM-25-00197)
Eugene Sogbe/Monash University, Malaysia, Susilawati Susilawati/Monash University, Malaysia, Chee Pin Tan/Monash University, Malaysia
The Effects of Fare on Transport Equity: New Evidence from Long-Distance Travel in Vietnam (TRBAM-25-01614)
Ngoc An/Kochi University of Technology, Ngoc Pham/Kochi University of Technology, Hung Khuat/Kochi University of Technology, Shiomi Yasuhiro/Kochi University of Technology, Nishiuchi Hiroaki/Kochi University of Technology, Haq Muhammad/Kochi University of Technology
Sustainable Pathway: Exploring Barriers of Indian Inland Water Transport (TRBAM-25-02253)
Sayanton Mohanta/National Institute of Technology, Calicuta, Yogeshwar Navandar/National Institute of Technology, Calicuta, Dr. Bivina G R/National Institute of Technology, Calicuta, Prof K Krishnamurthy/National Institute of Technology, Calicuta
What Factors Influence Intention to Use Bike-Sharing in a Developing Country with Restricted Rules for Cycling? (TRBAM-25-02606)
Nima Dadashzadeh/University of Huddersfield, Rich C. McIlroy/University of Huddersfield, Mohammad Khedmati/University of Huddersfield, Elena Alyavina/University of Huddersfield, Alexandros Nikitas/University of Huddersfield
Can Service Contracts Potentially Enhance the Creditworthiness of Transport Cooperatives? A Case Study from the Philippines (TRBAM-25-00720)
Varsolo Sunio/University of Asia and the Pacific, Justin Reginald Nery/University of Asia and the Pacific, Sandy Mae Gaspay/University of Asia and the Pacific, Thomas Stringer/University of Asia and the Pacific

3186 **CM** (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 146A

15-Minute Cities and Micromobility: Current Practices and Future Directions

Adam Schmidt, EBP, presiding

Sponsored By Standing Committee on Community Resources and Impacts

This session features papers that explore the impact of transportation investments meant to make cities more accessible by reimagining development approaches, investing in active transportation infrastructure, public transit, and micromobility. Research conducted at a global, national, and community level is presented to give attendees a wide-ranging view of how a changing transportation landscape is impacting communities and highlight which communities may need the most support in navigating those changes.

Where are 15-minute Neighborhoods? Assessing Local Cycling and Walking Accessibility in U.S. Cities (TRBAM-25-04914)

Shirley Shiqin Liu/University of Minnesota, Saumya Jain/University of Minnesota, Andrew Owen/University of Minnesota, Eric Lind/University of Minnesota

Shaping Urban Futures: News Media's Role in the 15-Minute City Discourse (TRBAM-25-02926)

Darrell Anderson/Texas State University, Subasish Das/Texas State University

Do New Residents Respond Differently to Transit and Bike Infrastructure Investments than Long-term Residents? Examining Mode Choices in Gentrified and Non-Gentrified Neighborhoods in Seattle, Washington (TRBAM-25-05494)

Charlotte Lemieux/University of British Columbia, Kelly Clifton/University of British Columbia, Melanie Butt/University of British Columbia, James JT Connolly/University of British Columbia

Integrating Interdependencies of Demand for Public Transportation, Shared Micro-Mobility and Land Use withing a System of Equations Modelling Framework (TRBAM-25-04349)

Filippos Alogdianakis/University of Cyprus, Christos Gkartzonikas/University of Cyprus, Loukas Dimitriou/University of Cyprus

Equity Implications of Shared Micro-mobility in the Suburbs: A Spatial Analysis of Shared E-Scooter Use Across Built- and Social Environments (TRBAM-25-03044)

Sara Cullen/Toronto Metropolitan University, Raktim Mitra/Toronto Metropolitan University

3187 **CM** (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 146C

Climate, Disasters, and Transportation Equity: Community Perspectives on Building Resilience

Sarah Grajdura, Utah State University, presiding

Matthew Palm, UNC Chapel Hill, presiding

Sponsored By Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity, Standing Committee on Equity in Transportation, Standing Committee on Community Resources and Impacts

Climate change requires communities become creative in their resilience solutions, especially for those most vulnerable. This lectern discusses community-focused natural disaster transportation resilience research spanning the US, Caribbean, and Canada. Participants will gain a better understanding of best practices that states and other jurisdictions have adopted in recent disasters.

Wildfire Evacuation Choice-Making among Underserved Groups in Alberta and British Columbia (TRBAM-25-00229)

Veronica Wambura/University of Alberta, Stephen Wong/University of Alberta

Community Resilience in the 2023 Vermont Floods (P25-20318)

Dana Rowangould/University of Vermont

Stalled Mobilities: Climate Disaster and Mobility Injustices in Puerto Rico and the US Virgin Islands (P25-20317)

Mimi Sheller/Worcester Polytechnic Institute

Protecting Health, Community, and Climate: Perspectives from Caltrans (P25-20744)

Nailah Pope-Harden/California Department of Transportation

3188 CM (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 140

Technological and Behavioral Levers to Successful Emission Reduction

Marianne Hatzopoulou, University of Toronto, presiding

Sponsored By Standing Committee on Air Quality and Greenhouse Gas Mitigation

This session presents emerging approaches or technologies for quantifying emission reductions as well as measuring and modelling air quality. In parallel to novel technologies, studies highlighting the impact of travel demand on decarbonizing transport are highlighted. Participants will learn about monitoring air pollution and related data collection using the latest technologies, and examine how travel behavior impacts emissions in local, regional and global scales.

Prediction of High-resolution PM 2.5 Concentration based on Deep Learning and Mobile Monitoring (TRBAM-25-00654)

Yizhou Wang/Shanghai Jiao Tong University, HONG-DI HE/Shanghai Jiao Tong University, Haichao Huang/Shanghai Jiao Tong University, Jin-Ming Yang/Shanghai Jiao Tong University, Zhong-Ren Peng/Shanghai Jiao Tong University

Urban Air Pollution Data Collection, Mapping, and Prediction Using Mobile Sensors Installed on Courier Trucks (TRBAM-25-03878)

Milad Saeedi/University of Toronto, Junshi Xu/University of Toronto, Usman Ahmed/University of Toronto, Matthew Roorda/University of Toronto, Marianne Hatzopoulou/University of Toronto

Safe Driving is Sustainable Driving: An Interpretable Telematics Methodology (TRBAM-25-02497)

Lisa Pinals/Cambridge Mobile Telematics, Fengdi Guo/Cambridge Mobile Telematics, Kyoungho Ahn/Cambridge Mobile Telematics, Samuel Madden/Cambridge Mobile Telematics, Hesham Rakha/Cambridge Mobile Telematics

Commuting Patterns and Emissions in Paris-Île-de-France: A Comparative Study of Interregional and Intraregional Travel (TRBAM-25-01089)

Kang LIANG/Ecole des Ponts ParisTech, Fabien Leurent/Ecole des Ponts ParisTech

Interactions Between Climate Policy and Technology-influenced Travel Behavior: Mitigating Induced Demand from CACC (TRBAM-25-04201)

Joshua Auld/Argonne National Laboratory, Natalia Zuniga-Garcia/Argonne National Laboratory, Paul Waddell/Argonne National Laboratory, Felipe de Souza/Argonne National Laboratory, Dan Loughlin/Argonne National Laboratory, Danielle Chou/Argonne National Laboratory

3189 CM (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 145B

Creating Better Bus Mobility Through Demand Responsive Transportation Strategies

Ronald Kilcoyne, TMD, presiding

Sponsored By Standing Committee on Bus Transit Systems, Standing Committee on Transit Management and Performance, Standing Committee on Public Transportation Planning and Development

On-demand transportation services are an effective way of providing mobility given recent advances in telecommunications technology, route development, and scheduling algorithms. This session will present some recent research regarding on-demand services and provide a better understanding of how they can complement fixed route services.

Data-Driven Computation of the Accessibility Provided by Demand-Responsive Transport (TRBAM-25-06330)

Pierfrancesco Leonardi/University of Catania, Vincenza Torrisi/University of Catania, Andrea Araldo/University of Catania, Matteo Ignaccolo/University of Catania

A Mixed Bus Service Operation Strategy with Both Conventional Bus And DRT: An Adaptation Analysis (TRBAM-25-06390)

Jianhong Ye/Tongji University, Chenguang Zhang/Tongji University, Lei Gao/Tongji University

An On-Demand Electric Transit Case Study of New Rochelle, New York (TRBAM-25-05361)

Bonnie Powell/National Renewable Energy Laboratory (NREL), Joshua Sperling/National Renewable Energy Laboratory (NREL), Johnny Esteban/National Renewable Energy Laboratory (NREL), Emily Serrano/National Renewable Energy Laboratory (NREL), Dustin Weigl/National Renewable Energy Laboratory (NREL), Stanley Young/National Renewable Energy Laboratory (NREL)

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Which Bus Routes Are More Suitable for Mobility-On-Demand Service? Taking Shanghai as an Example (TRBAM-25-03851)
Xiao-Fan Wei/Shanghai Jiao Tong University

3190

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 144AB
Factors Affecting Highway-Rail Grade Crossing and Trespassing Incident Occurrence and Severity
Samantha Chadwick, Federal Transit Administration (FTA), presiding
Sponsored By Standing Committee on Highway/Rail Grade Crossings

The presentations in this session look at factors affecting the occurrence and/or severity of highway-rail grade crossing incidents and trespassing incidents. Presentations range from assessment of behavioral and environmental characteristics resulting in trespassing occurrences, to a regression model assessing the long-term impacts of various highway-rail grade crossing countermeasures.

Preliminary Results From a Regional Passenger Railroad on Trespassing Issues (TRBAM-25-02630)
Chelsea Isom/University of California, San Diego, Eric Fitzsimmons/University of California, San Diego, Ryan Moran/University of California, San Diego, Natalie Moursand/University of California, San Diego, Linda Hill/University of California, San Diego
Investigating Non-Motorist (Pedestrian and Bicyclist) Exposure at Highway-Rail Grade Crossings Using AI-based Object Detection and Generalized Linear Count Models (TRBAM-25-01558)
Muhammad Farooq/University of Nebraska, Lincoln, Moomal Bukhari/University of Nebraska, Lincoln, Aemal Khattak/University of Nebraska, Lincoln, Muhammad Naveed Aman/University of Nebraska, Lincoln
Uncovering the Risks for Driver Injury Severities for Truck-Trailer Crashes at Highway-Railroad Crossings (TRBAM-25-05389)
Mouyid Islam/Michigan Department of Transportation, Asim Alogaili/Michigan Department of Transportation
Signal Preemption Simulation at Intersections near Highway-Rail Grade Crossings (TRBAM-25-03402)
Li Zhao/University of Nebraska, Lincoln, Muhammad Farooq/University of Nebraska, Lincoln, Aemal Khattak/University of Nebraska, Lincoln
Assessment of the Long-term Impacts of Highway-Railway Grade Crossing Countermeasures: A Bayesian Vector Autoregression Modeling Approach (TRBAM-25-01512)
Haniyeh Ghomi/McMaster University, Mohamed Hussein/McMaster University

3191

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 144C
Network Resiliency in Trade and Transportation
Daniel Hackett, Hackett Associates, LLC, presiding
Sponsored By Standing Committee on International Trade and Transportation, Standing Committee on Inland Water Transportation

This session focuses on the critical role of trade and transportation resiliency in the North American transportation network, emphasizing cross-border challenges and efforts to enhance modal shifts in resposnse to vulnerabilities.

U.S.-Canada Cross-Border Trade and Transportation Efforts (P25-20975)
Allison Glass/U.S. Department of Transportation Office of the Under Secretary for Policy, Andaleeb Qayyum/Transport Canada
U.S.-Mexico Cross-Border Trade and Transportation (P25-20976)
Andrew Canon/Texas Department of Transportation
Inland Waterway Perspective on Trade and Resiliency (P25-20977)
Tracy Zea/Waterways Council, Inc.

3192

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 145A

Urban Logistics and Their Influence on Freight Facility Location

Alireza Ermagun, George Mason University, presiding

Sponsored By Standing Committee on Urban Freight Transportation

This session highlights the impacts of logistics and its variations on the location, use, and size of freight facilities in urban contexts.

Transforming Urban Logistics: A Study of the Impact of Demand-Centric Policies on Freight Efficient Land-Uses in the Greater Toronto and Hamilton Area (TRBAM-25-01240)

Carlos Rivera-Gonzalez/University of New Mexico, Matthew Roorda/University of New Mexico

Empirical Assessment of Land Use and Other Policy Impacts on Warehousing Location Choices in San Bernardino City, CA. (TRBAM-25-05096)

Maria Valencia-Cardenas/University of California, Davis, Miguel Jaller/University of California, Davis

The Rise of Self-Driving: Impacts on the Number, Size, and Location of Warehouses (TRBAM-25-05865)

Lu Xu/University of California, Irvine, Dewei Xiao/University of California, Irvine, Jean-Daniel Saphores/University of California, Irvine

3193

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 149

Research in Intermodal Freight Transportation

Nathan Huynh, University of Nebraska, Lincoln, presiding

Sponsored By Standing Committee on Intermodal Freight Transport

Optimizing Train Load Planning in Intermodal Transportation: A Comparative Analysis of Integer Programming Formulations (TRBAM-25-00734)

Ralf Elbert/Technical University of Darmstadt, Yuerui Tang/Technical University of Darmstadt

Toward a Morphological Chart of the Connected and Autonomous Transport System for a Container Terminal (TRBAM-25-01718)

Nam Tran Thanh/Rotterdam University of Applied Sciences, Nilesh Anand/Rotterdam University of Applied Sciences, J.H.R van Duin/Rotterdam University of Applied Sciences, Thierry Verduijn/Rotterdam University of Applied Sciences

A robust optimization approach to the train assignment and handling capacity arrangement problem in multi-yard railway container terminals (TRBAM-25-02206)

Tian Xia/Beijing Jiaotong University, Wang Li/Beijing Jiaotong University, Baicheng Yan/Beijing Jiaotong University

Evaluating Inter-Regional Empty Container Repositioning Strategies (TRBAM-25-04427)

Aliza Sharmin/University of Tennessee, Yulin Sun/University of Tennessee, Mustafa Camur/University of Tennessee, Xueping Li/University of Tennessee

3194 CM (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 143AB

Funding the Aviation System

Laurie Cullen, Jaedicke Consulting LLC, presiding

Sponsored By Standing Committee on Aviation System Planning, Aviation Group, Standing Committee on Aviation Administration and Policy, Standing Committee on Aviation System Planning, Standing Committee on Environmental Issues in Aviation, Standing Committee on Aviation Economics and Forecasting, Standing Committee on Airport Terminals and Ground Access, Standing Committee on Airfield and Airspace Performance, Standing Committee on Aircraft/Airport Compatibility, Standing Committee on Aviation Safety, Security and Emergency Management, Standing Committee on New Users of Shared Airspace

As more people travel and passenger numbers continue to grow, airports are pushed to maximize the use of existing facilities as well as figure out how to cost effectively expand facilities in order to accommodate the growth. With the PFC level remaining stagnant and construction costs escalating, airports are forced to think outside the box when it comes to funding and financing their capital programs and come up with unique and innovative ways to pay for projects. States also face challenges in funding state grant programs to support both non-NPIAS and NPIAS airport projects. Please join us for this session to learn more about innovative funding opportunities such as state and federal loan programs, state economic development initiatives and grant programs, new airport revenue opportunities, new funding sources in the FAA reauthorization and innovative ways states can reevaluate their revenue streams to help pay for airport capital programs.

Thinking Outside the Federal Aviation Administration Box (P25-20810)
Chris Groh/University of New Orleans
Reauthorization Funding (P25-20812)
Kim Harris/Federal Aviation Administration (FAA)
Funding the State System (P25-20814)
Marty Blake/Indiana Department of Transportation
Fuel Tax (P25-20815)
Seth Young/The Aviation Planning Group

3195 CM (1.75)

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 143C

Artificial Intelligence and Data Science in Aviation Safety

Gaël Le Bris, WSP, presiding

Cheng Wang, Minnesota State University, Mankato, presiding

Sponsored By Standing Committee on Aviation Safety, Security and Emergency Management, Standing Committee on Aviation Administration and Policy, Standing Committee on Aviation Economics and Forecasting, Subcommittee on Aviation Safety

Artificial intelligence (AI) and intelligent systems present vast opportunities for enhancing aviation operations. Functions that could be provided include, but are not limited to, performing predictive analytics, real-time monitoring, improved decision-making, and AI-driven risk management. Intelligent systems could support or even replace human operators in performing certain tasks on the ramp, in the operations control center, and perhaps at some point in the cockpit and the air traffic control room. Attendees with learn how the introduction of these innovations in the aviation realm pose novel challenges in safety and security.

Real-Time Mental Workload Assessment of Helicopter Pilots in Actual Flight Using PPG and Machine Learning (TRBAM-25-00550)
Yunbiao Wang/Southwest Jiaotong University, Chenyang Zhang/Southwest Jiaotong University, Wenbing Zhu/Southwest Jiaotong University, Shihan Luo/Southwest Jiaotong University, Chuang Liu/Southwest Jiaotong University, Chaozhe Jiang/Southwest Jiaotong University
Aviation Accident Report Causality Extraction Based on Transformer with BERT-Embeddings (TRBAM-25-01784)
Zhen Chen/Tongji University, Yingying Xing/Tongji University, Hong Lang/Tongji University, Ling Wang/Tongji University, Qingqing Zhou/Tongji University, Shiwen Zhang/Tongji University

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Automatic Topics Extraction from Aviation Safety Reports Using Structural Topic Model and Network Topology (TRBAM-25-01726)
Lingzhi Cheng/Tongji University, Mengtian Zhao/Tongji University, Yingying Xing/Tongji University, Han Yi/Tongji University, Yang Song/Tongji University, Bo Jia/Tongji University
Opportunities and Use Cases for Natural Language Processing in Aviation Report Analysis (P25-21497)
Kenneth Allendoerfer/Federal Aviation Administration (FAA), Katrina Avers/Federal Aviation Administration (FAA)

3196

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, 147B
Innovative Data Applications for the Inland Waterway Transportation System
Erika Witzke, CPCS Transcom, presiding
Sponsored By Standing Committee on Inland Water Transportation

This session will highlight recent research related to inland waterway transportation.

Predicting Barge Presence and Quantity on Inland Waterways using Vessel Tracking Data and Machine Learning (TRBAM-25-01311)
Geoffery Agorku/University of Arkansas, Fayetteville, Sarah Hernandez/University of Arkansas, Fayetteville, Maria Falquez/University of Arkansas, Fayetteville, Subhadipto Poddar/University of Arkansas, Fayetteville, Shihao Pang/University of Arkansas, Fayetteville
Identifying Inland Waterway Traffic Flow Patterns Using Modified Clustering (TRBAM-25-00896)
Shihao Pang/University of Arkansas, Fayetteville, Sarah Hernandez/University of Arkansas, Fayetteville, Subhadipto Poddar/University of Arkansas, Fayetteville, Geoffery Agorku/University of Arkansas, Fayetteville
Study of Ships' Travel Delay in Staying Turning Basins in Deep-draft Inland Waterways: Application to Sabine-Neches Waterway (TRBAM-25-05862)
Golnoosh Toosi/Lamar University, Minhajul Abedin Tajik/Lamar University, Xing Wu/Lamar University, Victor Zaloom/Lamar University
Waterway Lock Scheduling Rules Balancing Fairness and Efficiency (TRBAM-25-00777)
Wenzhang Yang/Southeast University, Zhuang Kong/Southeast University, Jia Zhou/Southeast University, Yiqin Xie/Southeast University, Peng Liao/Southeast University, Hao Wang/Southeast University
Optimizing Waterway Maintenance Using Stochastic Models for Effective Dredging (TRBAM-25-02679)
Ahmadreza Mahmoudzadeh/Texas A&M University, Parham Atoofi/Texas A&M University, Kenneth Mitchell/Texas A&M University, Xiubin Wang/Texas A&M University

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Parking and Transportation Demand Management
Mohammad Miralinaghi, Illinois Institute of Technology, presiding
Sponsored By Standing Committee on Transportation Demand Management

Join the TRB Transportation Demand Management Committee (AEP60) to learn more about various strategies to help reduce vehicle congestion by leveraging creative uses of parking.

Improving Curb Space Management for Better Transportation Operations – A Literature Review (TRBAM-25-01003) - B402
Suryakant Buchunde/University of Western Ontario, Merkebe Getachew Demissie/University of Western Ontario
Parking Demand Allocation Methodology for Hub Parking Lot Complex Considering Through Traffic Demand (TRBAM-25-01070) - B403
Chu Zhang/Southeast University, Qianyi Hu/Southeast University, Jiayi Chen/Southeast University, Xiaofei Ye/Southeast University, Jun Chen/Southeast University
Game Analysis of Dockless Bike-sharing Parking Guidance under the Incentive and Punishment Mechanism Considering Social Norms and Government Subsidies (TRBAM-25-01212) - B404
Shujing Zhang/Beijing Jiaotong University, Shunping Jia/Beijing Jiaotong University

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Impact of Parking Payment System on Mode Switch Behaviour of Downtown Driverless Car Commuters (TRBAM-25-03326) - B410
Fuad Huda/Amec Foster Wheeler, Graham Currie/Amec Foster Wheeler, Allan Pimenta/Amec Foster Wheeler, Md Kamruzzaman/Amec Foster Wheeler
The Impacts of Curb Space Allocations on Cruising-for-parking Emissions in a Simulated Environment (TRBAM-25-05866) - B411
Thomas Maxner/University of Washington, Andisheh Ranjbari/University of Washington
Detecting Parking Lot Boundaries from Satellite Imagery Using Deep Learning (TRBAM-25-05139) - B412
Shirin Qiam/University of Illinois, Urbana-Champaign, Saipraneeth Devunuri/University of Illinois, Urbana-Champaign, Lewis Lehe/University of Illinois, Urbana-Champaign
Driver Compliance with In-Vehicle Smart Parking Advice: A Sequential Stated Choice Experiment (TRBAM-25-00473) - B413
Dennis Andreoli/Eindhoven University of Technology, Aloys Borgers/Eindhoven University of Technology, Peter van der Waerden/Eindhoven University of Technology, Sina Bahrami/Eindhoven University of Technology
Seventy Years of University Parking Problems: A Synthesis of the Literature (TRBAM-25-00575) - B414
Timothy Garceau/Central Connecticut State University
Estimating the Potential for Dynamic Parking Reservation Systems to Increase Delivery Vehicle Accommodation (TRBAM-25-01203) - B420
Aaron Burns/Carnegie Mellon University, Jeremy Michalek/Carnegie Mellon University, Kate Whitefoot/Carnegie Mellon University, Connor Forsythe/Carnegie Mellon University
Online Configuration of Reservable Parking Spaces Using Multi-Agent Deep Reinforcement Learning (TRBAM-25-01691) - B421
Minghui Xie/Chang'an University, Siyu Lin/Chang'an University, Sen Wei/Chang'an University, Xinying Zhang/Chang'an University, Yao Wang/Chang'an University, Yuanqing Wang/Chang'an University
Leveraging Multisource Data for Off-Street Parking Occupancy Prediction Using Machine Learning (TRBAM-25-01962) - B422
Katerina Vakrinou/National Technical University of Athens (NTUA), Eleni Mantouka/National Technical University of Athens (NTUA), Eleni Vlahogianni/National Technical University of Athens (NTUA)
A Microsimulation Study of Curb Space Operational Strategies and User Behaviors (TRBAM-25-02726) - B423
Yuyang Zhao/University of Michigan, Chenhan Li/University of Michigan, Jisoon Lim/University of Michigan, Neda Masoud/University of Michigan
A Model of Parking Choice Behavior Considering User Preference Based on Improved Cumulative Prospect Theory (TRBAM-25-02742) - B424
Jiawen Yu/Southeast University, Hanshang Du/Southeast University, Yiming Zhang/Southeast University, Xiucheng Guo/Southeast University, Yan Wang/Southeast University
Analyzing Parking Search and Location Choice Behavior Using Trip Trajectory Data and a Bayesian Statistics Approach (TRBAM-25-04337) - B430
Prakash Ranjan/University of Connecticut, Fatemeh Fakhrmoosavi/University of Connecticut, Krishna Murthy Gurumurthy/University of Connecticut, Abdelrahman Ismael/University of Connecticut, Nazmul Arefin Khan/University of Connecticut
Parking Policies for Mix of Human-driven and Automated Vehicles. (TRBAM-25-05446) - B431
Shaghayegh Nouhi/University of Minnesota, Mobina Nankali/University of Minnesota
Investigating Factors Influencing Drivers' Intention to Use Intelligent Parking Information System Using a Logit-cumulative Prospect Theoretic Model (TRBAM-25-05457) - B432
Jahyeong Koo/Seoul National University, Jongho Oh/Seoul National University, Yeonwoo Jeong/Seoul National University, Chungwon Lee/Seoul National University
Shared Parking Space Allocation Model Considering User Satisfaction (TRBAM-25-05724) - B400
Kewei Yu/Chang'an University, Daniel Jian Sun/Chang'an University, Yunlong Li/Chang'an University
Development of a Bi-Level Parking Demand Assignment Model (TRBAM-25-05948) - B433
Mohammad Hosein Zamanian/University of Illinois, Chicago, Farideddin Peiravian/University of Illinois, Chicago
Understanding Parking Regularity in Residential Areas for Shared Parking: An Entropy-Based Analysis (TRBAM-25-06404) - B434
GIJUN LEE/Seoul National University, Jongho Oh/Seoul National University, Yeonwoo Jeong/Seoul National University, Chungwon Lee/Seoul National University
Parking Reservation Method in Urban Central Business District Based on Dynamic Pricing (TRBAM-25-05537) - B401
Yunlong Li/Chang'an University, Daniel Jian Sun/Chang'an University, Kewei Yu/Chang'an University

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Newer Forms of Congestion Pricing

Lisa Kay Schweyer, Foursquare Integrated Transportation Planning, presiding

Sponsored By Standing Committee on Transportation Demand Management

Join the TRB Transportation Demand Management Committee (AEP60) to learn about various strategies to help reduce vehicle congestion and single-occupancy vehicle usage.

FAIR ROAD PRICING WITH KARMA ECONOMIES (TRBAM-25-00073) - B440

Kevin Riehl/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Anastasios Kouvelas/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Michail Makridis/ETH Zurich: Eidgenossische Technische Hochschule Zurich

Applying Income-Sensitive Road Pricing Schemes Based On A Transport Model: A Simulation Study For Mexico City (TRBAM-25-06302) - B441

Simon Meinhardt/Technische Universitat Berlin, Kai Nagel/Technische Universitat Berlin

Cordon Pricing in San Francisco: An Agent-Based Simulation Approach for Informed Policy Making (TRBAM-25-06374) - B442

Carlos Guirado/Lawrence Berkeley National Laboratory, Cristian Poliziani/Lawrence Berkeley National Laboratory, K. Sydny Fujita/Lawrence Berkeley National Laboratory, Annika Todd-Blick/Lawrence Berkeley National Laboratory, Nazanin Rezaei/Lawrence Berkeley National Laboratory, Zachary Needell/Lawrence Berkeley National Laboratory, Thomas Wenzel/Lawrence Berkeley National Laboratory, Haitam Laarabi/Lawrence Berkeley National Laboratory, C. Anna Spurlock/Lawrence Berkeley National Laboratory

Dynamic Pricing in Ride-Sourcing: Accounting for Heterogeneous Demand and Queue-Jumping Behavior (TRBAM-25-06300) - B443

Zheng Huang/Sun Yat-Sen University, Yunping Huang/Sun Yat-Sen University, Can Chen/Sun Yat-Sen University, Enming Liang/Sun Yat-Sen University, Tianlu Pan/Sun Yat-Sen University, Renxin Zhong/Sun Yat-Sen University

Comparing Congestion Pricing Strategies with Evidence from a Large-Scale Simulation Framework (TRBAM-25-04844) - B452

Kentaro Mori/University of Texas, Austin, Felipe de Souza/University of Texas, Austin, Krishna Murthy Gurumurthy/University of Texas, Austin, Joshua Auld/University of Texas, Austin, Kara Kockelman/University of Texas, Austin

Joint Optimization of Dynamic Pricing and Matching Strategies for Ridesourcing Platform Considering Order Cancellations (TRBAM-25-02772) - B444

Xiaohan Zhou/Dalian University of Technology, Shaopeng Zhong/Dalian University of Technology, Jiang Yu/Dalian University of Technology, Xiyao Li/Dalian University of Technology, Zhenhua Li/Dalian University of Technology

Investigating Mode and Departure Time Choice Behavior Under Congestion Pricing: A Stated Preference Approach (TRBAM-25-04994) - B450

Mohammad Amin Ashena/University of Calgary, Schulich, Adam Weiss/University of Calgary, Schulich, Lina Kattan/University of Calgary, Schulich

Towards an Integrated Transportation Pricing Approach Using Vehicle-Based Technologies (TRBAM-25-04071) - B451

Sonika Sethi/HDR

3199

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Transportation Demand Management and Mobility Innovations

Sabyasachee Mishra, University of Memphis, presiding

Sponsored By Standing Committee on Transportation Demand Management

Join the TRB Transportation Demand Management Committee (AEP60) to learn more about various strategies for demand management and mobility innovations.

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MobilityCoins - Enhancing Tradable Mobility Credits Through a Crowdfunded Approach to Improve Transportation Supply (TRBAM-25-06355) - B454
Philipp Servatius/Technical University of Munich, Klaus Bogenberger/Technical University of Munich, Mehdi Keyvan-Ekbatani/Technical University of Munich, Bo Wang/Technical University of Munich
Express Lane Route Choice under Real-time Information: A Joint Revealed and Stated-Preference Study (TRBAM-25-05936) - B472
RIFA TASNIA/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University, Daud Nabi Hridoy/North Carolina A&T State University, Md Sami Hasnine/North Carolina A&T State University, Hyoshin Park/North Carolina A&T State University
Sequential Day-to-day Credit Spending Model Under Incentives on Express Lanes (TRBAM-25-05573) - B474
Ridwan Tiamiyu/North Carolina A&T State University, Venktesh Pandey/North Carolina A&T State University
MaaS Portfolios for Travelers with Mobility Supplier and Consumer Roles in Shared and Multimodal Transportation Systems (TRBAM-25-05470) - B464
Sunghi An/Southern California Association of Governments, R. Jayakrishnan/Southern California Association of Governments, Michael Hyland/Southern California Association of Governments
A Study of Financial Impacts of Pooled Rideshare Based on Assignment Strategies (TRBAM-25-04666) - B453
Joseph Paul/Clemson University, Haotian Su/Clemson University, Krishna Murthy Gurumurthy/Clemson University, Taner Cokyasar/Clemson University, Joshua Auld/Clemson University, Yunyi Jia/Clemson University
A Bi-Level Mathematical Model for Optimizing Stakeholder Interactions in Mobility as a Service (MaaS) Frameworks (TRBAM-25-04379) - B463
Rihab AMGHAR/VEDECOM, Mostafa Ameli/VEDECOM, Nadir Farhi/VEDECOM, S. M. Hassan Mahdavi Moghaddam/VEDECOM, Jaâfar Berrada/VEDECOM
Incentive Strategies for Ridesplitting Based on Evolutionary Game Model (TRBAM-25-04159) - B482
Xiaoyun Cheng/Chang'an University, Ruiheng Li/Chang'an University, Weijie Wu/Chang'an University, Yajuan Deng/Chang'an University
NUDGING Travellers Towards Greener Modes: A Virtual Reality Experiment (TRBAM-25-04155) - B483
Yu Wang/University of Leeds, Thomas Hancock/University of Leeds, Oliver Hauser/University of Leeds, albert solernou/University of Leeds, Jorge Garcia/University of Leeds, Charisma Choudhury/University of Leeds
Forecasting Revenues of Motor Fuel Taxes in California: an Application of Time-Series Regression Model to Estimate Changes in Vehicle Miles-travelled (VMT) among Light-duty Vehicles (LDVs) (TRBAM-25-03920) - B484
Jean Ji/University of California, Davis, Alan Jenn/University of California, Davis
Integrated operator and user-based rebalancing and recharging in dockless shared e-micromobility system (TRBAM-25-03640) - B492
Elnaz Emami/University of Sydney, Mohsen Ramezani/University of Sydney
Identifying Critical Commuters: A Machine Learning Approach to Flexible Work Hours and Urban Congestion (TRBAM-25-03236) - B462
Sulthana Shams/University Gustave Eiffel, Emmanuel Munch/University Gustave Eiffel, Fayçal Touzout/University Gustave Eiffel, Latifa Oukhellou/University Gustave Eiffel, Mostafa Ameli/University Gustave Eiffel
Analyzing the Potential Commuting Demand and Impact of Private Autonomous Vehicles: A Case Study from Beijing, China (TRBAM-25-02112) - B493
Fei Xue/Beijing Jiaotong University, Enjian Yao/Beijing Jiaotong University
Effectiveness of Carbon Credit Incentives on Daily Activity-Travel Behavior: Quantification, Optimization and Evaluation (TRBAM-25-01303) - B494
Tianxu WANG/Shenzhen Technology University, Lei Gong/Shenzhen Technology University, Tian Lei/Shenzhen Technology University, Yinlian Zeng/Shenzhen Technology University
Towards Vehicle Miles Traveled Reduction: Impact of Mileage-based user fee on travel mode choices (TRBAM-25-01299) - B473
Daud Nabi Hridoy/Virginia Polytechnic Institute and State University, RIFA TASNIA/Virginia Polytechnic Institute and State University, Venktesh Pandey/Virginia Polytechnic Institute and State University, Md Sami Hasnine/Virginia Polytechnic Institute and State University
Using Machine Learning to Predict Rural-Urban Carpooling Participation with Monetary Incentives (TRBAM-25-00994) - B500
Helia Mohammadi-Mavi/Pennsylvania State University, Andisheh Ranjbari/Pennsylvania State University, Helia Mohammadi-Mavi/Pennsylvania State University

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INWALK: A financial reward smartphone application for promoting walking in urban areas (TRBAM-25-00877) - B501
Christos Karolemeas/National Technical University of Athens (NTUA), Panagiotis Tzouras/National Technical University of Athens (NTUA), Lambros Mitropoulos/National Technical University of Athens (NTUA), Georgios Laskaris/National Technical University of Athens (NTUA), Konstantinos Kepaptsoglou/National Technical University of Athens (NTUA)
Long-Term Inventory Management in Hybrid Bike-Sharing Systems based on Reinforcement Learning with Generative Prediction Models (TRBAM-25-00189) - B502
Ziyi Shi/Zhejiang University, Zheyuan Jiang/Zhejiang University, Meng Xu/Zhejiang University, Yaoming Zhou/Zhejiang University, Zheng Zhu/Zhejiang University
Evaluating and Optimization of the Credit Charge-cum-Reward Scheme:Experiments based on a Collaborative Experimental Platform (TRBAM-25-02076) - B503
Chenke Hu/University of Arizona, Jun Zhao/University of Arizona, Xiaoran Qin/University of Arizona, Linghao Wang/University of Arizona, Zheng Zhu/University of Arizona, Hai Yang/University of Arizona
Investigating the Post-COVID-19 Travel Demand Management Strategy (TRBAM-25-02847) - B504
Chloe Chin Kar Ying/Monash University, Susilawati Susilawati/Monash University
Deep Reinforcement Learning for Day-to-day Dynamic Tolling in Tradable Credit Systems (TRBAM-25-04846) - B505
XIAOYI WU/Technical University of Denmark, Ravi Seshadri/Technical University of Denmark, Filipe Rodrigues/Technical University of Denmark, Carlos Lima Azevedo/Technical University of Denmark

3200

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Best Practices, New Technologies, and Lessons Learned in Public Involvement and Communications for Transportation
Jamille Robbins, North Carolina Department of Transportation, presiding
Sponsored By Standing Committee on Public Engagement and Communications

The Public Engagement & Communications Poster Session will highlight best practices, new technologies, and lessons learned. It aims to build awareness, enhance skills, and advance the state of the art in public involvement and communications for transportation.

Council Bluffs Interstate System Improvement Program (P25-20287) - B509
Wendy Thompson/HDR, Andrea Henry/Iowa Department of Transportation
City of Amarillo Safe Streets for All Plan (P25-20290) - B517
Shari Kendall/City of Amarillo
Hernando County Transit Development Plan: Public Involvement Plan (P25-20294) - B516
Jason Jackman/University of South Florida
Moving Forward 2055 (P25-20404) - B510
Leslie Black/FHI Studio
The Michigan Department of Transportation's I-75 Modernization Project from M-102 to M-59 (P25-20410) - B515
Mark Dubay/Michigan Department of Transportation
Participant Compensation in Infrastructure Public Engagement: Insights from Initial Research (P25-20411) - B512
Kathryn Caskey/HDR
Hi-Lake Redesign (P25-20596) - B514
Stephanie Devitt/SDK Strategic Services, Jason Staebell/Hennepin County
Bloomington Safe Streets for All - "Safety Week" Engagement and Communications Blitz (P25-20597) - B508
Karina Pazos/City of Bloomington, Indiana, Sara Schooley/Toole Design Group, LLC
SAFERoad Solutions Marketing Toolkit (P25-20598) - B511
Jason Siwula/Kentucky Transportation Cabinet, Allen Blair/Kentucky Transportation Cabinet
Keep Georgia Safe: Empowering Students with Lifesaving Road Safety Skills. (P25-20599) - B518
Katina Lear/Georgia Department of Transportation, Corie Stagner/Livingston Marketing
Community Driven CAV: Applying an Equity Lens to Design the Human Centered Future of Transportation. (P25-20417) - B513
Kathryn Caskey/HDR, Brian Miller/HDR
CATS Red Line – Commuter vs. Light Rail Video (P25-20418) - B507
Lauren Roeder/HDR, Krystal Harwick/HDR
(continued)

Ditch the Drive During Boston's Sumner Tunnel Closure (P25-20419) - B506
Erin Reed/Howard Stein Hudson

3201

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Asphalt Pavement Construction and Rehabilitation Posters
Adam Hand, University of Nevada, Reno, presiding
Sponsored By Standing Committee on Asphalt Pavement Construction and Rehabilitation

Quality Assurance Specifications for Longitudinal Joint – Joint-Dielectric-based Index vs. PWL (TRBAM-25-00184) - B544
Hamad Muslim/Michigan State University, Syed Haider/Michigan State University, Fawaz Kaseer/Michigan State University, Lev Khazanovich/Michigan State University, Ethan Akerly/Michigan State University
Performance-Related Specifications Framework Using Dielectric Profiling System to Improve Asphalt Pavement Longitudinal Joint Performance (TRBAM-25-00286) - B545
Hamad Muslim/Michigan State University, Syed Haider/Michigan State University, Poornachandra Vaddy/Michigan State University, Muhammed Kutay/Michigan State University, Fawaz Kaseer/Michigan State University, Ethan Akerly/Michigan State University
Asphalt concrete density measurement based on coplanar capacitance principle: theoretical establishment and experimental validation (TRBAM-25-00425) - B546
Kang Yao/Southeast University, Xueqin Chen/Southeast University, Qiao Dong/Southeast University, Bin Shi/Southeast University, Xing Hu/Southeast University, Shiao Yan/Southeast University, Jun Zhang/Southeast University
Temperature Measurement for Concrete Pavement with Thin Hot Asphalt Overlay (TRBAM-25-02209) - B547
Denis Chamberlain/Aston University, Mujib Rahman/Aston University, Tala Kasim/Aston University, Moinul Hossain/Aston University, Indumini Indira Withana/Aston University
Investigations of Thermal Behaviors of Asphalt Pavement with Short-Term Preheating for Overlay Construction (TRBAM-25-02437) - B548
Xinyi Song/Tongji University, Lijun Sun/Tongji University, Huailei Cheng/Tongji University, Hongchao Zhang/Tongji University, Yue Hu/Tongji University
Design, Optimization and Performance Evaluation of an Six-Synchronous Fiber Stone Seal (TRBAM-25-02862) - B549
Lingqing Yuan/Tongji University, Zhanchuang Han/Tongji University, Liping Liu/Tongji University, Mingchen Li/Tongji University, Shiyu Mao/Tongji University
Implementation of Micro-cracking on Soil-Cement Base Pavements in Louisiana (TRBAM-25-02965) - B530
Ferdous Intaj/LTRC/LSU, Yilong Liu/LTRC/LSU, Danny Xiao/LTRC/LSU, Zhong Wu/LTRC/LSU
US Experience with Inverted Pavement: A Case Study in New Mexico (TRBAM-25-03033) - B531
Ester Tseng/TEST, Inc., Imad Al-Qadi/TEST, Inc., Erol Tutumluer/TEST, Inc., Issam Qamhia/TEST, Inc., Hasan Ozer/TEST, Inc.
Design and Construction of Electrically Conductive Asphalt Pavements (TRBAM-25-04383) - B532
Ashith Marath/Rowan University, Ahmed Saidi/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Danielle Kennedy/Rowan University
A Full-Scale Study of Open Graded Aggregate Compaction Behavior under Vibratory Plate Compaction (TRBAM-25-05841) - B533
Adeyemi Adetokunbo/Oklahoma State University, Adeoluwa Gbolade/Oklahoma State University, Debakanta Mishra/Oklahoma State University

3203

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Enhancing Asset Management and Safety Through Data-Driven Insights
Richard Greene, North Carolina Department of Transportation, presiding
Sponsored By Standing Committee on Geospatial Data Acquisition Technologies

Guardrail condition assessment for supporting safety analysis through mobile LiDAR (TRBAM-25-05019) - B540
Qing Hou/University of Massachusetts, Amherst, Chengbo Ai/University of Massachusetts, Amherst, Michael Knodler/University of Massachusetts, Amherst

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AI and Satellite Assisted Real Time Flood Mapping for Transportation Infrastructure Asset Management (TRBAM-25-05294) - B541
Nasim Mohamadiazar/Florida International University, Ali Ebrahimian/Florida International University
A transportation asset management framework based on Geospatial Building Information Model (GeoBIM). (TRBAM-25-05324) - B542
Ali Taheri/Florida A&M University-Florida State University, John Sobanjo/Florida A&M University-Florida State University
Safety Buffer and its Association with Vehicle Type and Speed: an Empirical Evaluation Using Unmanned Aerial Vehicle Data (TRBAM-25-06199) - B543
Praveen M. Puthiyapurayil/University of Illinois, Chicago, Suvin Padinjare Venthuruthiyil/University of Illinois, Chicago

3204

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Trajectory Planning for Automated Lawn Mowers
Ken Murray, California Department of Transportation, presiding
Sponsored By Standing Committee on Roadside Maintenance Operations

3D Coverage Trajectory Planning Problem with Safety Constraint for Automated Lawn Mower: Exact and Heuristic Approaches (TRBAM-25-05259) - B558
Hang Zhou/University of Wisconsin,Madison, Peng Zhang/University of Wisconsin,Madison, Zhaohui Liang/University of Wisconsin,Madison, Hangyu Li/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison

3205

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Advances in the Detection of Cracks, Potholes, and Other Pavement Conditions to Support the Selection of Pavement Preservation Treatments
DingXin Cheng, California State University, Chico, presiding
Sponsored By Standing Committee on Pavement Preservation

Deep Learning Framework for Infrastructure Maintenance: Crack Detection and High-Resolution Imaging of Infrastructure Surfaces (TRBAM-25-00742) - B551
Nikhil M Pawar/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin, FENG HONG/University of Texas, Austin, Surya Congress/University of Texas, Austin
A Generative Approach to Generalize Deep Learning Models for Pavement Distress Segmentation (TRBAM-25-00911) - B556
Abhishek Kumar Prajapati/Pennsylvania State University, S. Ilgin Guler/Pennsylvania State University
Solving Class Imbalance in Pavement Crack Data Using Conditional Wasserstein GANs with Gradient Penalty (TRBAM-25-02349) - B552
Afshin Shahrestani/No Organization, Ali Faisal/No Organization, Suliman Gargoum/No Organization
Intelligent Pixel-Level Segmentation of Pavement Sealed Cracks Using CycleGAN-Based Domain Adaptation (TRBAM-25-02916) - B553
Yiming Li/Tongji University, Jiang Chen/Tongji University, Hong Lang/Tongji University, Jinsong Qian/Tongji University
An Automated 3D Crack Severity Assessment Using Surface Data for Improving Flexible Pavement Maintenance Strategies (TRBAM-25-03316) - B550
Zhe Li/Chang'an University, Jiupeng Zhang/Chang'an University, Mehran Eskandari Torbaghan/Chang'an University
Using Roughness and Rutting Data to Quantify the Effectiveness of Pavement Preservation Treatments (TRBAM-25-04135) - B557
Tyler Somers/University of New Brunswick, Xiomara Sanchez/University of New Brunswick
Exploring Cost-Effective LiDAR Solutions for Pothole Detection and Quantification: A Low-Point-Density Approach (TRBAM-25-04727) - B555
Ali Faisal/University of British Columbia, Suliman Gargoum/University of British Columbia
Exploring the Root Causes of Wide Thermal Cracks in the Southwestern Region of United States (TRBAM-25-05057) - B554
Saed Aker/Arizona State University, Tempe, Awais Zahid/Arizona State University, Tempe, Masih Beheshti/Arizona State University, Tempe, Hasan Ozer/Arizona State University, Tempe

3206

Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Research and Innovation in Accessible Transportation and Mobility

Chengbo Ai, University of Massachusetts, Amherst, presiding

Sponsored By Standing Committee on Accessible Transportation and Mobility

Poster session from the Accessible Transportation and Mobility committee (AME50) featuring research papers and abstracts on state-of-the-art strategies, best practices, international examples, and innovative approaches to improving accessibility and mobility for persons with disabilities. Topics of focus include accessibility in autonomous vehicles, travel mode choices and usage, built environment impacts on accessibility, ridehailing and ridesharing services, international accessibility research, and several others.

Trends and Determinants of the Mobility of Older Adults in the United States and Germany, 2001-2017 (TRBAM-25-00045) - A231

Ralph Buehler/Virginia Polytechnic Institute and State University, John Pucher/Virginia Polytechnic Institute and State University, Regine Gerike/Virginia Polytechnic Institute and State University, Rico Wittwer/Virginia Polytechnic Institute and State University

Decoding the Spatial Effects of Walkability on Walking Behavior among Older Adults by Integrating Big Data and Small Data (TRBAM-25-00150) - A232

Xuan He/Chinese University of Hong Kong, Sylvia He/Chinese University of Hong Kong

A Tale of Two Aging Nations: Urban Design and Older Adults' Mobility in the United States and Japan. (TRBAM-25-00669) - A240

Ashley (Wan-Tzu) Lo/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

Rural-Urban Differences in Older Adults' Travel Behavior: Evidence from the 2022 National Household Travel Survey (TRBAM-25-01036) - A241

Arna Nithila/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

Analysis of Socioeconomic and Built Environment Factors Influencing Travel Mode Choice of Older Adults in Georgia (TRBAM-25-00847) - A233

Shinah Park/Georgia Institute of Technology, Gulsah Akar/Georgia Institute of Technology

How Often Do People with Disabilities Travel by Certain Modes? A Study from California (TRBAM-25-00976) - A234

Md Musfiqur Bhuiya/University of California, Davis, Jesus Barajas/University of California, Davis, Prashanth Venkataram/University of California, Davis

Revealing the Elderly's Preference for Mobility-as-a-Service Plans in an Ageing Society (TRBAM-25-02150) - A235

Nazam Ali/University of Hong Kong, R. C. P. Wong/University of Hong Kong, Jintao Ke/University of Hong Kong

Meeting in the Middle: Pooled Rideshare as Compelling Transportation Offering for Elders (TRBAM-25-02355) - A230

Joseph Paul/Clemson University, Rakesh Gangadharaiah/Clemson University, Rebecca Pool/Clemson University, Johnell Brooks/Clemson University, Krishna Murthy Gurumurthy/Clemson University, Joshua Auld/Clemson University, Yunyi Jia/Clemson University

Did COVID-19 Change Seniors' Willingness to Use Autonomous Vehicles? Insights from a Nationwide Survey in the United States (TRBAM-25-02588) - A250

Bernard Boakye/Louisiana State University, Hany Hassan/Louisiana State University, Marie-Agnès Tellier/Louisiana State University

Exploring the Travel Characteristics and Constraints of Visually Impaired People through Activity Space Analysis: A Case Study in Nanjing (TRBAM-25-02888) - A251

Xin Zhao/Southeast University, Zhaoyan Guo/Southeast University, Yongfeng Ma/Southeast University, Shuyan Chen/Southeast University, Xudong Mao/Southeast University, Shuya Zhang/Southeast University

Enabling Mobility and Inclusion: Designing Accessible Autonomous Vehicles for People with Disabilities (TRBAM-25-02967) - A252

Fahimeh Golbabaei/Queensland University of Technology, James Dwyer/Queensland University of Technology, Rafael Gomez/Queensland University of Technology, Andrew Peterson/Queensland University of Technology, Kevin Cocks/Queensland University of Technology, Alexander Bubke/Queensland University of Technology, Alexander Paz/Queensland University of Technology

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Examining Spatial Variations in Built Environment Impact on the Bike-Sharing Usage Among Older Adults (TRBAM-25-03234) - A253
Xinghua Li/Tongji University, Ziqi Yang/Tongji University, Yuntao Guo/Tongji University, Lu Teng/Tongji University, Zhenghan Zhang/Tongji University, Yue Wang/Tongji University
Framework for Addressing Accessibility Poverty – A Case Study on Older Adults in Curridabat-Costa Rica (TRBAM-25-03709) - A254
Camila Barquero/Technical University of Munich, David Duran-Rodas/Technical University of Munich, Benjamin Büttner/Technical University of Munich
Connecting the Dots: Unraveling the Relationship Between Older Adults' Mode Usage, Activity Participation, and Quality of Life (TRBAM-25-04826) - A242
Arna Nithila/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville, Michelle Gray/University of Arkansas, Fayetteville, Alishia Ferguson/University of Arkansas, Fayetteville, Jennifer Webb/University of Arkansas, Fayetteville
Location Choice Modeling for Households with a Disability Based on Parcel Characteristics (TRBAM-25-05182) - A255
Aleks Paskett/University at Buffalo, SUNY, Ziqi Song/University at Buffalo, SUNY, Keunhyun Park/University at Buffalo, SUNY
Analyzing the Evolving Behavior of Older U.S. Travelers in the 21st Century (TRBAM-25-05544) - A260
Phoebe Chiu/University of California, Los Angeles, Yu Hong Hwang/University of California, Los Angeles, Fariba Siddiq/University of California, Los Angeles, Brian Taylor/University of California, Los Angeles
Analyzing Mobility Challenges for Individuals with Disabilities in the U.S. (TRBAM-25-05622) - A261
Eazaz Sadeghvaziri/Mercer University, Ramina Javid/Mercer University, Claudia Boero/Mercer University
Which Older Adults Would Pay More for Ridehailing Services with Accessible and Age-Friendly Features? (TRBAM-25-05659) - A270
Aditi Misra/University of Colorado, Denver, Manish Shirgaokar/University of Colorado, Denver, Asha Weinstein Agrawal/University of Colorado, Denver
Exploring the Relationship Between Travel Behavioral Characteristics and Satisfaction with the Barrier-Free Environment for People with Disabilities in Old Neighborhoods (TRBAM-25-05726) - A244
Guangyue Nian/Tongji University, Haixiao Pan/Tongji University
Towards Designing Autonomous Shared Rides for People with Parkinson's Disease: Barriers and User Needs Analysis (TRBAM-25-05727) - A271
Chengxin Zhang/University of Michigan, Imrul Shuva/University of Michigan, Huizhong Guo/University of Michigan, Charlotte Tang/University of Michigan, Nathaniel Miller/University of Michigan, Shan Bao/University of Michigan
Evaluating the Accessibility of Trip Destinations for Older Adults in Old Residential Compounds using "Aged Walking Score" (TRBAM-25-05729) - A245
Guangyue Nian/Tongji University, Zhendong Wang/Tongji University, Haixiao Pan/Tongji University
Staying Active: Walking Behavior of Older Adults in the United States (TRBAM-25-06008) - A243
Mubarak Thanni/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Pathways to Climate Resilience: New Tools, Models, and Approaches for Transportation Systems Analysis
Tom Wall, Argonne National Laboratory, presiding
Sponsored By Standing Committee on Extreme Weather and Climate Change Adaptation

Lessons from Augmenting Forecasted Flooding with Automated Hydrological Analyses to Improve Transport Service Resilience and Pre-Emergency Response (TRBAM-25-00713) - A210
Garrett Fingerle/No Organization, David Mattey/No Organization
Travel Decision Behaviour in Response to Severe Flooding in Pakistan (TRBAM-25-00894) - A211
Aqsa Talpur/Central South University, Suleman Ahmad/Central South University, Farrukh Baig/Central South University, Amjad Pervez/Central South University, Jaeyoung Lee/Central South University
Global Health and Climate Benefits from Walking and Cycling Infrastructure (TRBAM-25-01043) - A212
Adam Millard-Ball/University of California, Los Angeles, Monisha Reginald/University of California, Los Angeles, Yasmina Yusuf/University of California, Los Angeles, Christopher Bian/University of California, Los Angeles

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Multi-Capability Climate Resilience Assessment Approach for Improved Rail Network Performance Monitoring (TRBAM-25-02494) - A213
Adair Garrett/Georgia Institute of Technology, Jose Pañero/Georgia Institute of Technology, Taylor Sherwood/Georgia Institute of Technology, Adjo Amekudzi-Kennedy/Georgia Institute of Technology
Evaluating Urban Flooding Impact on Mobility and POI Visits: A Difference-in-Difference Analysis Using Mobile, Satellite Imagery, and Geographic Data (TRBAM-25-03153) - A214
Lele Zhang/Villanova University, Xin Wu/Villanova University, Kailun Liu/Villanova University, Mehedi Md Abdullah Al/Villanova University, Jiashu Zhou/Villanova University, Virginia Smith/Villanova University, Chenfeng Xiong/Villanova University
Modeling Flood Propagation and Cascading Failures in Interdependent Transportation and Stormwater Networks (TRBAM-25-03559) - A215
H.M. Imran Kays/University of Oklahoma, Arif Mohaimin Sadri/University of Oklahoma, K.K. "Muralee" Muraleetharan/University of Oklahoma, P. Scott Harvey/University of Oklahoma, Gerald A. Miller/University of Oklahoma
Using Deep Learning to Forecast the Urban Heat Island Effect Using a Network of Temperature Sensors (TRBAM-25-04174) - A222
Jiaoyang Li/University of Toronto, St. George, Junshi Xu/University of Toronto, St. George, Arman Ganji/University of Toronto, St. George, Scott Weichenthal/University of Toronto, St. George, Marshall Llyod/University of Toronto, St. George, Marianne Hatzopoulou/University of Toronto, St. George
Development of a Simplified Risk Analysis Framework for Rail Thermal Buckling Under Future Climatic Extremes (TRBAM-25-04217) - A223
Brian Staes/Oregon State University, Benyamin Ghoreishi/Oregon State University, Chenqiang Liu/Oregon State University, Haizhong Wang/Oregon State University, Robert Bertini/Oregon State University
The Coastal Community Flood Impact Scorecard Toolkit for Measuring Quality of Life and Economic Impacts: Development and Case Study Application (TRBAM-25-04875) - A224
Jeffrey LaMondia/Auburn University, Benjamin Bowers/Auburn University, Xing Fang/Auburn University, Christopher Gerber/Auburn University, Susan Poudel/Auburn University
Assessing the Impact of Hurricanes on Roadway Closures and Accessibility: A Machine Learning-Based Case Study of Hurricanes Ian and Idalia in Florida (TRBAM-25-04919) - A221
Samuel Takyi/Florida A&M University-Florida State University, Richard Antwi/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Leslie Okine/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University
Characterizing Performance Resilience of Transportation Networks against Extreme Weather Events (TRBAM-25-05861) - A225
Kaifa Lu/University of Florida, Yanghe Liu/University of Florida, Zhong-Ren Peng/University of Florida
Assessing Tornado Impacts in the State of Kentucky with a Focus on Demographics and Roadways using a GIS-based Approach (TRBAM-25-06233) - A220
Mehmet Burak Kaya/Florida A&M University-Florida State University, Onur Alisan/Florida A&M University-Florida State University, Alican Karaer/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University

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Tuesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Advances in Construction Management
Hala Nassereddine, University of Kentucky, presiding
Sponsored By Standing Committee on Construction Management

Posters exploring advances in transportation construction management.

A Modelling Study of Cool Surfaces and Outdoor Workers Productivity at San Francisco International Airport (TRBAM-25-00225) - B534
Barrak Alahmad/No Organization, Iona Isachsen/No Organization, Yazan Alwadi/No Organization, Haider Taha/No Organization, Anthony Bernheim/No Organization, Erin Cooke/No Organization, Elizabeth Wesley/No Organization, Gregory Kats/No Organization, John Spengler/No Organization
A Comprehensive Review of Mental Health Risk Factors in Construction Industry (TRBAM-25-00587) - B535
Apurva Pamidimukkala/University of Texas, Arlington, Sharareh (Sherri) Kermanshachi/University of Texas, Arlington, Deema Almaskati/University of Texas, Arlington

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Preparing the Capacity of U.S. States to Deliver on Infrastructure (TRBAM-25-03520) - B536
Bryan Pounds/McKinsey & Company, Tim Bacon/McKinsey & Company, Ryan Luby/McKinsey & Company, Shannon Peloquin/McKinsey & Company, Rebecka Pritchard/McKinsey & Company, Ezra Greenberg/McKinsey & Company, Maya Sari/McKinsey & Company
Mapping the Risk Patterns of Construction Cost and Time Overruns Across Regions in U.S. Highway Infrastructure (TRBAM-25-00293) - B537
Mamdouh Mohammed/Lawrence Technological University, Ahmed Abdelaty/Lawrence Technological University
A Survey of Data-Driven Construction Materials Price Forecasting (TRBAM-25-02390) - B538
Jie Ma/Purdue University, Jin Li/Purdue University
Analyzing the Causes and Impacts of Design Errors and Omissions in Highway Construction (TRBAM-25-01292) - B539
Nilima Jayana/University of Wyoming, Ahmed Abdelaty/University of Wyoming, Daniel D'Angelo/University of Wyoming, Maryam El-Maraghy/University of Wyoming, Mamdouh Mohammed/University of Wyoming, Mohamed S. Yamany/University of Wyoming

3208

Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Salon A
Advancing Managed Lanes in Urban Areas
Dan Lamers, North Central Texas Council of Governments, presiding
Michael Davis, RS&H, Inc., presiding
Brian Swindell, HDR, presiding
Sponsored By Standing Committee on Managed Lanes

This session will explore the unique role managed lanes can play in advancing public transportation and CAVs within urban areas.

Assessing the Impact of CAV Reversible Lanes on Motorways: A Traffic Microsimulation Study (TRBAM-25-02314)
Weixuan Zhou/Imperial College London, Nicolette Formosa/Imperial College London, John Mathewson/Imperial College London, Mohammed Quddus/Imperial College London
Accelerating Implementation of an Express Transit Network Using Congestion Pricing, Active Traffic Management, and Public-Private Partnerships (TRBAM-25-03721)
Patrick DeCorla-Souza/Federal Highway Administration (FHWA), Michael Replogle/Federal Highway Administration (FHWA)
Development of Autonomous Bus Dedicated Lane Implementation Strategies: A Case Study of Korea Expressway (TRBAM-25-06303)
Hojae Kim/Hanyang University, Yeji Sung/Hanyang University, Juneyoung Park/Hanyang University, Seongmin Park/Hanyang University, Hyunjin Park/Hanyang University

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Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
New Insights from Bicycle Transportation Research
Raktim Mitra, Toronto Metropolitan University, presiding
Sponsored By Standing Committee on Bicycle Transportation

The session brings together recent research on bicycle transportation. Posters will cover a wide variety of topics, including bicycle facilities, cyclist behavior, cyclist classification, equity (justice) in cycling, level of service, cycling safety, and cycling Planning & policy.

Study of Bicycle Boulevard Improvements: Will they Notice? (TRBAM-25-04364) - B400
Tristan Fortin/Ecole Polytechnique de Montreal, Nicolas Saunier/Ecole Polytechnique de Montreal
A Novel Machine-Learning, Multi-Criteria, Centralized, Bicycle Routing Algorithm (TRBAM-25-03607) - B401
Victoria Dahmen/Technical University of Munich, Allister Loder/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

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Unveiling Barriers and Motivations to Cycling Across Different Stages of Change (TRBAM-25-05489) - B410
Hamed Naseri/Polytechnique Montréal, Jerome Laviolette/Polytechnique Montréal, Owen Waygood/Polytechnique Montréal, Kevin Manaugh/Polytechnique Montréal
How do Bike-sharing Schemes Affect Cycling Uptake? (TRBAM-25-02294) - B402
Samuel McCreery-Phillips/University of Southampton, Shahram Heydari/University of Southampton
Transferability of Bicycle Volume Models Built with Crowdsourced Data: Applications to Statewide Prediction and Corridor Analysis Before and After COVID-19 (TRBAM-25-05076) - B403
Joseph Broach/Portland State University, Md Ashraful Imran/Portland State University, Sirisha Kothuri/Portland State University, Nathan McNeil/Portland State University, Kate Hyun/Portland State University
Designing a Warning System for a Smartphone-Based Assistive Application for Bicyclists (TRBAM-25-01470) - B404
Anika Jannat Rimu/No Organization, Jaivardhan Sood/No Organization, Taufiq Rahman/No Organization, Shuchisnigdha Deb/No Organization
Assessing the Impact of Montreal's Réseau Express Vélo (REV) on Nearby Bike Lane Usage and Post-COVID-19 Cycling Trends (TRBAM-25-00081) - B412
Mischa Young/Université de l'Ontario français, Gavin MacGregor/Université de l'Ontario français, Georges Tanguay/Université de l'Ontario français
Evaluation of Road User Perceptions of Novel Bike Turnouts (TRBAM-25-03473) - B413
Lena Breuer/Oregon State University, Hisham Jashami/Oregon State University, David Hurwitz/Oregon State University
Assessing the Impact of Infrastructure on Bicycling Behavior: Insights from an Instrumented Bicycle Study (TRBAM-25-04326) - B414
Danil Belikhov/University of Wuppertal, Guillermo Pérez Castro/University of Wuppertal, Fredrik Johansson/University of Wuppertal, Heather Kaths/University of Wuppertal, Johan Olstam/University of Wuppertal, Mathis Titgemeyer/University of Wuppertal
Determinants of Risky Riding Behaviours of Cyclists: A Literature Review (TRBAM-25-01745) - B420
Rakshita Verma/Indian Institute of Technology, Roorkee, Pushpa Choudhary/Indian Institute of Technology, Roorkee
Socio-Psychological and Technological Influences on Electric Two-Wheeler Rider Satisfaction and Loyalty (TRBAM-25-01140) - B421
Km G Simran/Maulana Azad National Institute of Technology Bhopal, Yogeshwar G Navandar/Maulana Azad National Institute of Technology Bhopal, Bivina G R/Maulana Azad National Institute of Technology Bhopal
High-Stress Cycling Accessibility and Cyclist-Involved Crashes in Arizona Metropolitan Regions (TRBAM-25-00579) - B422
Steven Gehrke/Northern Arizona University, Manoj Allam/Northern Arizona University
Zero-shot Learning based Cyclists Detection through Surveillance Systems (TRBAM-25-02814) - B423
Yinhai Wang/University of Washington, Sruangsaeng Chaikasetsin/University of Washington, Mehrdad Nasri/University of Washington, Hanyi Yang/University of Washington, Chenxi Liu/University of Washington
Injuries Involving Electric Bicycles: What We Can – and Cannot – Learn from NEISS Consumer Product Injury Data (TRBAM-25-06045) - B430
Kevin Fang/Sonoma State University, Amelia Le/Sonoma State University, Asha Weinstein Agrawal/Sonoma State University
E-bike Rider Safety: A Literature Review on Numbers, Outcomes, & Causes of Crashes, Injuries, and Deaths (TRBAM-25-05860) - B431
Amir Ghanbari/University of Iowa, Asha Weinstein Agrawal/University of Iowa, Kevin Fang/University of Iowa
Assessing Safety Risks and Behaviors of E-Scooter and E-Bicycle Riders Using Naturalistic Riding Data (TRBAM-25-00879) - B424
Claire Naude/University Gustave Eiffel, Ebrahim Riahi/University Gustave Eiffel, Bastien Canu/University Gustave Eiffel, Thierry Serre/University Gustave Eiffel
What's in a bike lane? Exploring the diversity of micromobility types in an Australian city (TRBAM-25-00983) - B432
Alexa Delbosc/Monash University, Finlay Esler/Monash University, Angus Mitchell/Monash University
Infrastructure and cycling behaviour: implications for modal shift and GHG emissions reduction (TRBAM-25-05528) - B411
Hamed Naseri/Polytechnique Montréal, Jerome Laviolette/Polytechnique Montréal, Owen Waygood/Polytechnique Montréal, Kevin Manaugh/Polytechnique Montréal, Jose Arturo Jasso Chavez/Polytechnique Montréal
Evaluating Post-Pandemic Changes in Cycling Frequency Among Young Adults (TRBAM-25-03003) - B433
Muhammad Sajjad Ansar/Toronto Metropolitan University, Raktim Mitra/Toronto Metropolitan University

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Assessing Bike Suitability of Transportation Infrastructure Segments (TRBAM-25-04657) - B434
Dimitra Michalaka/Citadel Military College, Chun-Hsing Ho/Citadel Military College, Kewei Ren/Citadel Military College, Yuche Chen/Citadel Military College, Xiwen Hao/Citadel Military College, Kweku Brown/Citadel Military College, Nathan Huynh/Citadel Military College, William Davis/Citadel Military College
Bicyclist Behavior at Intersections: A Study of Two-Stage Turn Queue Boxes in Massachusetts (TRBAM-25-03171) - B440
Dewan Tanvir Ahammed/University of Illinois, Urbana-Champaign, Eleni Christofa/University of Illinois, Urbana-Champaign, Chengbo Ai/University of Illinois, Urbana-Champaign, Francis Tainter/University of Illinois, Urbana-Champaign, Leila Cesic/University of Illinois, Urbana-Champaign
A Methodology for a Bikeability Index for Active School Commuting (ASC-BI) (TRBAM-25-04204) - B441
Tuğba Sevgi Dursun/Middle East Technical University, Hediye Tuydes-Yaman/Middle East Technical University, Gulcin Dalkic-Melek/Middle East Technical University
Cyclist Safety Assessment Using Autonomous Vehicle Data (TRBAM-25-03032) - B442
Tarek Ghoul/University of British Columbia, Tarek Sayed/University of British Columbia
Deciphering Cyclists' Risky Street-crossing Behavior: An In-depth Analysis of Built Environment Contributing Factors to The Cyclist Violation (TRBAM-25-03133) - B443
Hui Bi/Southeast University, Xuejun Zhang/Southeast University, Yichang Shao/Southeast University, Yuhan Zhang/Southeast University, Zhirui Ye/Southeast University
Comparing the Effects of Road Traffic Conditions on Injury Severity of Electric Bicycle Drivers in Shenyang City and Changsha City (TRBAM-25-03270) - B450
Yang Bian/Beijing University of Technology, Yuheng Li/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Xiaolong Zhang/Beijing University of Technology
Enhancing Cyclist Safety in Dhaka: A Data-Driven Approach Using Ordinal Logistic Regression and Machine Learning Models (TRBAM-25-05557) - B444
Nazmus Sakib/Ahsanullah University of Science and Technology, Siam Junaed/Ahsanullah University of Science and Technology, Ahmed Hossain/Ahsanullah University of Science and Technology, Md Istiaque Ahmed/Ahsanullah University of Science and Technology, Subasish Das/Ahsanullah University of Science and Technology
Empirical Analysis of the Effects of Yield-as-Stop Laws on Bicyclist Safety (TRBAM-25-05350) - B452
Steve Jackson/Toxcel, LLC
Risk Assessment of E-bikes at Intersections: An Unsupervised Machine Learning Approach Incorporating Aggressive Behavior and Riding Volatility Data (TRBAM-25-03086) - B451
Xiaolong Zhang/Beijing University of Technology, Yang Bian/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Jianling Huang/Beijing University of Technology, Yuheng Li/Beijing University of Technology
Estimating Energy Bounds for Adoption of Private Electric Bikes (TRBAM-25-05435) - B453
Bingrong Sun/National Renewable Energy Laboratory (NREL), K. Shankari/National Renewable Energy Laboratory (NREL), Andrew Duvall/National Renewable Energy Laboratory (NREL), Venu Garikapati/National Renewable Energy Laboratory (NREL)
What Is the Potential for Intermodal Cycling-metro Trips in Montreal? (TRBAM-25-05997) - B454
Adam Theo Samuel Courtois/Ecole Polytechnique de Montreal, Catherine Morency/Ecole Polytechnique de Montreal
GPS-based Speed Profiles for Cyclists In Zurich, Switzerland (TRBAM-25-03873) - B462
Laurin Maurer/Swiss Federal Institute of Technology (ETH Zurich), Adrian Meister/Swiss Federal Institute of Technology (ETH Zurich), Kay Axhausen/Swiss Federal Institute of Technology (ETH Zurich)
Electric Bikes as Mode Alternatives: Evidence from Tehran (TRBAM-25-00275) - B463
Ali Tavakoli Kashani/Iran University of Science and Technology, Mohammad Najafpour derav/Iran University of Science and Technology, Ali Afshar/Iran University of Science and Technology, Gerd Müller/Iran University of Science and Technology, Amirhossein Taheri/Iran University of Science and Technology

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Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Measurement of Road User Perception, Situational Awareness, Visual Attention, Workload, and Behavior in Myriad Contexts
John Gaspar, University of Iowa, presiding
Sponsored By Standing Committee on Road User Measurement and Evaluation

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Development of a VR-based Simulation Framework for Supporting Pedestrian Perception Behavior Study (TRBAM-25-06260) - B472
Zizheng Yan/Old Dominion University, Hong Yang/Old Dominion University, Junqing Wang/Old Dominion University, Di Yang/Old Dominion University, Kun Xie/Old Dominion University
Evaluating Parametric Car-Following Models in Naturalistic Congestion: Insights in Driver Behavior and Model Limitations (TRBAM-25-06037) - B473
Huaidian Hou/University of Michigan, Arpan Kusari/University of Michigan, Brian Lin/University of Michigan
Using Machine Learning to Classify Driver Behavior from Psychological Features: An Exploratory Study (TRBAM-25-05909) - B474
Alexandra Kondyli/University of Kansas, RokunuzJahan Rudro/University of Kansas, Saumik Sakib Bin Masud/University of Kansas, Md Mashfiq Rizvee/University of Kansas, Shuyao Wang/University of Kansas, Vishal Kummetha/University of Kansas, Christopher Ramey/University of Kansas, Sumaiya Shomaji/University of Kansas, Evangelia Chrysikou/University of Kansas
Advancing Multi-alternative Decision by Sampling Model With Eye-Tracking Data: Insights From Electric Vehicle Preference Under Decoy Effects (TRBAM-25-05597) - B482
Ding Jiaxuan/National University of Singapore, Vladimir Maksimenko/National University of Singapore, Prateek Bansal/National University of Singapore
Modelling Response Time and Hazard Identification in a Video-Based Hazard Perception Test for Car Drivers (TRBAM-25-05596) - B483
Akshay T K/India National Institute of Technology, Calicuta, Nishant Pawar/India National Institute of Technology, Calicuta, Kirti Mahajan/India National Institute of Technology, Calicuta
Driving Stress Interpretable Prediction Based on the Multi-Layer Scene Graph of Road Environments from Drivers' Visual Perception and an Attention-Enhanced Spatiotemporal Graph Convolutional LSTM Network (TRBAM-25-05362) - B484
Weixi Ren/Tongji University, Bo Yu/Tongji University, Yuren Chen/Tongji University, Jianqiang Gao/Tongji University, Shan Bao/Tongji University
Eye Movement Analysis Method Based on Zero-shot Environment Perception (TRBAM-25-04440) - B492
Ziyu Zhang/Southeast University, Shuyan Chen/Southeast University, Yongfeng Ma/Southeast University, Qianqian Pang/Southeast University, Junjie Zhang/Southeast University
Exploring Neural Mechanisms of Driver Cognition in Conditional Autonomous Driving: An fMRI and Granger Causality Analysis under Different Visibility and Urgency (TRBAM-25-02222) - B493
Xiaonan Li/Tongji University, Feng Chen/Tongji University, Yunjie Ju/Tongji University, Ting Zhang/Tongji University, Yanni Huang/Tongji University
Development of Real-World Driving Cycle (RWDC) for Passenger Car using Naturalistic Driving Data – A Micro Trip Segment-Based Approach (TRBAM-25-01127) - B494
Sandeep Kumar/Indian Institute of Technology, Varanasi, Satyajit Mondal/Indian Institute of Technology, Varanasi
A Mixed-Methods Approach Using Virtual Reality to Study User Reactions to Self-Driving Vehicles (TRBAM-25-03885) - B500
Paulo Anciaes/University College London, Maria Kamargianni/University College London, Emmanouil Chaniotakis/University College London
A Behaviour-Agnostic Methodological Framework for Incorporating Human Factors into Traffic Microsimulation (TRBAM-25-04202) - B501
Amna Chaudhry/Delft University of Technology, Amir Hossein Kalantari/Delft University of Technology, Marcel Sala/Delft University of Technology, Alkis Papadoulis/Delft University of Technology, Antonio Pellicer-Pous/Delft University of Technology, Mark Brackstone/Delft University of Technology, Eleonora Papadimitriou/Delft University of Technology, Mark Burke/Delft University of Technology, Sam Chapman/Delft University of Technology, Shanna Lucchesi/Delft University of Technology, Amir Pooyan Afghari/Delft University of Technology
Evaluating the Impact of Augmented Reality Safety Warnings on Situational Awareness and Attention: an EEG-based Measurement of Neural Responses in Roadway Work Zones (TRBAM-25-03981) - B502
Fatemeh Banani Ardecani/University of North Carolina, Charlotte, Amit Kumar/University of North Carolina, Charlotte, Sepehr Sabeti/University of North Carolina, Charlotte, Omidreza Shoghli/University of North Carolina, Charlotte
Influence of Camera Position and Fusion of Multiple Cameras for Driver Gaze Estimation (TRBAM-25-03786) - B503
Shiva Singh/Indian Institute of Technology, Kanpur, Pavan Kumar Sharma/Indian Institute of Technology, Kanpur, Pranamesh Chakraborty/Indian Institute of Technology, Kanpur

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Assessing the Efficacy of Pre-trained Large Language Models in Analyzing Autonomous Vehicle Field Test Disengagements (TRBAM-25-03591) - B504
Melika Ansarinejad/University of Cincinnati, Sherif Gaweesh/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
Comparative Assessment of Aggressive Driving Behavior: Evaluating the Reliability of a Driving Simulator Based on Naturalistic Driving Data (TRBAM-25-03474) - B505
Anusha Adavikottu/Indian Institute of Technology, Bombay, Nagendra Velaga/Indian Institute of Technology, Bombay
Construction and Preliminary Verification of a Multi Road-user Interaction Simulation Platform (TRBAM-25-02989) - B506
Ting Fu/Tongji University, Ziwei Dong/Tongji University, Qiangqiang Shangguan/Tongji University, Qiangqiang Shangguan/Tongji University
A Method for Grading the Complexity of V2V Driving patterns Based on Driving Primitives (TRBAM-25-02366) - B507
Qian Qiu/Chang'an University, Zhigang Xu/Chang'an University, Xiaopeng Li/Chang'an University
Driving style recognition based on semi-supervised learning (TRBAM-25-01989) - B508
HUAN XU/Tongji University, Zhizhou Wu/Tongji University, Yunyi Liang/Tongji University
Detection of dangerous driving behaviour using machine learning techniques and big data (TRBAM-25-01848) - B509
Thodoris Garefalakis/National Technical University of Athens (NTUA), Eva Michelaraki/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Identification of Driving Workload in Plateau Environment Based on Physiological and Psychological Factors: A Real-world Driving Study (TRBAM-25-01732) - B511
Aolin Yu/Beijing University of Technology, Jiangbi Hu/Beijing University of Technology, Youlei Fu/Beijing University of Technology, Ronghua Wang/Beijing University of Technology, Fangchen Xie/Beijing University of Technology
Pedestrian Perception of Vehicle Movement Information in Virtual Reality: A Subjective and Objective Analysis (TRBAM-25-01553) - B512
Yang Chen/Chang'an University, Weicheng Sun/Chang'an University, Fuwei Wu/Chang'an University
Integrating Mental Workload and Real-time Risk Assessment for Enhanced Driver Takeover Prediction (TRBAM-25-01532) - B513
Yichang Shao/Southeast University, Yi Zhang/Southeast University, Liyang Hu/Southeast University, Zhirui Ye/Southeast University, Yueru Xu/Southeast University, Xiaomeng Shi/Southeast University
Physically Informed Driving Style Recognition for Intelligent Vehicle Control and Assistance (TRBAM-25-00807) - B514
Congcong Bai/Zhejiang University, Jun Jing/Zhejiang University, Bokun Liu/Zhejiang University, Xi Gao/Zhejiang University, Chengcheng Yang/Zhejiang University, wentong guo/Zhejiang University, Sheng Jin/Zhejiang University
A Data-Driven Method for Driving Risk Assessment based on Temporal Fusion Transformer (TRBAM-25-00804) - B515
Congcong Bai/Zhejiang University, Xinxin Xing/Zhejiang University, Jun Jing/Zhejiang University, Xi Gao/Zhejiang University, Donglei Rong/Zhejiang University, wentong guo/Zhejiang University, Sheng Jin/Zhejiang University
Modeling Driver Perceived Risk in Obstacle Avoidance Scenarios Using Monte Carlo Methods (TRBAM-25-00745) - B510
Zhen Yang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhe Gong/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Yimei Qin/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Ruiping Zheng/Key Laboratory of Road and Traffic Engineering of the Ministry of Education
Revisiting Interactions of Multiple Driver States in Heterogenous Population and Cognitive Tasks (TRBAM-25-00500) - B516
Jiyao Wang/Hong Kong University of Science and Technology (Guangzhou), Ange Wang/Hong Kong University of Science and Technology (Guangzhou), Song Yan/Hong Kong University of Science and Technology (Guangzhou), Dengbo He/Hong Kong University of Science and Technology (Guangzhou), Kaishun Wu/Hong Kong University of Science and Technology (Guangzhou)
CogFormer: Aligned-attention Transformer-based Multi-physiological signals Fusion for Estimating Driver Cognitive Load in Conditional Automated Driving (TRBAM-25-00458) - B517
Ange Wang/Hong Kong University of Science and Technology (Guangzhou), Haohan Yang/Hong Kong University of Science and Technology (Guangzhou), Jiyao Wang/Hong Kong University of Science and Technology (Guangzhou), Hai Yang/Hong Kong University of Science and Technology (Guangzhou), Dengbo He/Hong Kong University of Science and Technology (Guangzhou)

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Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A

Intelligent Transportation Systems in the Era of Connected Vehicles and Vehicle to Everything Communication

Adrian Cottam, Auburn University, presiding

Hany Hassan, Louisiana State University, presiding

Sponsored By Standing Committee on Intelligent Transportation Systems

Moderators: Adrian Cottam, Ph.D. and Hany Hassan, Ph.D., P.E.

A Roadside Unit Deployment Strategy Considering Failure Probability in VANET Environment (TRBAM-25-00840) - A100

Bingjie Liang/Beijing Jiaotong University, Wenqi Lu/Beijing Jiaotong University, Bin Ran/Beijing Jiaotong University

Investing in Stationary and Mobile Sensors in Automated Traffic (TRBAM-25-00897) - A101

MohammadAmir Ahmadian/University of Toronto, Sina Bahrami/University of Toronto, Mehdi Nourinejad/University of Toronto, Yafeng Yin/University of Toronto

Evaluation of an Adaptive Ramp Metering System on I-880 in San Francisco Bay Area (TRBAM-25-01433) - A102

Lulu Mao/Elite Transportation Group, Inc., Chris Tseng/Elite Transportation Group, Inc., Yixin Wang/Elite Transportation Group, Inc., Lin Zhang/Elite Transportation Group, Inc.

V2X-Real: a Large-scale Dataset for V2X Cooperative Perception (TRBAM-25-01587) - A103

Hao Xiang/University of California, Los Angeles, Zhaoliang Zheng/University of California, Los Angeles, Xin Xia/University of California, Los Angeles, Runsheng Xu/University of California, Los Angeles, Letian Gao/University of California, Los Angeles, Zewei Zhou/University of California, Los Angeles, Xu Han/University of California, Los Angeles, Xinkai Ji/University of California, Los Angeles, Mingxi Li/University of California, Los Angeles, Zonglin Meng/University of California, Los Angeles, Li Jin/University of California, Los Angeles, Mingyue Lei/University of California, Los Angeles, Zhaoyang Ma/University of California, Los Angeles, Zihang He/University of California, Los Angeles, Haoxuan Ma/University of California, Los Angeles, Yunshuang Yuan/University of California, Los Angeles, Yingqian Zhao/University of California, Los Angeles, Jiaqi Ma/University of California, Los Angeles

Non-Cooperative Urban Road Networks Perimeter Control with Extended Mean-Field Reinforcement Learning (TRBAM-25-01755) - A104

Xinyuan Zhang/Tongji University, Xinghua Li/Tongji University, Yuntao Guo/Tongji University, Xinwu Qian/Tongji University, Cong Zhao/Tongji University, Srinivas Peeta/Tongji University

Enhancing Automatic Emergency Braking Systems with High-Precision Geographic Maps Integration (TRBAM-25-01932) - A105

Yaqiu Li/Hiroshima University, Haoran Li/Hiroshima University, Haojie Si/Hiroshima University, Junyi Zhang/Hiroshima University

A New Framework for Traffic Conflict Identification by Incorporating Predicted High-resolution Trajectory and Vehicle Profiles in a CAV Context (TRBAM-25-03024) - A106

JingChun Zhang/Beijing Jiaotong University, Yongsheng Zhang/Beijing Jiaotong University, Enjian Yao/Beijing Jiaotong University

A Novel Precision Shortest Path Guidance System for Real-Time Location Tracking of Connected Vehicles (TRBAM-25-03510) - A107

Yuncheng Zeng/Tongji University, Minhua Shao/Tongji University, Lijun Sun/Tongji University

Latency in Vehicle-Infrastructure Collaborative Computing Across Different Traffic Environments Using Multi-layer Agent-based Simulation (TRBAM-25-03511) - A108

Xinyun Lao/Tongji University, Yu Shen/Tongji University, Difei Wu/Tongji University, Gang Liu/Tongji University, Yuchuan Du/Tongji University

Impact of Privacy Filters and Fleet Changes on Connected Vehicle Trajectory Datasets for Intersection and Freeway Use Cases (TRBAM-25-03624) - A118

Enrique Saldivar-Carranza/Iteris Inc., Rahul Suryakant Sakhare/Iteris Inc., Jairaj Desai/Iteris Inc., Jijo Mathew/Iteris Inc., Ashmitha Jaysi Sivakumar/Iteris Inc., Justin Mukai/Iteris Inc., Darcy Bullock/Iteris Inc.

DARTS: Drone-Based AI-Powered Real-Time Traffic Incident Detection System (TRBAM-25-03969) - A117

Bai Li/University of South Florida, Achilleas Kourtellis/University of South Florida, Yu Yu Zhang/University of South Florida

Real-Time Tailgating Behavior Management under Connected Environment (TRBAM-25-04150) - A116

Hao Yang/McMaster University, Seyhan Ucar/McMaster University, Yashar Farid/McMaster University, Kentaro Oguchi/McMaster University

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Free Tracker Hijacking: Adversarial Attack Against Multi-Object Tracking in Intelligent Transportation Systems (TRBAM-25-04957) - A115
Shize Huang/No Organization, Qianhui Fan/No Organization, JinZhe Qin/No Organization, Qunyao Tan/No Organization, Yiming Shen/No Organization, Zhaoxin Zhang/No Organization, Chenyu Gu/No Organization
A Scalable Co-Simulation Platform for High-Fidelity V2X Modeling and Evaluation (TRBAM-25-05431) - A114
Maxwell McManus/National Renewable Energy Laboratory (NREL), Qichao Wang/National Renewable Energy Laboratory (NREL), Nicholas Accurso/National Renewable Energy Laboratory (NREL)
Optimization of Roadside Unit Deployment in Traffic Networks Considering Computational Load Re-assignment (TRBAM-25-05550) - A113
Yu Shen/Tongji University, Juntao Liu/Tongji University, Yujing Zheng/Tongji University, Yuchuan Du/Tongji University
A New Vehicle-to-Vehicle Communication System: Visual-Enhanced Cooperative Traffic Operations (TRBAM-25-05876) - A112
Ke Ma/University of Wisconsin, Madison, Heye Huang/University of Wisconsin, Madison, Hangyu Li/University of Wisconsin, Madison, Peng Zhang/University of Wisconsin, Madison, Zhaohui Liang/University of Wisconsin, Madison, Xiaopeng Li/University of Wisconsin, Madison

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Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Vehicle-Highway Automation
Meng Wang, Technische Universität Dresden, presiding
Sponsored By Standing Committee on Vehicle-Highway Automation

Enhancing Lane Change Safety: A Hierarchical Risk-Resposive Reinforcement Learning Model for Autonomous Vehicle Merging on On-Ramps (TRBAM-25-00139) - A110
Zhiheng Fang/Southeast University, Qiaojun Xiang/Southeast University
A Novel Framework For Multi-Vehicle Game-Based Lane-Changing Operations Of Connected and Autonomous Vehicles Under Mixed Traffic Environment (TRBAM-25-00175) - A111
Junqiang Leng/Harbin Institute of Technology, Pengzhi Chen/Harbin Institute of Technology, Xueyan Sun/Harbin Institute of Technology, Xiaoyan Huo/Harbin Institute of Technology, Hanchao Ma/Harbin Institute of Technology, Qinzhong Hou/Harbin Institute of Technology
Are Current Roads Ready for Highly Automated Driving? A Conceptual Model for Road Readiness for AVs Applied to the United Kingdom City of Leeds (TRBAM-25-00216) - A120
Oguz Tengilimoglu/University of Leeds, Oliver Carsten/University of Leeds, Zia Wadud/University of Leeds
Optimizing Driving Decision-Making at Freeway Weaving Segments with Relational Graph Attention Networks and Deep Reinforcement Learning (TRBAM-25-00262) - A121
Zijin Wang/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Dongdong Wang/University of Central Florida
Exploring the Impact of Various Lateral Movement Strategies of Autonomous Truck Platooning on Traffic Safety and Efficiency (TRBAM-25-00302) - A122
Mohamed Mohamed/Louisiana State University, Hany Hassan/Louisiana State University
Human-driven Vehicle Trajectory Prediction Integrating Personalized Modeling and GAN-Enhanced Inverse Reinforcement Learning (TRBAM-25-00313) - A123
Rui Peng/Southeast University, Min Yang/Southeast University, Wenbo Zhang/Southeast University, Lichao Wang/Southeast University, Renjie Zhang/Southeast University
Decision-making of Autonomous Vehicles in Interactions with Jaywalkers: A Riskaware Deep Reinforcement Learning Approach (TRBAM-25-00372) - A124
Ziqian Zhang/Southeast University, Haojie Li/Southeast University
Level of Automated Driving Safety in Urban Mixed Traffic Environment based on Real-world Autonomous Vehicle Data (TRBAM-25-00446) - A125
Sangjae Lee/Hanyang University, Juneyoung Park/Hanyang University, Cheol Oh/Hanyang University
From Pixels to Paths: Pedestrian Trajectory Prediction Beyond Benchmarks (TRBAM-25-00498) - A126
Shaozhi Wang/North Carolina State University, Zhengming Zhang/North Carolina State University, Renran Tian/North Carolina State University

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Enhancing Pedestrian Detection in Autonomous Vehicles through Multi-modal Information Fusion (TRBAM-25-00501) - A127
Muhammad Mobaidul Islam/North Carolina A&T State University, Abdullah Al Redwan Newaz/North Carolina A&T State University, Tesfamichael Getahun/North Carolina A&T State University, Ali Karimoddini/North Carolina A&T State University
Robust Control of Autonomous Vehicles in Challenging Roads (TRBAM-25-00505) - A128
Jose Matute/North Carolina A&T State University, Ali Karimoddini/North Carolina A&T State University
A Dual Optimization Method for Lane-Changing Trajectories Based on Dynamic Interaction and Risk Assessment (TRBAM-25-00552) - A138
Juncheng Jiang/Tongji University, Yajie Zou/Tongji University, Yubin Chen/Tongji University, Yue Zhang/Tongji University, Yangyang Wang/Tongji University, Hao Zhang/Tongji University
Nonlinear Oscillatory Response of Automated Vehicle Car-following: Theoretical Analysis with Traffic State and Control Input Limits (TRBAM-25-00610) - A137
Sixu Li/Texas A&M University, Yang Zhou/Texas A&M University
A Vehicle Trajectory Prediction Model with Map Structure-Aware Capabilities (TRBAM-25-00646) - A136
Caiyin Dong/Southwest Jiaotong University, Zhanbo Sun/Southwest Jiaotong University, Ang Ji/Southwest Jiaotong University, Ruibin Zhao/Southwest Jiaotong University, Yu Zhao/Southwest Jiaotong University
Lightweight LiDAR-Based Cooperative Localization Model for Leader-Follower Cooperative Driving Automation System in GPS-Denied Environments (TRBAM-25-00667) - A135
Yuxin Ding/Pennsylvania State University, Xianbiao Hu/Pennsylvania State University
Physically Analyzable AI-Based Nonlinear Platoon Dynamics Modeling During Traffic Oscillation: A Koopman Approach (TRBAM-25-00694) - A134
Kexin Tian/Texas A&M University, Haotian Shi/Texas A&M University, Yang Zhou/Texas A&M University, Sixu Li/Texas A&M University
SECRM-2D: RL-Based Efficient and Comfortable Route-Following Autonomous Driving with Analytic Safety Guarantees (TRBAM-25-00737) - A133
Tianyu Shi/University of Toronto, Ilia Smirnov/University of Toronto, Omar ElSamadisy/University of Toronto, Baher Abdulhai/University of Toronto
A Takeover Controller of Cooperative Adaptive Cruise Control: From Machine to Human (TRBAM-25-00769) - A132
Haoran Wang/Tongji University, Shuoyuan Li/Tongji University, Jia Hu/Tongji University
Cooperative Sequential Lane-changing Merging for Connected Automated Vehicles Platoons in Mixed Traffic Flow (TRBAM-25-00789) - A131
Li Tan/Southwest Jiaotong University, Haoran Jiang/Southwest Jiaotong University, Yangsheng Jiang/Southwest Jiaotong University, Zhihong Yao/Southwest Jiaotong University
Automated Driving with Evolution Capability: A Reinforcement Learning Method with Monotonic Performance Enhancement (TRBAM-25-00798) - A130
Xuerun Yan/Tongji University, Jia Hu/Tongji University, Haoran Wang/Tongji University
Centralized Multi-Vehicle Collaborative Trajectory Planning Based on Kaldor-Hicks Improvement (TRBAM-25-00801) - A140
Donglei Rong/Zhejiang University, Xinxin Xing/Zhejiang University, Chengcheng Yang/Zhejiang University, Congcong Bai/Zhejiang University, Jérémie Alagbé/Zhejiang University, wentong guo/Zhejiang University, Sheng Jin/Zhejiang University
Characterizing Car-Following Behavior of Human-driven Vehicles and Autonomous Vehicles Based on Driving Primitive (TRBAM-25-00845) - A141
Shuning Tang/Tongji University, Yajie Zou/Tongji University, Shubo Wu/Tongji University, Yuanchang Xie/Tongji University, Yunlong Zhang/Tongji University
KoMA: Knowledge-driven Multi-agent Framework for Autonomous Driving with Large Language Models (TRBAM-25-00882) - A142
Kemou Jiang/Beihang University, Xuan Cai/Beihang University, Zhiyong Cui/Beihang University, Aoyong Li/Beihang University, Yilong Ren/Beihang University, Haiyang Yu/Beihang University, Hao Yang/Beihang University, Daocheng Fu/Beihang University, Licheng Wen/Beihang University, Pinlong Cai/Beihang University
Action pattern prediction with knowledge-enhanced attention LSTM (TRBAM-25-00966) - A143
Xue Yao/Delft University of Technology, Ziye Qin/Delft University of Technology, Simeon Calvert/Delft University of Technology, Serge Hoogendoorn/Delft University of Technology

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DynFollower: A Deep Reinforcement Learning based Car-Following Model for Smooth and Safe Cut-in Handling (TRBAM-25-01039) - A144
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Mario Ilic/Technische Universitat Munchen, Mathias Pechinger/Technische Universitat Munchen, Tanja Niels/Technische Universitat Munchen, Evald Nexhpi/Technische Universitat Munchen, Klaus Bogenberger/Technische Universitat Munchen
A Proactive Social Force Model (PSFM) Framework to Support Coordination between Human-Driven and Autonomous Vehicles (TRBAM-25-06424) - A260
Faruk Ahmic/Monash University, Hai Vu/Monash University, Wynita Griggs/Monash University
Towards Developing Socially-Compliant Automated Vehicles: State of the Art, Experts Expectations, and a Conceptual Framework (TRBAM-25-06458) - A261
Yongqi Dong/Delft University of Technology

3213

Tuesday, 06:00 p.m. - 07:30 p.m., Convention Center, Hall A
Safety Performance and Analysis for Safe Road Users and Safe Speeds
Raul Avelar, Insurance Institute for Highway Safety, presiding
Sponsored By Standing Committee on Safety Performance and Analysis

Join the TRB Committee on Safety Performance and Analysis for a selection of papers related to safer road users, including pedestrian, bicyclists, micromobility, and human factors. Additionally, papers related to safe speeds are included during this time.

Right-Turn Safety for Pedestrians: Insights from Multilevel Models of Conflicts in Utah (TRBAM-25-01356) - B518
Atul Subedi/Utah State University, Patrick Singleton/Utah State University, Alyssa Gaither/Utah State University, Michelle Mekker/Utah State University
Joint Analysis of E-bike Crash Types and Injury Severity at Different Locations Using a Copula-based Approach (TRBAM-25-03101) - B528
Yuntong Zhou/Beijing University of Technology, Mohamed Abdel-Aty/Beijing University of Technology, Xin Gu/Beijing University of Technology, Yanyan Chen/Beijing University of Technology
Exploring the Spatial Heterogeneity in Non-Motorized Vehicle Crashes on Urban Roads (TRBAM-25-03664) - B530
Chunting Nie/Tongji University, Xuesong Wang/Tongji University, Heng Wei/Tongji University, Xueyu Zhang/Tongji University, Xuefang Zhang/Tongji University, Lulu Zhou/Tongji University
Analysis of Crashes Involving Micromobility Devices (TRBAM-25-05580) - B519
Enock Mwambeleko/Florida International University, Priyanka Alluri/Florida International University, Thobias Sando/Florida International University, HM Nayem/Florida International University, Amy Aida/Florida International University, Janeroze Matyenyi/Florida International University
Bicycle Crash Incidents in San Francisco Before, During and After COVID-19 (TRBAM-25-05655) - B520
Masuma Mollika Miti/University of California, Berkeley, Jean C. Doig Godier/University of California, Berkeley, Julia B. Griswold/University of California, Berkeley
(continued)

Factors Influencing the Severity of Personal Mobility Device Accidents: A Decision-Tree Method (TRBAM-25-03741) - B525
Haebin Park/Korea Advanced Institute of Science and Technology, Sunghoon Jang/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology
Exploring the Effect of Speed on Crash Frequency: A Negative Binomial Lindley Approach (TRBAM-25-05534) - B521
Deepak Shah/Kentucky Transportation Center, Eugene Boasiako Antwi/Kentucky Transportation Center, Xu Zhang/Kentucky Transportation Center, Mei Chen/Kentucky Transportation Center
Assessing Pedestrian Safety: Risk Factors in Georgia's Pedestrian-Vehicle Crashes (TRBAM-25-00524) - B464
Shinah Park/Georgia Institute of Technology, Gulsah Akar/Georgia Institute of Technology
Freeway Crash Risk Prediction using Deep Forest with SHAP and Detailed Risky Driving Behavior Data (TRBAM-25-00613) - B526
Xiao-chi Ma/Southeast University, Zhongxing Che/Southeast University, Yun-hao Zhou/Southeast University, Jian Lu/Southeast University, Yiik Diew Wong/Southeast University
Evaluating the Safety Impact of Mid-block Pedestrian Signals (MPS) (TRBAM-25-01266) - B527
Md Jamil Ahsan/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Ahmed Abdelrahman/University of Central Florida
Unveiling the Determinants of Injury Severities in E-Scooter Crashes: A Latent Class Binary Logit Analysis of Single and Multiple-Vehicle Crashes (TRBAM-25-01286) - B522
Grigorios Fountas/Aristotle University of Thessaloniki, Achille Fonzone/Aristotle University of Thessaloniki, Abbas Sheykhfard/Aristotle University of Thessaloniki, Socrates Basbas/Aristotle University of Thessaloniki
Assessing the Safety Nature of Pedestrian-Vehicle Interaction at Non-signalized Crosswalks (TRBAM-25-02110) - B537
Mo Zhou/Chang'an University, Ying Yan/Chang'an University, Zhending Tian/Chang'an University, Wenxuan Wang/Chang'an University, Hongliang Ding/Chang'an University
Investigating the Association Between Bike Sharing Docks and Cyclist Crash Frequency in Greater London (TRBAM-25-02123) - B532
Michael Forrest/University of Southampton, Shahram Heydari/University of Southampton, Jingjing Zhao/University of Southampton
Developing Equity-Aware Safety Performance Functions for Identifying Hotspots of Pedestrian-Involved Crashes (TRBAM-25-02628) - B523
Guocong Zhai/Old Dominion University, Kun Xie/Old Dominion University, Di Yang/Old Dominion University, Hong Yang/Old Dominion University
Developing Road-HFACS: A Novel Approach Quantifying Human Factors Analysis and Classification System with Bayesian Network for Road Traffic Incidents (TRBAM-25-03697) - B531
Xuesong Wang/Tongji University, Yanru Zhou/Tongji University, Ashleigh Filtness/Tongji University, Chao Wang/Tongji University, Xiaowei Tang/Tongji University, Shikun Liu/Tongji University
Bayesian Networks in Identifying Patterns between Pedestrian and Driver Behavioral Interactions (TRBAM-25-03750) - B535
Subasish Das/Texas State University, Boni Kutela/Texas State University
A Novel Approach for Instantaneous Traffic Near-Miss Identification Based On Vehicle Speeds And Proximity At Signalized Intersections (TRBAM-25-03898) - B524
Pengfei (Taylor) Li/University of Texas, Arlington
Developing a Short-Term and Rapid Road Traffic Safety Assessment Indicator: Copula-Based Joint Modeling of Crash and Risky Driving Behavior Count (TRBAM-25-03910) - B538
Jia Li/Beijing University of Technology, Guan jie Li/Beijing University of Technology
Understanding Body Injury Patterns and Associated Severity of Micromobility Users Using Bayesian Networks and Text Mining (TRBAM-25-04710) - B534
Abdul Ngereza/Cleveland State University, Boni Kutela/Cleveland State University, Panick Kalambay/Cleveland State University, Angela Kitali/Cleveland State University, Emmanuel Kidando/Cleveland State University
Injury Severity Analysis of E-scooter Riders in England (TRBAM-25-05036) - B533
Jingjing Zhao/University of Southampton, Shahram Heydari/University of Southampton
Comprehensive Safety Impacts Analyses of the Augmented Reality Warning and Navigation System (TRBAM-25-05286) - B539
Zhiyang He/Tongji University, Ling Wang/Tongji University, Yingying Xing/Tongji University, Wanjing Ma/Tongji University
Unveiling the Speeding Behavior: Assessing the Speeding Risks and Driver Injury Severities in Single-Heavy Truck Crashes (TRBAM-25-05322) - B540
Asif Mahmud/Michigan Department of Transportation, Mouyid Islam/Michigan Department of Transportation

(continued)

Spatial Statistical Analysis of Bicycle Crashes in Ohio (TRBAM-25-05417) - B541
Modabbir Rizwan/No Organization, Bhuiyan Alam/No Organization, Yaw Kwarteng/No Organization
Evaluation of Surrogate Indicators for Pedestrian Safety at Unsignalized Roundabouts Crosswalks: An Extreme Value Theory Approach (TRBAM-25-05448) - B542
Norran Novat/Western Michigan University, Sia Mwende/Western Michigan University, Hoping Raising/Western Michigan University, Valerian Kwigizile/Western Michigan University, Jun-Seok Oh/Western Michigan University
Accounting for Gender and Age Differences in the Duration between a Previous Non-fatal Crash and a Fatal Crash (TRBAM-25-06072) - B536
Richard Dzinyela/Alabama Transportation Institute, Kofi Adanu/Alabama Transportation Institute, Hardik Gupta/Alabama Transportation Institute, Pranik Koirala/Alabama Transportation Institute, Nawaf Alnawmasi/Alabama Transportation Institute, Subasish Das/Alabama Transportation Institute, Dominique Lord/Alabama Transportation Institute
Effect of Rider Kinematics and Expected Speed Differences on the Sideswipe Crash Risk of Powered Two-Wheelers: A Copula-Based Proactive Safety Approach (TRBAM-25-06304) - B543
Pranab Kar/University of Memphis, Mallikarjuna Chunchu/University of Memphis, Sabyasachee Mishra/University of Memphis
Investigating the Impact of Speed Variation on Intersection Crashes Using Pervasive Traffic Data (TRBAM-25-05799) - B544
Mehraab Nazir/Indian Institute of Technology, Delhi, Sai Chand/Indian Institute of Technology, Delhi, Rahul Goel/Indian Institute of Technology, Delhi, Abdul Hannan Azad/Indian Institute of Technology, Delhi, Akash Shanbhog/Indian Institute of Technology, Delhi
An Analysis of the Safety Impact of Changing Speed Limit From 55 MPH to 60 MPH on Two-Lane, Two-Way Road Segments In Minnesota (TRBAM-25-03811) - B545
Raghavan Srinivasan/UNC Highway Safety Research Center, Taha Saleem/UNC Highway Safety Research Center, Bo Lan/UNC Highway Safety Research Center, Richard Storm/UNC Highway Safety Research Center, Rebecca Herring/UNC Highway Safety Research Center, Elizabeth Wemple/UNC Highway Safety Research Center
Assessing Disparities in Driver Exposure and Fatal Crash Risks in Nighttime Driving (TRBAM-25-04444) - B546
Xi Zhang/AAA Foundation for Traffic Safety, Rebecca Steinbach/AAA Foundation for Traffic Safety
Analyzing Speed-Difference Impact on Freeway Joint Injury Severities of Leading-Following Vehicles Using Statistical and Data-Driven Models (TRBAM-25-01399) - B529
Chenzhu Wang/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Lei Han/University of Central Florida, Said Easa/University of Central Florida, Chenzhu Wang/University of Central Florida
How Driver Socioeconomic Profiles Relate to Speeding and Hard Braking Events on Roads: A Perspective Based on Departure Locations Reflected by Vehicle Trajectory Data (TRBAM-25-01522) - B547
Suoyao Feng/University of Nevada, Reno, Seri Park/University of Nevada, Reno, Aobo Wang/University of Nevada, Reno
A Geographic Assessment of Near-Miss Events Involving Vehicles and Vulnerable Road Users in Reno and Sparks, Nevada (TRBAM-25-04567) - B548
Scott Kelley/University of Nevada, Reno, Cole Peiffer/University of Nevada, Reno, Fei Guan/University of Nevada, Reno, Hao Xu/University of Nevada, Reno, James Okorocha/University of Nevada, Reno, Kelly Dunn/University of Nevada, Reno, Carlos Cardillo/University of Nevada, Reno

Wednesday, January 08 (Sessions 3202, 4001 - 4025, 4027 - 4094)

4001

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 102B

Trust in Vehicle Automation

Shannon Roberts, University of Massachusetts, Amherst, presiding

Azadeh Dinparastdjadid, Waymo, presiding

Sponsored By Standing Committee on Human Factors of Vehicles, Joint Subcommittee on Human Factors in Road Vehicle Automation (with ACH40)

Effects of Trust to Automated Vehicle on Drivers' Mental Workload: A Naturalistic Driving Study (TRBAM-25-03362)

Dingan Ni/Wuhan University, Kai Tian/Wuhan University, Wenhui Guo/Wuhan University, Hui Zhang/Wuhan University, Naikan Ding/Wuhan University

To Apologize or Not to Apologize? Trust Repair After Automated Vehicles' Mistake (TRBAM-25-03472)

Yunhao Cai/Zhejiang University, Yueying Chu/Zhejiang University, Zhigang Xu/Zhejiang University, Peng Liu/Zhejiang University

Trust Dynamics in Driving Automation: The Effects of Initial Expectations and Error Consistency (TRBAM-25-01231)

Xiaoxuan Cheng/Rice University, Jing Chen/Rice University

Examining Driving Behaviors and Trust in An In-vehicle Warning System Under Uncertainty: A Driving Simulator Study (TRBAM-25-04121)

Cong Zhang/Purdue University, Chi Tian/Purdue University, Tianfang Han/Purdue University, Yunfeng (Cindy) Chen/Purdue University, Jiansong Zhang/Purdue University, Yiheng Feng/Purdue University

An Investigation into How Vehicle Reliability, Confidence Information, and Repeated Exposure Affect Trust in Automated Vehicles (TRBAM-25-01205)

Myeongkyu Lee/Purdue University, Brandon Pitts/Purdue University

4002

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon C

Doctoral Student Research in Transportation Operations, Part 1 (Part 2, Session 4052)

Huaguo Zhou, Auburn University, presiding

Michael Knodler, University of Massachusetts, Amherst, presiding

Sponsored By Section - Operations, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Intelligent Transportation Systems, Standing Committee on Freeway Operations, Standing Committee on Traffic Signal Systems, Standing Committee on Vehicle-Highway Automation, Standing Committee on Traffic Flow Theory and Characteristics, Standing Committee on Traffic Control Devices

This annual session consists of presentations by doctoral students on cutting-edge research related to transportation operations and traffic control, providing them with a platform to showcase their skills.

A Variable Time Gap Feedback Policy for String Stable Adaptive Cruise Control (P25-20251)

Shaimaa El-Baklish/IVT ETH Zürich

Systematic Management of Signalized Intersections with Vehicle Trajectory Data (P25-20253)

Zachary Jerome/University of Michigan, Ann Arbor

FAST: Freeway Anomaly Spatio-temporal Detection via Graph Autoencoder (P25-20254)

Junyi Ji/Vanderbilt University

Advanced Mobility Analytics Applications Using High-resolution Vehicle Trajectory Data (P25-20256)

Ericka Mora Campos/University of Nevada, Reno

Prospecting the Use of Existing Traffic Signal Video Detection Technology for Collecting Reliable Count Data (P25-20260)

Kshitij Sharma/Upper Great Plains Transportation Institute

CoopSECRM2D: Cooperative Multi-Agent Reinforcement Learning for Efficient Freeway On-Ramp Merging (P25-20261)

Tianyu Shi/University of Toronto

(continued)

Exploring the Use of Probe Vehicle Telematics Data for Freeway Detector Speed Accuracy Check and Congestion Monitoring (P25-20263)
Jianyuan Xu/California Department of Transportation

4003

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Salon A
National Transportation Safety Board Investigations
Carl Schultheisz, National Transportation Safety Board (NTSB), presiding
Kristin Poland, National Transportation Safety Board (NTSB), presiding
Sponsored By Section - Safety

Runway Incursion and Overflight, Austin, Texas (P25-20922)
Marie Moler/National Transportation Safety Board (NTSB)
The Doctor Is In: National Transportation Safety Board Medical Investigations (P25-20923)
Turan Kayagil/National Transportation Safety Board (NTSB)
Fern Hollow Bridge Collapse, Pittsburgh, Pennsylvania (P25-20924)
Adrienne Lamm/National Transportation Safety Board (NTSB)
Summary of the East Palestine, Ohio Train Accident Investigation (P25-20925)
Ruben Payan/National Transportation Safety Board (NTSB)

4004

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 103A
The Future of Safety Performance and Analysis
Derek Troyer, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Safety Performance and Analysis

The session will highlight papers supporting the advancement of the Committee on Safety Performance and Analysis Triennial Strategic Plan.

Enhancing Intersection Safety through Kinetic Energy Management and Categorical Crash Data Analysis (TRBAM-25-03330)
Thomas Cabe/Georgia Institute of Technology, Viviana Abadia/Georgia Institute of Technology, Yichang Tsai/Georgia Institute of Technology
Better Safety Analyses through Smarter Data: Adding Open-Street-View and Traffic Calibrated-LBS Data to Pedestrian Crash Analysis in Lincoln, NE (TRBAM-25-04099)
Mohammad Elayan/University of Nebraska, Lincoln, Sagun Karki/University of Nebraska, Lincoln, Jason Hawkins/University of Nebraska, Lincoln
Leveraging Connected Vehicle Trajectories to Estimate Driver Compliance at Stop-Controlled Intersections: A Novel Approach (TRBAM-25-05208)
Raghupathi Kandiboina/Iowa State University, Skylar Knickerbocker/Iowa State University, Neal Hawkins/Iowa State University, Anuj Sharma/Iowa State University
Injury Severity Analysis along Major Arterial Roads in Kentucky Using High-Resolution Weather Data (TRBAM-25-03891)
Tathagatha Khan/Western Kentucky University, Kirolos Haleem/Western Kentucky University, Arunabha Banerjee/Western Kentucky University, Bharat Pathivada/Western Kentucky University

4005

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 150A

Toward Effective and Sustainable Data Management and Governance

April Blackburn, Rawlins IC, presiding

Sponsored By Standing Committee on Information Systems and Technology, Standing Committee on Statewide/National Transportation Data and Information Management, Standing Committee on Geographic Information Science, Standing Committee on Information and Knowledge Management

In the seven years since publication of NCHRP Report 508 on Data Management and Governance Practices (2017), state agencies remain at varying maturity levels with respect to establishing and sustaining organizational principles and policies around enterprise data. Towards that end, NCHRP has initiated several new projects to better understand the state of practice and key challenges facing state agencies in this area. This session invites state agencies to share their success stories and lessons learned in data management and governance through a panel led, audience participation format. The panel will include state data professionals and members of the NCHRP 20-44(48) project on Peer Exchanges on Data Management and Governance Practices.

Panel Moderator (P25-20402)

Steve Towns/Government Technology Magazine

NCHRP 20-44(48) Lead Investigator (P25-20403)

Andrew Graettinger/University of Wisconsin, Milwaukee

4006

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 150B

ChatGPT and Beyond: A Large Language Model–Based Transportation Perspective

Ruimin Ke, Rensselaer Polytechnic Institute (RPI), presiding

Sponsored By Standing Committee on Artificial Intelligence and Advanced Computing Applications

This session highlights the transformative impact of large language models (LLMs) on the transportation field. Presentations will delve into how LLMs like ChatGPT are revolutionizing various aspects of traffic and transportation engineering. The session will showcase practical applications, demonstrating how these models streamline operations and offer innovative solutions, including V2X communication, vehicular cybersecurity, scene understanding, safety, and traffic management.

BEV-LLM: Bird's-Eye-View Reasoning on Driving Scene with Large Language Model (TRBAM-25-00427)

Sung Yeon Park/Purdue University, Ji Hyuk Kang/Purdue University, Minjae Lee/Purdue University, Hahyeon Choi/Purdue University, Yoonah Park/Purdue University, Juhwan Cho/Purdue University, Adam Lee/Purdue University, Ziran Wang/Purdue University

Towards Responsible and Reliable Traffic Flow Prediction with Large Language Models (TRBAM-25-01509)

Meixin Zhu/Hong Kong University of Science and Technology (Guangzhou), Xusen Guo/Hong Kong University of Science and Technology (Guangzhou), Qiming Zhang/Hong Kong University of Science and Technology (Guangzhou), Junyue Jiang/Hong Kong University of Science and Technology (Guangzhou), Mingxing Peng/Hong Kong University of Science and Technology (Guangzhou), Hao Frank Yang/Hong Kong University of Science and Technology (Guangzhou)

SafetyAssistant: A Vision-Based Traffic Safety Analysis Framework Utilizing Large Language Models (TRBAM-25-05210)

Ruixuan Zhang/New York University, Juexiao Zhang/New York University, Zilin Bian/New York University, Chen Feng/New York University, Kaan Ozbay/New York University

Retrieval Augmented Generation-Based Large Language Models for Bridging Transportation Cybersecurity Legal Knowledge Gaps (TRBAM-25-05469)

Khandakar Ashrafi Akbar/University of Texas, Dallas, Md Nahiyan Uddin/University of Texas, Dallas, Latifur Khan/University of Texas, Dallas, Trayce Hockstad/University of Texas, Dallas, Mizan Rahman/University of Texas, Dallas, Mashrur Chowdhury/University of Texas, Dallas, Bhavani Thuraisingham/University of Texas, Dallas

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V2X-LLM: Improving Vehicle-to-Everything Integration and Understanding with Large Language Models (TRBAM-25-05915)
Keshu Wu/Texas A&M University, RUI GAN/Texas A&M University, Junwei You/Texas A&M University, Yang Cheng/Texas A&M University, Pei Li/Texas A&M University, Jingwen Zhu/Texas A&M University, Steven Parker/Texas A&M University, Bin Ran/Texas A&M University, David Noyce/Texas A&M University

4007

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 151A
New Topics in Network Design and Equilibrium
Alireza Talebpour, University of Illinois, Urbana-Champaign, presiding
Sponsored By Standing Committee on Transportation Network Modeling

This session explores innovative studies in network design and equilibrium. Presentations will examine network partitioning to computational and operational efficiency, link- and path-based incentives for network-level congestion management, combined optimization of network traffic and environmental factors, multi-modal transport networks, quantum optimization, and impacts of shared mobility on congestion, infrastructure conditions, accessibility, and environment.

A Fundamental-Diagram-Informed Spatial Partitioning Method for Heterogeneous Traffic Networks (TRBAM-25-01670)
Yu Zhao/Southeast University, Fan Ding/Southeast University, Huachun Tan/Southeast University, Zhao Liu/Southeast University
Evaluating Link and Path Incentives: Which is the Most Effective Strategy for Mitigating Traffic Congestion? (TRBAM-25-01914)
Ramin Niroumand/Aalto University, Shaghayegh Vosough/Aalto University, Claudio Roncoli/Aalto University, Marco Rinaldi/Aalto University, Richard Connors/Aalto University
Pareto Network Optimization with Environmental Measures via Surrogate-Assisted Cross Entropy Method (TRBAM-25-02526)
Zhongyang Lu/City University of Hong Kong, Andy Chow/City University of Hong Kong
A Quantum Optimization Algorithm for Electric Vehicle Charging Station Placement for Intercity Trips (TRBAM-25-05285)
Tina Radvand/University of Illinois, Urbana-Champaign, Alireza Talebpour/University of Illinois, Urbana-Champaign
Traffic Assignment of Multi-Modal Transport Networks Based on An Augmented Link-Based Super-Network Model (TRBAM-25-03977)
Dingshan Sun/Delft University of Technology, Marco Rinaldi/Delft University of Technology, Victor Knoop/Delft University of Technology
Integrated Traffic Assignment Model for Evaluating Shared Mobility Impacts on Urban Transportation System (TRBAM-25-05340)
Mobina Nankali/University of Minnesota, Michael Levin/University of Minnesota

4008 **CM** (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 151B
Considerations for Structure-Borne Noise and Vibration Analysis
Shannon McKenna, Cross-Spectrum Acoustics Inc., presiding
Ahmed El-Aassar, Gannett Fleming, Inc., presiding
Sponsored By Standing Committee on Transportation-Related Noise and Vibration

Transportation sources can generate noise and vibration and induce structure-borne noise that can be annoying to occupants or disruptive to sensitive land uses (e.g., residential), as well as special land uses such as research laboratories or recording studios. This session addresses practical considerations related to transportation-induced structure-borne noise and vibration.

Study on Vibration Response of Surrounding Building Induced by Subway Train Operations (TRBAM-25-02197)
Xi Zhang/Tongji University, Pingbao Xu/Tongji University, Honggui Di/Tongji University

(continued)

Noise Distribution Assessment on Double-U Bridges with Different Types of Sound Barriers (TRBAM-25-02210)
Mengyi Wang/Tongji University, Yu Zhou/Tongji University, Zhongning Cheng/Tongji University
Subway-Caused Vibration Propagation Law Inside Buildings Near the Metro Tunnel (TRBAM-25-02918)
Xi Zhang/Tongji University, Pingbao Xu/Tongji University, Honggui Di/Tongji University

4009

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 202B
National Environmental Policy Act and Environmental Justice Law and Policy Update
Edward Boling, Perkins Coie, LLP, presiding
Sponsored By Standing Committee on Environmental Issues in Transportation Law

This annual presentation on new developments in environmental impact assessment law and policy will feature presenters from the Council on Environmental Quality (CEQ) and U.S. Department of Transportation (DOT) discussing the 2024 CEQ rulemaking that updated CEQ NEPA regulations to reflect the Fiscal Responsibility Act amendments to NEPA, Biden Administration policies, and recent developments in cases including the Supreme Court oral argument of Seven County Infrastructure Coalition v. Eagle County. Invited speakers include senior officials of CEQ and DOT.

Panel Member (P25-20899)
Jomar Maldonado/Council on Environmental Quality, Carolyn Nelson, P.E./Pipeline and Hazardous Materials Safety Administration (PHMSA)

4010

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 201
Concrete Bridge Capacity Considerations
Andrew Wagner, HDR, presiding
Sponsored By Standing Committee on Concrete Bridges

Biaxial Bending Numerical Investigation of Prestressed Concrete Girder Due to Asymmetric Prestressing Strands (TRBAM-25-06212)
Haitham Abdelmalek/Missouri University of Science and Technology, Mohanad Abdulazeez/Missouri University of Science and Technology, Ahmed Ibrahim/Missouri University of Science and Technology, Mohamed ElGawady/Missouri University of Science and Technology
Flexure Capacity Prediction of Bridge Deck Overlaid or Repaired with UHPC (TRBAM-25-04388)
Mina Gerges/University of Nebraska, Lincoln, Akbota Aitbayeva/University of Nebraska, Lincoln, Jiong Hu/University of Nebraska, Lincoln, George Morcous/University of Nebraska, Lincoln
Evaluation of Structural Cracking in Reinforced and Prestressed Concrete Bridges: A Review and a Machine Learning-Based Framework (TRBAM-25-03951)
MOHAMED LASHEEN/University at Buffalo, SUNY, Pinar Okumus/University at Buffalo, SUNY, Negar Elhami-Khorasani/University at Buffalo, SUNY
Evaluation of Torsional Strength Design Expressions Using Numerical Analysis of Post-tensioned Girders (TRBAM-25-05171)
Mi Jin Jung/University at Buffalo, SUNY, Pinar Okumus/University at Buffalo, SUNY, Frosch Frosch/University at Buffalo, SUNY

4011

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 101
Asphalt Pavement Construction Compaction and Longitudinal Joints
Adam Hand, University of Nevada, Reno, presiding
Sponsored By Standing Committee on Asphalt Pavement Construction and Rehabilitation

This session bridges the topics of laboratory and field compaction as well as joint density while integrating application of intelligent compaction and thermal profiling.

(continued)

A Mechanistic-Informed Data-Driven Model for Compaction of Asphalt Pavements Incorporating Gyratory and Intelligent Compaction (TRBAM-25-04231)
Tianhao Yan/FHWA - Turner-Fairbank Highway Research Center, Maryam Sakhaeifar/FHWA - Turner-Fairbank Highway Research Center
Compaction and Early-Age Curing Evaluation of Emulsion-Based Cold Recycled Layers (TRBAM-25-05820)
Amarjeet Tiwari/Indian Institute of Technology, Madras, Dheeraj Bonagiri/Indian Institute of Technology, Madras, Bhanoj Dokku/Indian Institute of Technology, Madras, Arpan Ghosh/Indian Institute of Technology, Madras, Stephane Charmot/Indian Institute of Technology, Madras, Murali Krishnan/Indian Institute of Technology, Madras
Strategies to Construct Durable Longitudinal Joints in Asphalt Pavements: Laboratory and Field Investigations (TRBAM-25-05231)
Vipul Chitnis/Oregon State University, Mayank Sukhija/Oregon State University, Erdem Coleri/Oregon State University
Missouri DOT's Verification Procedures for Intelligent Compaction and Paver-Mounted Thermal Profiling Systems (TRBAM-25-01427)
Amanda Gilliland/Transtec Group, Inc., George Chang/Transtec Group, Inc., S Subramanian/Transtec Group, Inc., Jason Blomberg/Transtec Group, Inc., Jacob Graessle/Transtec Group, Inc.

4012

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 204AB
Freeze-Thaw Effects on Pavement Materials
Benjamin Worel, Minnesota Department of Transportation, presiding
Sponsored By Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials

Session highlighting methods to understand the effects of freeze-thaw and seasonal movement of pavement materials and ways to mitigate their effects to improve long-term pavement performance

Evaluating Thermal Characteristics of Foam Glass Aggregates as an Insulation Layer in Asphalt Pavements (TRBAM-25-04706)
Lakshmana Ravi Raj Gali/Rowan University, Arunkumar Goli/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Wade Lein/Rowan University
Understanding Freeze-thaw in Soils: An Analysis of Salt Effects Using Different Freeze-Thaw Protocols (TRBAM-25-05243)
Mohammad Wasif Naqvi/Michigan State University, Md Fyaz Sadiq/Michigan State University, Bora Cetin/Michigan State University, John Daniels/Michigan State University
Evaluating the Performance of Wicking Geotextile Under Freeze-Thaw Conditions Below Pavement Infrastructure (TRBAM-25-02624)
Shanmukha Sai Avinash Gonnabathula/Texas A&M University, College Station, Nripojyoti Biswas/Texas A&M University, College Station, Krishneswar Ramineni/Texas A&M University, College Station, Md Fyaz Sadiq/Texas A&M University, College Station, Bora Cetin/Texas A&M University, College Station, Raul Velasquez/Texas A&M University, College Station, Anand Puppala/Texas A&M University, College Station
Design and Construction of Engineered Water Repellency at MnROAD (TRBAM-25-04140)
Emmanuel Adeyanju/University of North Carolina, Charlotte, Yunesh Saulick/University of North Carolina, Charlotte, MICHEAL UDUEBOR/University of North Carolina, Charlotte, John Daniels/University of North Carolina, Charlotte, Bora Cetin/University of North Carolina, Charlotte

4013

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 202A

Paving the Way to Low-Carbon Transportation Materials

John Harvey, University of California, presiding

Sponsored By Section - Pavements

Under the Low Carbon Transportation Materials (LCTM) grants program administered by the FHWA, $2 billion has been made available to states, cities, and other organizations for the adoption of construction materials with lower levels of greenhouse gas emissions (GHG). This lectern session will feature presentations that describe implementation of low carbon materials programs specific to pavements in different regions. The presentations will focus on key aspects like EPD benchmarking and ways to lower the embodied carbon of construction materials. In addition, presentations will also cover the potential hurdles and discuss ongoing research efforts to expand the pavement LCA scope beyond cradle-to-gate.

GWP Benchmarking of Asphalt Mixtures to Support Low-Carbon Procurement and LCA-Based Strategies to Reduce Mix GWP (TRBAM-25-06154)

Adeoluwa Gbolade/Oklahoma State University, Debakanta Mishra/Oklahoma State University

Development of a Consumption-weighted Benchmarking Methodology for Asphalt Cradle-to-gate Global Warming Potential Impacts in Colorado (TRBAM-25-05412)

Daniel Donado-Quintero/University of Colorado, Boulder, Christopher Senseney/University of Colorado, Boulder

Assessment of Massachusetts Asphalt Mixtures: EPDs and Cradle-to-Grave LCA of High RAP Mixes and Targeted Overlay Pavements (TRBAM-25-01275)

Cameron Ferreira/University of Massachusetts, Dartmouth, Walaa Mogawer/University of Massachusetts, Dartmouth, Egemen Okte/University of Massachusetts, Dartmouth

Determining CO2 Emissions for Balanced Mix Design Thresholds Using Environmental Product Declarations for Asphalt Mixtures with Varying NMAS (TRBAM-25-02188)

Kai Xin/Michigan Technological University, Amlan Mukherjee/Michigan Technological University, Zhanping You/Michigan Technological University

4014

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 207B

Assessing Non-Conventional Materials for Flexible Pavement Applications

Lance Malburg, NACE / Dickinson County Road Commission, presiding

Sponsored By Standing Committee on Design and Rehabilitation of Asphalt Pavements

This session focuses on assessing design, rehabilitation, and behavior of flexible pavements that utilize nonconventional materials for roadway applications.

Enhancing Asphalt Pavement Durability with Rubber Pellets: A Case Study in Michigan (TRBAM-25-04806)

Dongzhao Jin/Michigan Technological University, Sepehr Mohammadi/Michigan Technological University, Kai Xin/Michigan Technological University, Lei Yin/Michigan Technological University, Meng Wu/Michigan Technological University, Qi Ren/Michigan Technological University, Zhanping You/Michigan Technological University

Finite Element-Based Long-Term Rutting Prediction for Gussasphalt Bridge Deck Pavement (TRBAM-25-00164)

ZeZhen Dong/Southeast University, Junqing Zhu/Southeast University, Tao Ma/Southeast University, Shan Jiang/Southeast University

Reducing the Carbon Footprint of Asphalt Pavement Rehabilitation Through Full-Depth Reclamation (TRBAM-25-05267)

Zila Mascarenhas/Universidade de Sao Paulo, Fernanda Belizario-Silva/Universidade de Sao Paulo, Frederico Guatimosim/Universidade de Sao Paulo, Raimi da Silva/Universidade de Sao Paulo, Guilherme Linhares/Universidade de Sao Paulo, Celso Romeriro Junior/Universidade de Sao Paulo, Kamilla Vasconcelos/Universidade de Sao Paulo

Forensic Evaluation of a Dry-Process Rubber-Modified Flexible Asphalt Pavement (TRBAM-25-03740)

Matthew Kmetz/Auburn University, Samina Samrose/Auburn University, David Timm/Auburn University, Carolina Rodezno/Auburn University

(continued)

Investigating the Performance of Rehabilitation Treatments for Flexible Pavement under Different Climate Scenarios Using Machine Learning Techniques (TRBAM-25-05234)
Sajib Khan/Carleton University, Jalal Barzegaran/Carleton University, Kamal Hossain/Carleton University, Surya Teja Swarna/Carleton University

4015

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146B

Responder Ready: Elevating Responder Safety and Incident Reporting with Innovative Traffic Incident Management
Scott Parr, Embry Riddle Aeronautical University, presiding
Sponsored By Section - Transportation Systems Resilience, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Transportation Safety Management Systems, Standing Committee on Traffic Law Enforcement, Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity

As traffic incident management (TIM) evolves, there is a critical need to adopt innovative strategies that prioritize responder safety and address the complexities of secondary and struck-by incidents. This session will explore the latest advancements in TIM, with a particular focus on enhancing data collection and reporting for secondary crashes, improving safety measures for responders, and integrating emerging technologies, including connected and autonomous vehicles (CAVs), into incident management practices. Attendees will gain valuable insights into how these innovations are transforming the field, providing new tools and approaches for reducing risks, improving safety outcomes and ensuring efficient incident response on our roadways.

Traffic Incident Management Responder Line-of-Duty Deaths and Injuries Data Collection and Reporting (P25-20603)
William Jenaway/King of Prussia Volunteer Fire Company
Improving Roadside Responder Crash Data (P25-20664)
Lindsay Arnold/AAA Foundation for Traffic Safety
Impacts of Connected, Automated Vehicle Technologies on Traffic Incident Management Response (P25-20746)
Patrick Son/Gannett Fleming, Inc.

4016

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146C

Building Capacity: Training and Educational Needs for Integrating Climate Resilience into Transportation Practice
Aimee Flannery, Jacobs, presiding
Sponsored By Standing Committee on Extreme Weather and Climate Change Adaptation

As climate change poses increased risk to transportation systems, the need for a workforce equipped with knowledge and skills to integrate climate resilience into practice is urgent. This session will address training and educational needs necessary to prepare transportation professionals for the challenges ahead. Key topics include identifying skills gaps, curriculum development, professional development programs, and collaboration with academic institutions. By the end of this session, participants will have a clearer understanding of training needs within the transportation sector and practical ideas for developing educational initiatives that promote climate resilience.

4017 CM (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 140

Resiliency and Electric Vehicle Charging

Rachael Nealer, U.S. Department of Energy (DOE), presiding

Sponsored By Standing Committee on Alternative Fuels and Technologies

EVs reduce emissions, are more efficient, and help to address the climate crisis in the long term, but recent extreme weather events highlight the need for critical planning and interventions around a changing climate related to a new technology in the short term. This session will explore resiliency planning around temperature impacts, evacuation routes, and household power sources to further the field in discussions around EVs strengths and needed improvements to support overall resiliency.

Understanding Intended Electric Vehicle Usage and Travel Behaviour during Wildfire Evacuations (TRBAM-25-00974)

Mohammad Hossein Babaei/University of Alberta, Stephen Wong/University of Alberta

Mixed Fleet of Diesel and Electric Trucks in a Mixed Pickup and Delivery Problem with Temperature Effect on Electricity Consumption and Charging (TRBAM-25-05216)

Hanieh Rastegar Moghaddam Bajestani/University of Illinois, Chicago, Amir Shafiee/University of Illinois, Chicago, Xi Cheng/University of Illinois, Chicago, Jane Lin/University of Illinois, Chicago

Effect of Weather Conditions, Battery Size, and Commuter types on the Performance and Charging Needs of Electric Vehicles (TRBAM-25-05564)

Rabih Al Haddad/Argonne National Laboratory, Charbel Mansour/Argonne National Laboratory, Maroun Nemer/Argonne National Laboratory, Natalia Zuniga-Garcia/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory

Exploring the Feasibility of Plug-in EV Fleets as Supplemental Power Sources for Household Resiliency (TRBAM-25-06106)

Xiazhi Zhang/University of Hawai'i, Manoa, Krishna Murthy Gurumurthy/University of Hawai'i, Manoa, Joshua Auld/University of Hawai'i, Manoa, Roger Chen/University of Hawai'i, Manoa

Combined Large-Scale Charging Station Location and Long-Haul Electric Truck Routing Problem Incorporating the Effects of Temperature Variation (TRBAM-25-05584)

Xi Cheng/University of Illinois, Chicago, Xueqi Zeng/University of Illinois, Chicago, Amir Shafiee/University of Illinois, Chicago, Hanieh Rastegar Moghaddam Bajestani/University of Illinois, Chicago, Chi Xie/University of Illinois, Chicago, Jane Lin/University of Illinois, Chicago

4018 CM (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 145B

How Is the Intermodal Facility Performing?: Methods for Assessing Places Where Bikes, Buses, Trains, Scooters, and People Interact

Bill Schwartz, Nelson\Nygaard Consulting Associates, presiding

Sponsored By Standing Committee on Passenger Intermodal Facilities

This session focuses on methods for planning, designing, or evaluating innovative facility concepts, as well as reimagining the transit transfer experience. We'll introduce a new metric for evaluating interagency transit connections, explore how mobility hubs influence mode choice, assess user behavior at shared bicycle and transit platforms, and identify optimal locations for park-and-ride facilities using advanced analytical methods.

Quantitative Method for Assessing the Quality of Intermodal/Interagency Connections and Service Integration at Suburban Rail Stations (TRBAM-25-04316)

William Jack Tattersall/University of Toronto, St. George, Amer Shalaby/University of Toronto, St. George

How do Mobility Hubs Change Mode Choice Behavior? (TRBAM-25-06006)

Roxani Gkavra/BOKU University, Oleksandr Rossolov/BOKU University, Yusak Susilo/BOKU University

Evaluation of User Interactions and Preferences of Shared Bicycle and Transit Platforms (TRBAM-25-04373)

Nathan McNeil/Portland State University, Sirisha Kothuri/Portland State University, Jennifer Dill/Portland State University, Chris Monsere/Portland State University, Elizabeth Yates/Portland State University, Julia Plotts/Portland State University

(continued)

An Enhanced Fuzzy AHP Method for Identification of Potential Park-and-ride Facility Locations in Delhi, India (TRBAM-25-00047)
Manaswine Kar/University of Illinois, Chicago, Shubhajit Sadhukhan/University of Illinois, Chicago, Manoranjan Parida/University of Illinois, Chicago

4019 **CM** (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 145A
Demand Response and Paratransit Optimization
Ranjit Godavarthy, North Dakota State University, presiding
Sponsored By Standing Committee on Rural, Intercity Bus, and Specialized Transportation

This session explores innovative strategies to enhance demand-responsive transit (DRT) systems and improve accessibility in suburban and rural areas. Topics such as optimizing garage locations for ADA paratransit services , analyzing fleet sizing for DRT revealing optimal vehicle numbers based on population density and demand patterns, and proposing a spatial assessment framework to evaluate DRT's impact on public transit systems will be presented. Together, these studies provide actionable insights for transport planners and policymakers seeking to improve mobility and reduce car dependency.

Application of Optimization Methods for ADA Paratransit Garage Locations based on Users' Pick-Up and Drop-Off Points (TRBAM-25-01228)
Jinug Lee/Pusan National University, Saewoom Jang/Pusan National University, Mingyu Sung/Pusan National University, Roya Etminani-Ghasrodashti/Pusan National University, Jinuk Hwang/Pusan National University
Optimizing Demand Responsive Transit: A Study on Fleet Size and Service Performance in Munich's Northern Suburbs (TRBAM-25-02142)
Mohammed Zubair/Universitaet der Bundeswehr, Muenchen, Roman Bock/Universitaet der Bundeswehr, Muenchen, Silja Hoffmann/Universitaet der Bundeswehr, Muenchen
How Demand Responsive Transit is Reshaping Public Transit: A Spatial Assessment Framework Based on Causal Impact Inference (TRBAM-25-05883)
Eui-Jin Kim/Ajou University, Dain Oh/Ajou University, Hyunmyung Kim/Ajou University
A tactical planning framework to integrate paratransit with formal public transport systems (TRBAM-25-04137)
Ravi Gadepalli/Transit Intelligence LLP, Prateek Bansal/Transit Intelligence LLP, Geetam Tiwari/Transit Intelligence LLP, Nomesh Bolia/Transit Intelligence LLP

4020 **CM** (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 143AB
Aviation Industry Review and Outlook
John Heimlich, Airlines for America, presiding
Sponsored By Standing Committee on Aviation Economics and Forecasting, Standing Committee on Aviation System Planning

Representatives from major original equipment manufacturers (OEMs), international organizations, and specialized segments like cargo and business aviation will present their respective forecasts. The session is designed to give aviation professionals a comprehensive view of upcoming trends, challenges, and opportunities.

FAA Perspective (P25-20091)
Roger Schaufele/Federal Aviation Administration (FAA)
Rolland Vincent Associates Perspective (P25-20092)
Dean Roberts/Rolland Vincent Associates, LLC
Melius Research Perspective (P25-20093)
Conor Cunningham/Melius Research
Breeze Airways Perpsective (P25-20094)
Lukas Johnson/Breeze Airways

4021 **CM** (1.75)

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 143C

Managing the Safety Impact of Transformational Changes on Aviation

Gaël Le Bris, WSP, presiding

Carla Hackworth, Federal Aviation Administration (FAA), presiding

Sponsored By Standing Committee on Aviation Safety, Security and Emergency Management, Standing Committee on Airfield and Airspace Performance, Standing Committee on Aircraft/Airport Compatibility, Subcommittee on Aviation Safety

A unique marker of our time is that everything we know about aviation is evolving. This movement is unprecedented, from the gate to the higher altitude airspace, and the coming years might redefine aviation as a whole. The aviation community needs to learn, prepare, and adapt, but the complexity and urgency require a holistic strategy to identify and address emerging safety challenges, and build agility in the way we define and develop safety. It is vital to consider these evolutions with a multidisciplinary approach to understand the timelines and implications for all the stakeholders.

ACRP Student Paper: Runway Incursion Prevention Technologies Airports Can Afford: Evaluating ADS-B and Computer Vision for Use with Runway Status Lights (TRBAM-25-00594)

Luigi Raphael Dy/Saint Louis University, John Mott/Saint Louis University

Performance of WC19 Wheelchairs Under FAA Vertical Dynamic Testing Conditions (TRBAM-25-02299)

Miriam Manary/University of Michigan, Nichole Orton/University of Michigan, Kyle Boyle/University of Michigan, Tyler Vallier/University of Michigan, Kathleen Klinich/University of Michigan

Pilot Mental Workload Assessment Using fNIRS-based Brain Effective Connectivity During Crosswind Approach and Landing (TRBAM-25-00354)

Chenyang Zhang/Southwest Jiaotong University, Shihan Luo/Southwest Jiaotong University, Shi Cao/Southwest Jiaotong University, Liping Fu/Southwest Jiaotong University, Tong Wang/Southwest Jiaotong University, Ya Shu/Southwest Jiaotong University, Chaozhe Jiang/Southwest Jiaotong University

ACRP Graduate Research Award - Ergonomic Risk Assessment of Airline Baggage Handlers Using Automated Joint Prediction (TRBAM-25-03107)

Navya Annapareddy/University of Virginia, Stephen Baek/University of Virginia

4022

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, 146A

Novel Analytical Methods Applied to Marine Safety Issues

Joseph Myers, ABS Consulting, presiding

Sponsored By Standing Committee on Marine Safety and Human Factors

This session features papers that apply novel analytical approaches to examine various issues related to marine safety topics. Attention is applied to concerns related to waterway traffic issues and vessel movements.

A Field Theory-based Algorithm for Complexity of Waterway Traffic Flow (TRBAM-25-01420)

Yihua Liu/Shanghai Maritime University, Xialan Fang/Shanghai Maritime University, Daiheng Ni/Shanghai Maritime University

Anomaly Detection in Vessel Operations in Narrow Waterways: Techniques and Applications (TRBAM-25-01449)

Homayoon Arbabkhah/Lamar University, Atefe Sedaghat/Lamar University, Masood Jafari Kang/Lamar University, Maryam Hamidi/Lamar University

Using Large Language Models to Analyze Maritime Near Miss Data (TRBAM-25-03877)

James Curry/Lamar University, Weihang Zhu/Lamar University, Brian Craig/Lamar University, Jyothi Chollangi/Lamar University, Saikrishna Gubbala/Lamar University, Wenhao Yang/Lamar University

Multi-source Perception Data Fusion of Vessels in Visual Occlusion Scenarios Leveraging Prior Knowledge of Vessel Motion (TRBAM-25-06134)

Wei He/MinJiang University, Wenbo He/MinJiang University, Jinyu Lei/MinJiang University, Zhiyuan Wang/MinJiang University

3202

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Research in Landscape and Environmental Design

Jeffrey Lormand, Parsons, presiding
Ellen White, State University of New York, ESF, presiding
Christine Colley, New York State Department of Transportation, presiding
Siba El-Samra, World Resources Institute, presiding
Christa Schaefer, Wisconsin Department of Transportation, presiding
Jennifer Taira, Tatsumi and Partners, Inc., presiding

Sponsored By Standing Committee on Landscape and Environmental Design, Subcommittee on Pedestrian and Bicycle Safety Analysis (with ACH10 and ACH20), Subcommittee on Context Sensitive Solutions, Standing Committee on Hydrology, Hydraulics, and Stormwater, Standing Committee on Roadside Maintenance Operations, Standing Committee on Women and Gender in Transportation, Standing Committee on Accessible Transportation and Mobility, Subcommittee on Accessible Transportation and Mobility Practices, Tools, and Techniques, Standing Committee on Public Transportation Planning and Development, Standing Committee on Pedestrians, Standing Committee on Bicycle Transportation

These are presentations related to the Scope of the Standing Committee on Landscape and Environmental Design (AKD40)

The Works of the Standing Committee on Landscape and Environmental Design (P25-20382) - A248
Christine Colley/New York State Department of Transportation, Willson McBurney/Moffatt & Nichol, Jeffrey Lormand/Parsons

Harmonizing Nature and Urban Life: Enhancing Green Streetscape Design in Downtown East Coast Cities Using Deep Learning and Perception Study (P25-20383) - A247
Mengting Ge/Virginia Polytechnic Institute and State University

(Un)Restricting by Design — Centering Bus Stop Design in Cultural Realities for Young Women and Girls (P25-20384) - A246
Hunza Irfan/University of Massachusetts, Amherst

Green Streets for People: Evaluating the Experiential Performance of Green Street Design (P25-20385) - A245
Jordan Upadhyay/Rutgers University

Designing Active Commuting Corridors: Investigating the Walkshed Landscapes within Safe Routes for Students (P25-20386) - A244
Katharine Schumacher/Rutgers University

The Revitalization of Puerto Rico's Historic Rail Infrastructure through Green Infrastructure and Sustainable Mobility (P25-20545) - A243
Luis Rivera/UAGM University

Reimagining Urban Leftover Spaces Under Overpasses: Mitigating Urban Heat Islands and Heatwaves Through Green Space Transformation (P25-20546) - A242
Jiahua Zhao/Virginia Polytechnic Institute and State University

4023

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Emerging Research on Shared Micromobility

Nick Foster, Kittelson & Associates, Inc., presiding

Sponsored By Standing Committee on Bicycle Transportation

This poster session will present papers on a range of topics related to bike share, e-bikes, e-scooters, and other forms of micromobility. Topics covered include safety, bikeshare system use and optimization, service quality evaluation, legal issues, and travel characteristics and other behavioral analyses.

Pedaling Towards Sustainability: Service Quality Evaluation of Bicycle-Sharing Systems Based on User Satisfaction Survey (TRBAM-25-00001) - B547
Nidhi Kathait/Indian Institute of Technology, Roorkee, Amit Agarwal/Indian Institute of Technology, Roorkee

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Bike-Sharing System in Bogotá: Satisfaction and Loyalty in the Modal Choice of Public Bicycles (TRBAM-25-00300) - B548
Lady Piedrahita Villarraga/Universidad de Los Andes, Juan Pablo Bocarejo Suescun/Universidad de Los Andes
Analyzing Geographical Boundaries for Shared Bicycle Trips: A Case Study in Beijing (TRBAM-25-00336) - B549
Yanyan Chen/Beijing University of Technology, Yue Shi/Beijing University of Technology, Anran Li/Beijing University of Technology, Hanqiang Qian/Beijing University of Technology, Jun Yang/Beijing University of Technology
Exploring the Nonlinear Impact of Macro and Micro Level Built Environments on Bike-Share Route Discrepancie (TRBAM-25-00369) - B550
Yuxuan Cai/University of Hong Kong, Yiming Cheng/University of Hong Kong, Anzhi Chen/University of Hong Kong, Waishan Qiu/University of Hong Kong, yuankai wang/University of Hong Kong
Nonlinear and Spatial Variations in Built Environment Impacts on Bike Sharing Usage on Workdays and Non-workdays (TRBAM-25-02818) - B551
Jiahao Shi/City University of Macau, Huajie Yang/City University of Macau, Tao Tao/City University of Macau
Micro-Mobility Safety Assessment: Analyzing Factors Influencing the Micro-Mobility Injuries in Michigan by Mining Crash Reports (TRBAM-25-00748) - B541
Baraah Qawasmeh/Western Michigan University, Jun-Seok Oh/Western Michigan University, Valerian Kwigizile/Western Michigan University
A Hierarchical Fine-Grained Approach to Optimizing the Planning of Bike-Sharing Electronic Fences (TRBAM-25-02876) - B552
Zhonghua Wei/Beijing University of Technology, Zongning Bai/Beijing University of Technology, Shi hao Wang/Beijing University of Technology, Houqiang Ma/Beijing University of Technology, Yunxuan Li/Beijing University of Technology
Impact of Bike Infrastructures on System-Wide Bike-Share System Ridership: A Longitudinal Analysis Using ARIMA Models in Houston (TRBAM-25-03276) - B542
Mehdi Azimi/Texas Southern University, Lijie Zhou/Texas Southern University, Noushin Ghaffari, Ph.D./Texas Southern University, Yi Qi/Texas Southern University
The Influence Factors of Wrong-way Riding Behavior Frequency on Roadway Based on Shared Bicycle Trajectory Data (TRBAM-25-03352) - B553
Zhongyin Liu/Beijing University of Technology, Jiancheng Weng/Beijing University of Technology, Yang Bian/Beijing University of Technology, Xiaohua Zhao/Beijing University of Technology, Luyao Yin/Beijing University of Technology
Groups on the Micromove: Analysis of Emerging E-Scooter Flock-Riding in Helsinki (TRBAM-25-03480) - B554
Samira Dibaj/Aalto University, Miloš Mladenović/Aalto University, Shaghayegh Vosough/Aalto University
Barriers, Adoption, and Use of a Bike-sharing System: A Market-segment Approach to Current and Potential Users in Montréal, Canada (TRBAM-25-03505) - B543
Panagiotis Goudis/McGill University, Rodrigo Victoriano-Habit/McGill University, Thiago Carvalho/McGill University, Ahmed El-Geneidy/McGill University
Dockless Bicycle Sharing as Feeder Services to Subway Systems: A Study on its Integration Intensity and Spatiotemporal Characteristics (TRBAM-25-03622) - B556
Letao Kang/Beijing Jiaotong University, Jinglu Niu/Beijing Jiaotong University, Jiawen Xie/Beijing Jiaotong University, Kunzheng Wang/Beijing Jiaotong University, Sida Luo/Beijing Jiaotong University, Chunfu Shao/Beijing Jiaotong University
Travel Time Reliability of E-scooter Trips: A Case Study in Southampton, UK (TRBAM-25-03924) - B540
Zafer Kupeli/University of Southampton, Ioannis Kaparias/University of Southampton, Simon Blainey/University of Southampton
Legal Guidance on Micromobility: A New Jersey Case Study (TRBAM-25-04399) - B544
Gregory Woltman/Alan M. Voorhees Transportation Center, Samuel Rosenthal/Alan M. Voorhees Transportation Center, Hannah Younes/Alan M. Voorhees Transportation Center
Exploring Emerging Battery-Electric Micromobility Vehicles: A Perspective from Helsinki (TRBAM-25-04579) - B555
Miloš Mladenović/Aalto University, Samira Dibaj/Aalto University, Daniel Lopatnikov/Aalto University, Shaghayegh Vosough/Aalto University
Travel Characteristics Analysis of Shared Two-wheeled Vehicles within 15-Minute Living Circle (TRBAM-25-05156) - B557
Lu Liu/Beijing Jiaotong University, Liying Wei/Beijing Jiaotong University, Ping Chen/Beijing Jiaotong University, Sida Luo/Beijing Jiaotong University, Chunfu Shao/Beijing Jiaotong University
Understanding E-Scooter Route Choice Behavior in Washington DC: A Path Size Logit Model (TRBAM-25-05551) - B545
Yiheng Qian/University of Florida, Duanya Lyu/University of Florida, Wenwen Zhang/University of Florida, Xiang Yan/University of Florida

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What Factors Influence the Adoption and Use of Dockless Bike-Share? A Case Study from the Sacramento Region (TRBAM-25-05593) - B546
Hossain Mohiuddin/Morgan State University, David Bunch/Morgan State University, Tatsuya Fukushige/Morgan State University, Dillon Fitch-Polse/Morgan State University, Susan Handy/Morgan State University

4024

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Regional Transportation Systems Management and Operations
Kevin Miller, Southwest Research Institute, presiding
Sponsored By Standing Committee on Regional Transportation Systems Management and Operations

A Regional Corridor-Level Approach to Predict Wrong-Way Driving Crashes and Identify Wrong-Way Driving Hotspots on Florida Arterials (TRBAM-25-00420) - B562
Shahad Ibrahim/University of Central Florida, Adrian Sandt/University of Central Florida, Haitham Al-Deek/University of Central Florida, John McCombs/University of Central Florida, Nizam Uddin/University of Central Florida
Evaluating the Impact of Temporary Curbside Parking on Traffic Behavior in an Urban Mixed-Traffic Environment Using Trajectory-Based Fusion Data (TRBAM-25-03302) - B563
Tong Lin/National Yang Ming Chiao Tung University, Kun-Feng Wu/National Yang Ming Chiao Tung University, Ya-Fang Hsiao/National Yang Ming Chiao Tung University
Integrating Road Network Operations Planning into Real-Time Traffic Management: A Conceptual Framework (TRBAM-25-03675) - B564
Mahmud Keblawi/University of Queensland, Himabindu Maripini/University of Queensland, Jiwon Kim/University of Queensland, Zuduo Zheng/University of Queensland, Mehmet Yildirimoglu/University of Queensland, Mark Hickman/University of Queensland
Building Digital Infrastructure: Scalable and Reproducible Data Integration and Traffic Theory for Congestion Bottleneck Identification and Traffic Management Strategy Evaluation (TRBAM-25-06158) - B565
Mustafa Gadah/Arizona State University, Xuesong Zhou/Arizona State University, Frederic Duquella/Arizona State University

4025

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Insights on Travel Behavior
Aditi Misra, University of Colorado, Denver, presiding
Sponsored By Standing Committee on Transportation Demand Forecasting, Standing Committee on Traveler Behavior and Values

This session focuses on insights into travel behavior. Presentations will explore attitudes influencing private and shared autonomous vehicle choices, the resiliency of bike-sharing stations, peak and off-peak travel of workers vs. non-workers, individual behavior perspectives, and preparing travel demand models for uncertain futures.

Trust and Multitasking Ability: An Exploration of The Attitudes That Influence Private and Shared Autonomous Vehicle Choices (TRBAM-25-02347) - A106
Felita Ong/University of Toronto, Brenden Lavoie/University of Toronto, Khandker Nurul Habib/University of Toronto
Assessing the resilience of bike-sharing stations: weather and land use influences on demand dynamics (TRBAM-25-03953) - A107
Xing-Hang Zhu/McGill University, Xudong Wang/McGill University, Luis Miranda-Moreno/McGill University, Lijun Sun/McGill University
Impact of Exogenous Events on the Demand for On-Demand Ridepooling in Hamburg (TRBAM-25-00633) - A108
Lion Pfeil/Technische Universität, München, Michele Simoni/Technische Universität, München, Felix Zwick/Technische Universität, München
Effects of Activity-Travel Chaining Propensity on Peak and Off-Peak Travel: Workers vs. non-Workers (TRBAM-25-05923) - A110
Tanjeeb Ahmed/University of California, Irvine, Michael Hyland/University of California, Irvine

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From Predictive to Exploratory: Preparing Travel Demand Models for Uncertain Futures (TRBAM-25-04276) - A111
Martin Milkovits/Boston Region Metropolitian Planning Organization, Zihao Jin/Boston Region Metropolitian Planning Organization
Impact of Autonomous Vehicles on Long-Distance Travel Mode and Destination Choice in Texas (TRBAM-25-05338) - A104
PRIYANKA Paithankar/University of Texas, Austin, Maithreyi Vellimana/University of Texas, Austin, Kara Kockelman/University of Texas, Austin
Unraveling Household Interactions through the Analysis of Household-level Activity Engagement Behavior (TRBAM-25-06262) - A101
Nazmul Arefin Khan/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory
Exploring the Significance of the Mobility of Care with Time Use Analysis (TRBAM-25-05588) - A112
Naomi Panjaitan/University of California, Davis, Susan Pike/University of California, Davis
Integrating an agent-based behavioral model in microtransit forecasting and revenue management (TRBAM-25-03695) - A113
Xiyuan Ren/New York University, Joseph Chow/New York University, Venktesh Pandey/New York University, Linfei Yuan/New York University
Large-Scale Evaluation of Mobility, Technology and Demand Scenarios in the Chicago Region Using POLARIS (TRBAM-25-04224) - A100
Joshua Auld/Argonne National Laboratory, Jamie Cook/Argonne National Laboratory, Krishna Murthy Gurumurthy/Argonne National Laboratory, Nazmul Arefin Khan/Argonne National Laboratory, Charbel Mansour/Argonne National Laboratory, Aymeric Rousseau/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Felipe de Souza/Argonne National Laboratory, Omer Verbas/Argonne National Laboratory, Natalia Zuniga-Garcia/Argonne National Laboratory
Where does this road go? Insights from reinforcement learning models on route choice behaviour (TRBAM-25-06191) - A114
Jamal Amani Rad/University of Leeds, Stephane Hess/University of Leeds, Thomas Hancock/University of Leeds, Michiel Bliemer/University of Leeds, Matthew Beck/University of Leeds, Muhammad Fayyaz/University of Leeds
Day-of-Week, Month, and Seasonal Demand Variations: Comparing Flow Estimates across New Travel Data Sources (TRBAM-25-02488) - A105
Kentaro Mori/University of Texas, Austin, Kara Kockelman/University of Texas, Austin
Understanding the Learning Process of Street-Hailing Searching Behavior: A Bayesian Learning Approach (TRBAM-25-01092) - A115
Xinyi Shen/Zhejiang University, Xinxin Xing/Zhejiang University, Jiaqi Zeng/Zhejiang University, Wenbin Yao/Zhejiang University, Wentong Guo/Zhejiang University, Sheng Jin/Zhejiang University
Modeling Bicyclists' Destination Location Choice for Home-based Tours and Choice Set Generation using Spatial-Temporal Constraint (TRBAM-25-06147) - A102
Bijoy Saha/University of British Columbia, Mahmudur Fatmi/University of British Columbia
Counterfactual Analysis of the Subway Ridership Declination During COVID-19: An Enhanced Beta Regression with Bayesian Additive Regression Trees (TRBAM-25-03509) - A116
Zijian Yang/National University of Singapore, Guocong Zhai/National University of Singapore, Hongtai Yang/National University of Singapore, Ximeng Zhang/National University of Singapore
---Investigating EV Charging Location Preferences Using Random Parameter Rank-Ordered Logit Model (TRBAM-25-06373) - A103
Md Shahadat Hossain/University of British Columbia, Mostaq Ahmed/University of British Columbia, Bijoy Saha/University of British Columbia, Mahmudur Fatmi/University of British Columbia
Learning in Day-to-day Dynamics with Uncertainties: An Individual Behavior Perspective (TRBAM-25-01009) - A117
Hongxing DING/Hong Kong University of Science and Technology, Xinwei Li/Hong Kong University of Science and Technology, Hai Yang/Hong Kong University of Science and Technology
Modeling Spatial and Social Interdependency Effects on Commuting Mode Choice (TRBAM-25-05701) - A118
Daniele Giubergia/Universita degli Studi Di Cagliari, Angela Haddad/Universita degli Studi Di Cagliari, Francesco Piras/Universita degli Studi Di Cagliari, Chandra Bhat/Universita degli Studi Di Cagliari, Italo Meloni/Universita degli Studi Di Cagliari
Simulating Passenger Demand and Operational Performance in the Hyperloop Network: A Swiss Case Study (TRBAM-25-01583) - A120
Nuannuan Leng/EuroTube Foundation, Giacomo Pareschi/EuroTube Foundation, Julian Ehwald/EuroTube Foundation

(continued)

Consuming Behavior Recognition and Evaluation in Transfer Corridor on TOD Metro Station: A Trajectory Analysis-based Approach (TRBAM-25-01951) - A121
Liangji Tang/Tongji University, Fangsheng Wang/Tongji University, Yanan Li/Tongji University, Ling Hong/Tongji University
Modeling Shared E-Scooter Demand for its Influencing Factors: A Spatial Machine Learning Approach (TRBAM-25-02352) - A122
Omkar Parishwad/Chalmers University of Technology, Kun Gao/Chalmers University of Technology, Arsalan Najafi/Chalmers University of Technology, Lei Chen/Chalmers University of Technology
Exploring the Competition between Taxi and Subway Using Bayesian Machine Learning and Shapley Additive Explanations (SHAP) (TRBAM-25-03574) - A123
Xiang Liu/National University of Singapore, Guocong Zhai/National University of Singapore, Hongtai Yang/National University of Singapore, Min Tang/National University of Singapore
Data-driven Bike-share Network Expansion Using Graph Neural Networks with Applications in North American Cities (TRBAM-25-04930) - A124
Ghazaleh Mohseni Hosseinabadi/York University, Mehdi Nourinejad/York University, Peter Park/York University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Research on Bridge Deck Materials
Snehal Sonawane, WSP, presiding
Sponsored By Standing Committee on Construction of Bridges and Structures, Standing Committee on Innovative Highway Structures and Appurtenances, Standing Committee on Advanced Concrete Materials and Characterization

This poster session highlights current researches on bridge deck materials.

Study on alkali leaching mechanism on as-built cement concrete bridge deck pavement (TRBAM-25-02145) - A314
Bowei Sun/Civil Aviation University of China, Xin Huang/Civil Aviation University of China, Yan Li/Civil Aviation University of China, Haiwei Zhang/Civil Aviation University of China
Design and Evaluation of UHPP Steel Bridge Deck Pavement with Rigid Bottom and Flexible Top (TRBAM-25-04328) - A315
yitong Min/Southeast University, Zhendong Qian/Southeast University, Daoxie Chen/Southeast University, Leilei Chen/Southeast University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Recent Research in Concrete Pavement Construction
Tirupan Mandal, Wisconsin Department of Transportation, presiding
Sponsored By Standing Committee on Concrete Pavement Construction and Rehabilitation

Camera-Based Binocular Stereo Vision for Dynamic Assessment of Vibration Operations in Slipform Paving (TRBAM-25-04907) - A310
Xiangdong Yan/University of Pittsburgh, Megan Darnell/University of Pittsburgh, Julie Vandenbossche/University of Pittsburgh, Alessandro Fascetti/University of Pittsburgh
Strain Field Analysis of Concrete Pavement Using Distributed Optical Fiber Sensors (TRBAM-25-04983) - A311
Ziyi Wang/Tongji University, Jiading, Ke Cheng/Tongji University, Jiading, Dachen Gao/Tongji University, Jiading, Mengyuan Zeng/Tongji University, Jiading, Hongduo Zhao/Tongji University, Jiading
Early Age Performance Evaluation of Resurfacing Jointed Concrete Pavements (JCP) with Continuously Reinforced Concrete (CRC) Pavement. (TRBAM-25-05260) - A312
Niwesh Koirala/Texas Tech University, HeeJun Lee/Texas Tech University, Christopher Jabonero/Texas Tech University, Jeong Hee Nam/Texas Tech University, Moon Won/Texas Tech University
Evaluating Expertise of Concrete Pavement Construction in Modern Large Language Models (TRBAM-25-05905) - A313
Mason Smetana/University of Pittsburgh, Igor Sukharev/University of Pittsburgh, Lev Khazanovich/University of Pittsburgh

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Performance Effects of Geometric Design

Joseph Frawley, Massachusetts Department of Transportation, presiding

Sponsored By Standing Committee on Performance Effects of Geometric Design

Driving Radius Impact on Interchange Ramps (TRBAM-25-00396) - A228

Antonios Trakakis/National Technical University of Athens (NTUA), Konstantinos Apostoleris/National Technical University of Athens (NTUA), Stergios Mavromatis/National Technical University of Athens (NTUA), Basil Psarianos/National Technical University of Athens (NTUA)

Optimizing Maintenance Routes for Highway Infrastructure Using Leader-Follower Autonomous Vehicles (TRBAM-25-01618) - A218

Qing Tang/Old Dominion University, Chenxi Chen/Old Dominion University, Xianbiao Hu/Old Dominion University

A Comparison of Methods for Collecting Highway Horizontal Curve Attributes (TRBAM-25-05694) - A217

Farhad Farzinpour/Clemson University, Wayne Sarasua/Clemson University, William Davis/Clemson University, Pamela Murray-Tuite/Clemson University, Leo Cassule/Clemson University

Estimation of Roadway Vertical Alignment via an Artificial Neural Network Based Approach (TRBAM-25-03391) - A216

Bekir Bartin/Ozyegin Universitesi, Mojibulrahman Jami/Ozyegin Universitesi, Kaan Ozbay/Ozyegin Universitesi

Optimization of Road Geometry Parameters based on Vehicle Operation State (TRBAM-25-05519) - A215

Yifan Wang/Tongji University, Zhigui Chen/Tongji University, Xuesong Wang/Tongji University

Estimation of Effective Length of Passing Lanes on Two-Lane Rural Roads in Colombia (TRBAM-25-02663) - A214

Victor Valencia-Alaix/Universidad Nacional de Colombia, Medellin, Basilio Restrepo Betancur/Universidad Nacional de Colombia, Medellin, Juan Calle Rojas/Universidad Nacional de Colombia, Medellin

Calibrating critical headways and follow-up times at two-way stop-controlled intersections in Dar es Salaam, Tanzania (TRBAM-25-06366) - A213

Jaqueline Masaki/University of Dar Es Salaam, Joan Kitundu/University of Dar Es Salaam, Emmanuel Masindoki/University of Dar Es Salaam, Wayne Kittelson/University of Dar Es Salaam, Nagui Rouphail/University of Dar Es Salaam

Study on Acceleration and Deceleration Lane Length for Three-lane Ramps at Interchange (TRBAM-25-02938) - A212

Miaoyan Gao/Southeast University, Dong ying Sun/Southeast University, Boran Zhang/Southeast University, Jun Wang/Southeast University, Yibo Zhang/Southeast University, Bin Zhao/Southeast University, Jianchuan Cheng/Southeast University, Yunlong Zhang/Southeast University

Exploring the Spatio-Temporal Effects on Crash Frequency in Combined Alignment Sections of Mountainous Freeways (TRBAM-25-03621) - A211

Yesihati Azati/Tongji University, Xuesong Wang/Tongji University, Xinchen Ye/Tongji University

State of Practice Review of Tactical Curb Extensions, including Facilities with Mural Art (TRBAM-25-01483) - A210

Nathan McNeil/Portland State University, Sirisha Kothuri/Portland State University, Wes Kumfer/Portland State University, Sarah O'Brien/Portland State University

Current Practices in Channelized Right Turn Design for Pedestrians in the United States (TRBAM-25-04464) - A208

Jonathan Kay/Michigan State University, Timothy Gates/Michigan State University

Improving Driver Visibility and Safety at Intersections: The Role of Staggered Stop Lines (TRBAM-25-06290) - A207

Shumin Bai/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Zhen Yang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Yani Qi/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Shikun Xie/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Guilong Xu/Key Laboratory of Road and Traffic Engineering of the Ministry of Education

Data Driven Assessment of Traffic Calming: A Case Study of University Campus using Vehicle Telematics Data (TRBAM-25-05071) - A206

Terrence Blunt/University of Virginia, Ahmed Abdelzaher/University of Virginia, Brian Park/University of Virginia

(continued)

A Safe Systems Approach to Guide Policy for Prohibiting Right Turn on Red (TRBAM-25-04780) - A205
Bruce Appleyard/California Polytechnic State University, San Luis Obispo, Anurag Pande/California Polytechnic State University, San Luis Obispo, Megan Honey/California Polytechnic State University, San Luis Obispo, Joseph Gibbons/California Polytechnic State University, San Luis Obispo, Shams Tanvir/California Polytechnic State University, San Luis Obispo, Negar Ahangarfabrik/California Polytechnic State University, San Luis Obispo, Mario Carbajal/California Polytechnic State University, San Luis Obispo

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Performance Effects of Geometric Design: Student Research Poster Session
Amirarsalan Mehrara Molan, University of Mississippi, presiding
Sponsored By Standing Committee on Performance Effects of Geometric Design

Ongoing research being conducted by undergraduate and graduate students (both Master and Doctorate) in Geometric Design (and its performance effects such as safety and operations). Sub-themes include: • Contextual and Multimodal Considerations• Emerging and Crosscutting Topics• Performance-Based Approaches and Applications

A Study on Geometric Design Considerations for Restricted Crossing U-Turn Intersections (P25-20872) - A203
Troy Hill/University of Mississippi
Influence of Merging and Diverging Lanes on Speed Control of Autonomous Vehicles: A Machine Learning Approach (P25-20873) - A202
Onindoakash Shuvro/Florida A&M University-Florida State University
Safety and Traffic Operations Analysis of New Generation of Alternative Intersections (P25-20874) - A201
Stephen Osafo-Gyamfi/University of Mississippi
Applying Context Sensitive Solutions to Bicycle and Pedestrian Facilities (P25-20875) - A200
Dionysios Tzamakos/Kentucky Transportation Cabinet
"Speed and Curve Analysis on Rural Two-Lane Highways: Unveiling Safety Impacts Using Deep Learning" (P25-20876) - A198
Daniel Udekwe/Florida A&M University-Florida State University
Exploring High-Resolution Data to Analyze Driver Behavior in Roundabouts (P25-20877) - A197
Ericka Mora Campos/University of Nevada, Reno
Evaluatiing the Impact of Geometric Features on Yielding Behavior at RRFB Equiped Crosswalks (P25-20878) - A196
Ernest Nsong Asiedu/Auburn University
Effects of Geometric Design Elements on Operating Speed at Non-Circular Roundbaouts (P25-20879) - A192
Tonghui Li/Auburn University
Context sensitive solutions through Complete Streets (P25-20880) - A191
Eirini Stavropoulou/Kentucky Transportation Cabinet
A Multi-Objective Bilevel Decision Model for Post-Disaster Restoration of Road Networks (P25-20881) - A190
Ziyue Li/Florida A&M University-Florida State University
"Safety Effectiveness of Unsignalized Restricted Crossing U-turn Intersections in Mississippi using Empirical Bayes Before-After Study" (P25-20882) - A188
Gaurav Aryal/University of Mississippi
Analysis of Tire-Pavement Friction Factors From Pavement Texture Measurements (P25-20883) - A187
Angela Azevedo/Universidade de Sao Paulo

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Hydrology, Hydraulics, and Stormwater in the Transportation Environment
Michael Perez, Auburn University, presiding
Sponsored By Standing Committee on Hydrology, Hydraulics, and Stormwater

Mapping the Impact: Using Satellite Imaging to Assess Flood Extent and Depth for Enhanced Emergency Management (P25-20465) - A227
Jaime Schussler/Oklahoma State University

(continued)

Assessment of Culvert Vulnerability and Aquatic Connectivity in Oklahoma (P25-20466) - A226
Jaime Schussler/Oklahoma State University
Reconsidering the Rainfall Erosivity Factor using Modern Precipitation Data: An Oklahoma Case Study (P25-20467) - A225
Jaime Schussler/Oklahoma State University
Uncertainty in stormflow-quality estimates at unmonitored sites can confound efforts to determine if infrastructure projects will have an adverse effect on water quality (P25-20495) - A224
Gregory Granato/Federal Highway Administration (FHWA)
The U.S. Geological Survey and Federal Highway Administration collaborate to provide water-quality tools that transportation agencies use to help inform stormwater management decisions (P25-20496) - A238
Alana Spaetzel/U.S. Geological Survey, Gregory Granato/Federal Highway Administration (FHWA)
A GIS-based hydraulic modeling tool for Massachusetts stream crossing replacement projects in USGS StreamStats (P25-20499) - A237
Gardner Bent/USGS
Using local flood information on a hydrologic network to improve regional flood predictions at ungaged locations (P25-20506) - A236
Ken Eng/U.S. Geological Survey, Jery Stedinger/Cornell University, Joseph Moukarzel/Unknown
Data-Driven Hydrological Drought Onset, Duration and Intensity Forecasts for the Conterminous United States (CONUS): Developing and Testing an Operational Tool to Enhance Drought Early Warning (P25-20507) - A235
John Hammond/USGS
Natural Streamflow Metric Estimation Across the Conterminous United States Using Cluster-then-Predict Machine Learning (P25-20508) - A234
Jared Smith/U.S. Geological Survey, Sara Levin/USGS, Charles Stillwell/U.S. Geological Survey, Andrew Sekellick/USGS, Ken Eng/U.S. Geological Survey
Study on nitrogen and phosphorus purification effect and self-nitrogen and phosphorus leaching characteristics of porous cold-mix asphalt pavement materials (TRBAM-25-00722) - A233
Hao Ben/Tongji University, Hui Li/Tongji University, Jiawen Liu/Tongji University, Xue Zhang/Tongji University, Bo Yang/Tongji University
Network Resilience Analysis of Highway to Rainfall Using Percolation Theory (TRBAM-25-04134) - A232
Yang Li/Southeast University, Jialu Wu/Southeast University, Yunjiang Xiao/Southeast University, Hangqi Hu/Southeast University, Jun Chen/Southeast University, Wei Wang/Southeast University
BENEFIT ANALYSIS OF BARRIER INLET SCREENS (TRBAM-25-04346) - A231
Anil Tangirala/ms consultants, inc., Justin Kerns/ms consultants, inc., Ryan Winston/ms consultants, inc., Troy Lyons/ms consultants, inc., Tony Loeser/ms consultants, inc., Andrew Tirpak/ms consultants, inc.
Large-Scale Performance Evaluation of Sustainable Sediment Barrier Installations (TRBAM-25-04847) - A230
Brian Roche/Auburn University, Michael Perez/Auburn University, Wesley Donald/Auburn University, J. Blake Whitman/Auburn University
Exploratory Flocculant Testing on Field-Scale Construction Site Applications (TRBAM-25-02408) - A241
Jannell Clampitt/Auburn University, Michael Perez/Auburn University, Wesley Donald/Auburn University, Xing Fang/Auburn University, Billur Kazaz/Auburn University
Optimization of Sediment Basin Configurations using Intermediate-Scale Testing (TRBAM-25-04830) - A240
Megan Armstrong/Auburn University, Michael Perez/Auburn University, Wesley Donald/Auburn University, Xing Fang/Auburn University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Intersections: A Place Where We Can Make a Difference in Saving Lives and Moving People
Shannon Lambert, Jacobs, presiding
Sponsored By Standing Committee on Roundabouts and other Intersection Design and Control Strategies

Intersections get us where we need to be - safely! This poster session is filled with amazing research and noteworthy practices on roundabouts, restricted crossing u-turn intersections (RCUT/JTurn), median u-turn intersections (MUT), diverging diamond interchanges (DDI), and much more. Posters feature research on autonomous vehicles, connected vehicles, pedestrian and bicyclist safety, modeling and capacity analysis. Join us as this poster session has it all!

(continued)

Assessing Differences in Performance of Alternative Intersections and Interchanges and Conventional Designs (TRBAM-25-00165) - A186
Minerva Bonilla/Texas A&M University, William Rasdorf/Texas A&M University
An Evaluation of Persuasive Messaging Factors and Strategies on Attitude Change Toward J-Turn Intersections (TRBAM-25-01343) - A182
Katelyn Schwieters/University of Minnesota, Curtis Craig/University of Minnesota, Nichole Morris/University of Minnesota
Integration of Pedestrian Operations into Combined Alternate-Direction Lane Assignment and Reservation-Based Intersection Control (TRBAM-25-06016) - A181
Milan Knezevic/University of Pittsburgh, Aleksandar Stevanović/University of Pittsburgh
A Novel Roundabout Operation Strategy Using Reinforcement Learning Based Single-Agent Robot Speed Control (TRBAM-25-03399) - A180
Jaeeun Jung/Korea Advanced Institute of Science and Technology, Chun Gyounghoon/Korea Advanced Institute of Science and Technology, Inhi Kim/Korea Advanced Institute of Science and Technology
Evaluating Safety of Urban Roundabouts under Mixed Traffic Using UAV-Based Conflict Analysis and Safety Performance Functions (TRBAM-25-01155) - A178
Abhijnan Maji/Indian Institute of Technology, Roorkee, Indrajit Ghosh/Indian Institute of Technology, Roorkee, Satish Chandra/Indian Institute of Technology, Roorkee
Roundabout Capacity Survey Using Vehicle Trajectory Data and Gap Acceptance Cycles (TRBAM-25-00519) - A177
Rahmi Akcelik/SIDRA SOLUTIONS, Chun Gyounghoon/SIDRA SOLUTIONS, Nagui Rouphail/SIDRA SOLUTIONS
Comprehensive Investigation of Roundabout Safety Challenges in the Southeast United States: Findings and Recommendations from Kentucky's Survey Analysis (TRBAM-25-00028) - A176
Justin Szczepanski/Western Kentucky University, Jeremy Jordan/Western Kentucky University, Kirolos Haleem/Western Kentucky University, Mike Vaughn/Western Kentucky University
Bicyclists' Perceptions of Urban Roundabout Safety. (TRBAM-25-01864) - A172
Ian Trout/Arup, Haneen Farah/Arup, Aurelia Salomons/Arup, Amir Pooyan Afghari/Arup
Evaluating Traffic and Safety Impacts of Diverging Diamond Interchange Replacing Roundabouts: A Microsimulation Study (TRBAM-25-02214) - A171
Jingshuo Qiu/Imperial College London, Léah Camarcat/Imperial College London, Paraskevi Koliou/Imperial College London, Yuxiang Feng/Imperial College London, Nicolette Formosa/Imperial College London, Georgios Zacharopoulos/Imperial College London, Paraskevi Michalaki/Imperial College London, Panagiotis Angeloudis/Imperial College London, Mohammed Quddus/Imperial College London
ROUNDABOUT TRAFFIC CONTROL USING CYCLIC-PATH FOR CONNECTED AND AUTOMATED VEHICLES (TRBAM-25-01527) - A170
Shan Jiang/Tsinghua University, Xi Lin/Tsinghua University, Xiangdong Chen/Tsinghua University, Meng Li/Tsinghua University
Evaluating Dynamic Speed Feedback Signs at Roundabouts in Rural-to-Urban Transition Areas on Rural Highways and Freeway Exit Ramps (TRBAM-25-03874) - A168
Magdalena Cavka/Michigan State University, Myles Overall/Michigan State University, Sakar Pahari/Michigan State University, Sarah Premo/Michigan State University, Timothy Gates/Michigan State University
Evaluating Safety Risks Associated with Lateral Vehicle Movements in Dual Left-Turn Lane Intersection (TRBAM-25-02691) - A167
Shi hao Wang/Beijing University of Technology, Yunxuan Li/Beijing University of Technology, Yixin Li/Beijing University of Technology, Zhen Luo/Beijing University of Technology, Zongze Li/Beijing University of Technology, Zhonghua Wei/Beijing University of Technology
Development of a Social Force Simulation Model for Mixed Traffic at Roundabouts (TRBAM-25-00182) - A166
Salma AboBakr/Ain Shams University, Karim Ismail/Ain Shams University, Mohamed El Esawey/Ain Shams University, Ahmed Osama/Ain Shams University
Performance Effects of the Dynamic Reversible Contraflow Median U-Turn Intersection Design (TRBAM-25-06376) - A162
Peter Yu/University of Washington, Seattle, Yinhai Wang/University of Washington, Seattle
Gap-acceptance Behavior and Safety Analysis in Roundabouts (TRBAM-25-02622) - A161
Oriol Pascual Anglès/Ecole Polytechnique Federale de Lausanne (EPFL), Jasso Espadaler-Clapés/Ecole Polytechnique Federale de Lausanne (EPFL), Robert Fonod/Ecole Polytechnique Federale de Lausanne (EPFL), Nikolas Geroliminis/Ecole Polytechnique Federale de Lausanne (EPFL)

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A Comparative Analysis of Teardrop Roundabout and Two-way Stop-controlled Interchanges under Varied Traffic Conditions (TRBAM-25-02800) - A160
Tonghui Li/Auburn University, Zijie Zhao/Auburn University, Huaguo Zhou/Auburn University, Fangjian Yang/Auburn University
Autonomous Vehicle Control for Lane-Free Roundabouts: A Deep Reinforcement Learning Approach (TRBAM-25-06111) - A150
Athanasia Karalakou/Technical University of Munich, Majid Rostami-Shahrbabaki/Technical University of Munich, Felix Rempe/Technical University of Munich, Klaus Bogenberger/Technical University of Munich

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Soil Properties and Subsurface Investigation Techniques
Matthew Riegel, HNTB, presiding
Sponsored By Standing Committee on Soil and Rock Properties and Site Characterization

Engineering Parameter Assessment of Soil-TDA Fills for Infrastructure Performance Evaluation (TRBAM-25-06421) - B586
Ahmed Gheni/Missouri University of Science and Technology, Mohamed Elashram/Missouri University of Science and Technology, Mohamed ElGawady/Missouri University of Science and Technology
Critical Shear Stress of Low Plasticity Clayey Soil at a Bridge Site in Franklin County, Illinois (TRBAM-25-01374) - B589
Bishal Chand/Southern Illinois University, Edwardsville, Abdolreza Osouli/Southern Illinois University, Edwardsville, Roohollah Farzalizadeh/Southern Illinois University, Edwardsville, Mostafa Ebrahimi/Southern Illinois University, Edwardsville, Saad Ullah/Southern Illinois University, Edwardsville, Heather Shoup/Southern Illinois University, Edwardsville
Evaluation of Artificial CPT Prediction Techniques in Sparse, Unsampled Soil between CPTs for Site Variability Analysis (TRBAM-25-00091) - B579
Pezhman Moradi/Louisiana Department of Transportation and Development, Yazan Al-Harahsheh/Louisiana Department of Transportation and Development, Masoud Nobahar/Louisiana Department of Transportation and Development, Murad Abu-Farsakh/Louisiana Department of Transportation and Development
Exploratory, descriptive, and predictive analysis of the permanent deformation of Brazilian soils and granular materials (TRBAM-25-01080) - B588
Bruno Mota/Federal University of Rio de Janeiro, Gabriel Silva/Federal University of Rio de Janeiro, Mariluce Ubaldo/Federal University of Rio de Janeiro, Rogério Espíndola/Federal University of Rio de Janeiro, Luis Alberto Nascimento/Federal University of Rio de Janeiro, Francisco Thiago Sacramento Aragão/Federal University of Rio de Janeiro
Insight on CPT-based Approach for Pile Geotechnical Design of Bridges in Coastal Deposits (TRBAM-25-02924) - B577
Abolfazl Eslami/Louisiana Transportation Research Center (LTRC), Masoud Nobahar/Louisiana Transportation Research Center (LTRC), Sara Golafzani/Louisiana Transportation Research Center (LTRC), Barmak Biroun/Louisiana Transportation Research Center (LTRC)
Predicting Subsurface Abnormalities Growth using Physics-Informed Neural Networks (TRBAM-25-02241) - B587
Mehrdad Shafiei Dizaji/No Organization, Hoda Azari/No Organization
Bridging the Gap Between Soil Borings and/or Cone Penetration Tests Using Electric Resistivity Imaging to Improve Site Investigations (TRBAM-25-01408) - B578
Masoud Nobahar/Louisiana Department of Transportation and Development, Murad Abu-Farsakh/Louisiana Department of Transportation and Development, Jesse Rauser/Louisiana Department of Transportation and Development

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Geotechnical Instrumentation and Modeling

Derrick Dasenbrock, Federal Highway Administration (FHWA), presiding
Thomas Oommen, University of Mississippi, presiding
Surya Congress, Michigan State University, presiding
Joel Swenson, Barr Engineering Company, presiding
Sponsored By Standing Committee on Geotechnical Instrumentation and Modeling

Effect of resonance compaction method on liquefaction-induced differential ground settlement and lateral displacement considering spatial variability of soil (TRBAM-25-00376) - B585
SHIJIE ZHAI/Southeast University, Guanyin Du/Southeast University
SDR-TabTransformer: A Novel Deep Learning Algorithm for Road Subgrade Deformation Prediction Combined with SBAS-InSAR Technology (TRBAM-25-00788) - B580
Zhipeng Wang/Southeast University, Junqing Zhu/Southeast University, Tao Ma/Southeast University, Siqi Wang/Southeast University
A Novel Geotechnical Risk Assessment Framework using Geophysical and Remote Sensing NDE Techniques (TRBAM-25-06360) - B583
Rakesh Salunke/Jackson State University, Sadik Khan/Jackson State University
Influence of Initial Stiffness and Foundation Uniformity on Pavement Performance (TRBAM-25-04378) - B581
Md Fyaz Sadiq/Michigan State University, Raul Velasquez/Michigan State University, Ceren Aydin/Michigan State University, Bora Cetin/Michigan State University, Bernard Izevbekhai/Michigan State University
Geo-physical and UAV Based Field Monitoring and Finite Element Analysis of Erosion-Induced Displacement in Dam Systems (TRBAM-25-05980) - B582
Audrika Nahian/Jackson State University, Sadik Khan/Jackson State University, Jasim Imran/Jackson State University, Austin Downey/Jackson State University, Fariha Rahman/Jackson State University, Rakesh Salunke/Jackson State University
A Nonlinear Soil Model for Assessing the Crashworthiness of Road Barrier Piles (TRBAM-25-01551) - B584
Fatemeh Safari Honar/University of Melbourne, Negin Yousefpour/University of Melbourne, Nelson Lam/University of Melbourne, Jude Perera/University of Melbourne

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Interesting and Creative Uses of Geosynthetics

Han Wang, University of Illinois, Urbana-Champaign, presiding
Sponsored By Standing Committee on Geosynthetics

Learn about interesting and creative uses of geosynthetics and talk with the authors to gain deeper insight into their work.

Laboratory and Field Evaluations of 3D-Printed Model Geogrids and Composite Geosynthetics Made from Recycled Plastic (TRBAM-25-02406) - B572
Araz Hasheminezhad/Iowa State University, Halil Ceylan/Iowa State University, Sunghwan Kim/Iowa State University, Erol Tutumluer/Iowa State University
A Novel Method to Calculate the Limit Resistance from Convex Nodes of Hyperstatic Geogrid (TRBAM-25-02715) - B573
Yilin Wang/Hong Kong Polytechnic University, Guoyang Lu/Hong Kong Polytechnic University, Zhen Leng/Hong Kong Polytechnic University
Research Progress and Engineering Application of Wicking Geotextiles: A Review (TRBAM-25-03279) - B574
Zhisheng Peng/Southeast University, Dingwen Zhang/Southeast University, Xin Gao/Southeast University, Jiansheng Wang/Southeast University
Soil Arching Effect in the Geogrid-Reinforced Floating Pile-Supported Embankments: Numerical Study (TRBAM-25-01959) - B575
Haiyang Liu/Tongji University, Jinsong Qian/Tongji University, Huiyi Ouyang/Tongji University, Yuhang Si/Tongji University, Jianming Ling/Tongji University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Emerging Technologies for Cementitious Materials and Concretes

Dan Huang, Coastal Carolina University, presiding

John Kevern, National Renewable Energy Laboratory (NREL), presiding

Sponsored By Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete

This poster session will cover emerging technologies for cementitious materials and concretes.

The Effect of Metakaolin on Arundo Grass Biochar Concrete (TRBAM-25-00196) - A271

Sharareh Shirzad/Appalachian State University, Daniel Rose/Appalachian State University

Understanding the Changes in Engineering Behaviors and Microstructure of FA-GBFS Based Geopolymer Paste with Addition of Silica Fume (TRBAM-25-00280) - A262

Jing Hao/Southeast University, Hao Liu/Southeast University, Yang Zhang/Southeast University

Feasibility Assessment of Treated Wastewater in the Construction of Pavement Quality Concrete (PQC) and Dry Lean Concrete (DLC) Layers in Rigid Pavements (TRBAM-25-00379) - A270

Jallu Harishbabu/Indian Institute of Technology, Roorkee, Nikhil Saboo/Indian Institute of Technology, Roorkee, Siksha Kar/Indian Institute of Technology, Roorkee

Revolutionizing Roadways Through Magnetizable Concrete Pavement for Charging Electric Vehicles (TRBAM-25-00650) - A268

Mohamed Abdel Raouf/Ball State University, Yassien Zidan/Ball State University, Hana Alnaas/Ball State University, Rand Abo Elenain/Ball State University, Abdullah Mahmoud/Ball State University, Mahmoud Seddik/Ball State University, Mayar Khairy/Ball State University, Mohamed Abou-Zeid/Ball State University

Carbon Fiber-Reinforced Electrically Conductive Concrete Production, Quality Control, and Assurance Techniques for Heated Pavement System Application (TRBAM-25-02939) - A272

MD LUTFOR RAHMAN/Iowa State University, Halil Ceylan/Iowa State University, Sunghwan Kim/Iowa State University, Peter Taylor/Iowa State University, DAN KING/Iowa State University

Investigating Belitic Calcium Sulfoaluminate Cement as Replacement for Portland Cement in Engineered Cementitious Composites (TRBAM-25-04571) - A267

Adriana Alvarado/Louisiana State University, Hassan Noorvand/Louisiana State University, Cameron Murray/Louisiana State University, Daniel Game/Louisiana State University, Marwa Hassan/Louisiana State University

Evaluation of Mechanical Performance and Life Cycle Assessment of Concrete with the Addition of Cellulose Nanocrystals (TRBAM-25-04572) - A266

Andrea Gavilanes/Louisiana State University, Hassan Noorvand/Louisiana State University, Ariel Riofrio/Louisiana State University, Gabriel Arce/Louisiana State University, Marwa Hassan/Louisiana State University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Concrete Pavement Durability Research

Peter Taylor, Iowa State University, presiding

Sponsored By Standing Committee on Durability of Concrete

A compendium of papers covering a range of topics related to concrete pavement durability including alkali-silica reactivity, blended cements, internal curing and advanced materials.

Experimental Study on the Mechanical Properties and Deterioration Mechanism of Recycled Aggregate Concrete for Low-grade Highway Pavements (TRBAM-25-00159) - A252

Yifan Huang/Southeast University, Yang Zhang/Southeast University, Tao Ma/Southeast University

Comparative Study of the Testing Methods for Aggregate Alkali-Silica Reactivity and Mitigation Effectiveness Evaluation (TRBAM-25-00492) - A257

Zhen Liu/Louisiana Department of Transportation and Development, Tyson Rupnow/Louisiana Department of Transportation and Development, Jose Milla/Louisiana Department of Transportation and Development, Samuel Cooper, III/Louisiana Department of Transportation and Development

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Blended Cement Perfromance in Iowa (TRBAM-25-01411) - A251
Lisa McDaniel/Federal Highway Administration (FHWA)
Electromagnetic Detection Method of Concrete Porosity Considering the Influence of Water (TRBAM-25-02077) - A254
Pan Wang/Tongji University, Hui Li/Tongji University, Mingyan Liu/Tongji University
Development of an Accelerated Restrained Ring Test to Monitor the Cracking Potential of a Concrete Mixture Due to Drying Shrinkage (TRBAM-25-02571) - A255
Madeleine C Murphree/University of Florida, Md Shafakat Islam/University of Florida, Kyle Riding/University of Florida, Abla Zayed/University of Florida, Taylor A Rawlinson/University of Florida, Christopher Ferraro/University of Florida
Laboratory Investigation on the use of Expanded Clay Aggregates as Internal Curing Agent in Stiff Mortar Mixtures (TRBAM-25-02803) - A258
ANUSHA TOSHIKHANI/Indian Institute of Technology, Bombay, Solomon Debbarma/Indian Institute of Technology, Bombay
Applications of Advanced Materials to Enhance Concrete Performance in Cold Weather (TRBAM-25-02880) - A260
Alyssa Sunga/Rowan University, Shahriar Abubakri/Rowan University, Islam Mantawy/Rowan University, Danielle Kennedy/Rowan University, Benjamin Watts/Rowan University
Effectiveness of Curing on Fresh Concrete Using Capillary Pressure Sensors (TRBAM-25-03991) - A253
Danny Xiao/University of Wisconsin, Platteville, Markus Schmidt/University of Wisconsin, Platteville, John Kevern/University of Wisconsin, Platteville
Enhancing Self-Healing Performance of Bio-concrete: Impregnating Bacillus Pseudofirmus into Coarse Lightweight Aggregate via Vacuum Impregnation (TRBAM-25-04336) - A256
Omar Omar/Louisiana State University, Hassan Noorvand/Louisiana State University, Heena Dhasmana/Louisiana State University, Marwa Hassan/Louisiana State University, Sujata Subedi/Louisiana State University, Tyson Rupnow/Louisiana State University
Innovative Performance-Based Approach for Effective Utilization of Ground Glass Pozzolan with Metakaolin for ASR Mitigation in Job Mixtures (TRBAM-25-05133) - A250
Pravin Saraswatula/Texas A&M Transportation Institute, Anol Mukhopdhyay/Texas A&M Transportation Institute
SAP and NS Modified Cement Mortars (TRBAM-25-06427) - A261
Chibueze Ajuonuma/Purdue University, Jan Olek/Purdue University, Kendra Erk/Purdue University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Advancements in Winter Maintenance Technologies
Anna Arvidsson, Swedish National Road and Transport Research Institute (VTI), presiding
Sponsored By Standing Committee on Winter Maintenance, Standing Committee on Road Weather

Poster session: Advancements in Winter Maintenance Technologies

Prediction of Roadway Friction for Winter Maintenance Using Machine Learning Models (TRBAM-25-01544) - A302
Jingnan Zhao/Rutgers University, Hao Wang/Rutgers University, Laura Fay/Rutgers University
Development of Hydrophobic Asphalt Emulsion for Asphalt Roads in Subzero Temperature Regions (TRBAM-25-03129) - A303
Shuja Ali/Indian Institute of Technology, Kanpur, Prabin Ashish/Indian Institute of Technology, Kanpur, Ramkrishna Sarkar/Indian Institute of Technology, Kanpur, Xing Cai/Indian Institute of Technology, Kanpur, Anand Sreeram/Indian Institute of Technology, Kanpur, Anoop Raut/Indian Institute of Technology, Kanpur
Implementing Electrically Conductive Concrete Pavement: A Full-Scale Trial in Fairbanks, Alaska (TRBAM-25-04232) - A304
Alyssa Sunga/Rowan University, Shahriar Abubakri/Rowan University, Gilson Lomboy/Rowan University, Danielle Kennedy/Rowan University, Benjamin Watts/Rowan University, Seth Wagner/Rowan University
Predicting Winter Road Surface Condition from High-Resolution, Connected Vehicle Data: An Artificial Intelligence Approach (TRBAM-25-04730) - A305
Yunpeng Shi/University at Buffalo, SUNY, Wen Zhang/University at Buffalo, SUNY, Chunming Qiao/University at Buffalo, SUNY, Adel Sadek/University at Buffalo, SUNY

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Vehicle Trajectory Tracking On Snowy Roads: A Model Predictive Control Method (TRBAM-25-05217) - A292
Jinbiao Huo/University of Wisconsin, Madison, Zhaohui Liang/University of Wisconsin, Madison, Haotian Shi/University of Wisconsin, Madison, Ke Ma/University of Wisconsin, Madison, Xiaopeng Li/University of Wisconsin, Madison, Zhiyuan Liu/University of Wisconsin, Madison
Developing Digital Twin for Disaster Management under Snowstorm in Winter (TRBAM-25-05282) - A293
Yasuhiro Nagata/Hokkaido Development Engineering Center, Toru Hagiwara/Hokkaido Development Engineering Center, Sho Takahashi/Hokkaido Development Engineering Center, Masahiro Yagi/Hokkaido Development Engineering Center, Yasuhiro Kaneda/Hokkaido Development Engineering Center, Genki Ooi/Hokkaido Development Engineering Center
Analyzing Public Satisfaction with Winter Road Maintenance and Snow Clearance Across Demographic Groups and Geographies in Utah (TRBAM-25-05396) - A294
Shailendra Khanal/Utah State University, Patrick Singleton/Utah State University
Automating Work Orders and Tracking Winter Snow Plows and Patrol Vehicles with Telematics Data (TRBAM-25-05647) - A295
Anugunj Naman/Purdue University, Aaron Ault/Purdue University, Yaguang Zhang/Purdue University, James Krogmeier/Purdue University
Semi-Supervised Variational Model Ensembling Method for Snow Removal with Prior Information and Uncertainty Consistency (TRBAM-25-05987) - A296
Jizhao Wang/Tongji University, Hang Zhao/Tongji University, Zhizhou Wu/Tongji University, ZongWen Gu/Tongji University, Wenxin Jiang/Tongji University, Yunyi Liang/Tongji University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Advancements in Road Weather Management
Shawn Truelson, DTN, LLC, presiding
Sponsored By Standing Committee on Road Weather, Standing Committee on Winter Maintenance

These posters will shed light on recent research efforts that explore a range of weather impacts on roads. It will also explore ways to alleviate these impacts, ranging from building resilience to rainstorms to building a data bridge between connected vehicles and Road Weather Information Systems.

Analyzing Intersection Traffic Characteristics under Different Weather Conditions Using On-the-Go Drone Data (TRBAM-25-06258) - A300
Yanqiang Wang/Inner Mongolia University, Yuan Zhu/Inner Mongolia University, Xuanming Li/Inner Mongolia University, Junqing Wang/Inner Mongolia University, Yiming Pan/Inner Mongolia University, Hong Yang/Inner Mongolia University
Leveraging the Integration of Connected Vehicle and RWIS Technology (TRBAM-25-00980) - A301
Adnan Inusah/Iowa State University, Inya Nlenanya/Iowa State University, Shauna Hallmark/Iowa State University
VULNERABILITY OF ROAD NETWORK TO RAINSTORMS IN LONDON AND SURROUNDING REGIONS (TRBAM-25-01880) - A290
Jie Liu/University of Cambridge, Zizhen XU/University of Cambridge, Li Wan/University of Cambridge, Kristen MacAskill/University of Cambridge
Novel Method for Optimizing Dual-Type RWIS Networks - A Case Study of Maine, USA (TRBAM-25-03901) - A291
Simita Biswas/University of Alberta, Tae Kwon/University of Alberta

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Pavement Maintenance Poster Session
DingXin Cheng, California State University, Chico, presiding
Sponsored By Standing Committee on Pavement Maintenance

Quantifying the Impact of Waste Collection Vehicles on Local Pavements in California (TRBAM-25-00067) - A298
Sharlan Dunn/Brigham Young University, Debaroti Ghosh/Brigham Young University
A Novel Framework for Diagnosing Asphalt Pavement Distress Causes Based on Knowledge Graph and Case-Based Reasoning (TRBAM-25-00388) - A280
Siqi Huang/Southeast University, Junqing Zhu/Southeast University, Tao Ma/Southeast University, Zheng Tong/Southeast University

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Quantification of Post-Rainfall Moisture Content in Unbound Layers Using LTPP Data (TRBAM-25-00415) - A288
Ruohan Li/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin, FENG HONG/University of Texas, Austin
Rehabilitation Strategy of Degraded Concrete Pavement in Tunnel Based on FWD and Fatigue Analysis (TRBAM-25-00779) - A285
Tatsuo Nishizawa/Ishikawa National College of Technology, Takahiro Nakayama/Ishikawa National College of Technology, Akinori Komatsubara/Ishikawa National College of Technology, Yoshihito Nitto/Ishikawa National College of Technology, Kenichi Ishihara/Ishikawa National College of Technology
Deep Learning-Based Automatic Detection of Pavement Layers Using GPR (TRBAM-25-01537) - A281
Ali Fares/Hong Kong Polytechnic University, Tarek Zayed/Hong Kong Polytechnic University, Nour Fares/Hong Kong Polytechnic University, Kyrillos Ebrahim/Hong Kong Polytechnic University, Abdul-Mugis Yussif/Hong Kong Polytechnic University, Chenqin Xiong/Hong Kong Polytechnic University, Sherif Abdelkhalek/Hong Kong Polytechnic University
Automated Pavement Thickness Index Evaluation Using GPR (TRBAM-25-01547) - A282
Ali Fares/Hong Kong Polytechnic University, Tarek Zayed/Hong Kong Polytechnic University, Nour Fares/Hong Kong Polytechnic University, Abdul-Mugis Yussif/Hong Kong Polytechnic University, Sherif Abdelkhalek/Hong Kong Polytechnic University
A Data Fusion Method to Enhance the Applicability of Multi-vehicle Cooperative Perception in Smartphone-aided Ride Quality Monitoring (TRBAM-25-02465) - A286
Wangda Guo/Beijing University of Technology, Jinxi Zhang/Beijing University of Technology, Dandan Cao/Beijing University of Technology, Lei Nie/Beijing University of Technology
Improving Highway Safety and Efficiency: Field Evaluation of New Debris Removal System (TRBAM-25-02734) - A287
Yaobang Gong/University of Maryland, College Park, Sayantan Tarafdar/University of Maryland, College Park, Xianfeng Yang/University of Maryland, College Park
Developing a Framework for a Pothole Management Program (TRBAM-25-03179) - A276
DingXin Cheng/California State University, Chico, Pablo Raigoza/California State University, Chico, Devin Cheng/California State University, Chico, Eulises Lopez/California State University, Chico, Jaime Raigoza/California State University, Chico
UPDAPS-Detour: a Mechanistic-Empirical Flexible Pavement Analysis Tool to Evaluate the Effect of Detour Traffic on Pavement Performance (TRBAM-25-04445) - A278
Farhad Abdollahi/Genex Systems | Turner-Fairbank Highway Research Center, Muhammed Kutay/Genex Systems | Turner-Fairbank Highway Research Center, Michele Lanotte/Genex Systems | Turner-Fairbank Highway Research Center, Peng Chen/Genex Systems | Turner-Fairbank Highway Research Center, Bora Cetin/Genex Systems | Turner-Fairbank Highway Research Center
Precision Assessment of Automated Pavement Condition Data Collection Using Annual Rating Data (TRBAM-25-04543) - A283
Xiaohua Luo/Texas State University, Gauri Mahajan/Texas State University, Feng Wang/Texas State University, Haitao Gong/Texas State University, FENG HONG/Texas State University, Jueqiang Tao/Texas State University
Development of a time series deep learing model for e-scooter road anomaly identification (TRBAM-25-05053) - A277
Nayeon Kim/Chungbuk National University, Yongil Jung/Chungbuk National University, Tai-jin Song/Chungbuk National University
Updated Methods for Identification of Road Surface Type using Machine Learning-Enabled Remote Sensing (TRBAM-25-05180) - A284
Colin Brooks/Michigan Tech Research Institute, Reid Sawtell/Michigan Tech Research Institute, Dana Redhuis/Michigan Tech Research Institute, Susan Janiszewski/Michigan Tech Research Institute, Anthony Chavez/Michigan Tech Research Institute, Vanessa Barber/Michigan Tech Research Institute, Richard Dobson/Michigan Tech Research Institute, Jeremy Graham/Michigan Tech Research Institute, Tim Colling/Michigan Tech Research Institute, Nick Kozsykowski/Michigan Tech Research Institute, Audrey LaCost/Michigan Tech Research Institute, Grant Deljevic/Michigan Tech Research Institute, Abby Jenkins/Michigan Tech Research Institute, Mike Toth/Michigan Tech Research Institute, Austin Himmelein/Michigan Tech Research Institute

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Current Issues in Economic Development and Land Use
Noreen McDonald, University of North Carolina, Chapel Hill, presiding
Michael Lawrence, Jack Faucett Associates, Inc., presiding
Sponsored By Standing Committee on Economic Development and Land Use

(continued)

Urban roadway in America: the amount, extent, and value (TRBAM-25-00943) - A131
Erick Guerra/University of Pennsylvania, Gilles Duranton/University of Pennsylvania, Xinyu Ma/University of Pennsylvania
Are all streets created equal? Measuring the differences in the built environment among streets with various socioeconomic characteristics in Montréal, Canada (TRBAM-25-00954) - A130
Elitza Kraycheva/McGill University, Hisham Negm/McGill University, Madhav Badami/McGill University, Ahmed El-Geneidy/McGill University
Identifying The Impacts of New Transit on Commercial Gentrification Using Survival Analysis (TRBAM-25-01022) - A132
Geonmin Kim/University of Seoul, Suji Kim/University of Seoul, Seunghyeon Lee/University of Seoul, Jihye Byun/University of Seoul
Residential Price Modeling with Spatial and Aspatial Cross-Validation: A Comparison Across Geographic Contexts (TRBAM-25-01287) - A140
Usman Ahmed/University of Tennessee, Knoxville, Jason Hawkins/University of Tennessee, Knoxville
Understanding Housing Market Dynamics through A Joint Model of Time-On-Market Duration and Listing Outcome of Residential Property Listings (TRBAM-25-01534) - A142
Yicong Liu/University of Toronto, Saeed Shakib/University of Toronto, Eric Miller/University of Toronto, Khandker Nurul Habib/University of Toronto
Investigating the Multi-Level Impact of Built Environment and Job-Housing Structure on Commuting Volume: A Case Study Using Mobile Phone Signaling Data (TRBAM-25-01609) - A133
Zhuangbin Shi/Kunming University, Xueyi Liu/Kunming University, Mingwei He/Kunming University, Yang Liu/Kunming University
Urban Rail Transit and Green Urbanisation (TRBAM-25-01814) - A134
Anupriya -/Imperial College London, Daniel Graham/Imperial College London
Public Transportation Usage Among Night Commuters: The Role of Land Use and Accessibility (TRBAM-25-02278) - A135
Melrose Pan/Oak Ridge National Laboratory, A. Latif Patwary/Oak Ridge National Laboratory, Majbah Uddin/Oak Ridge National Laboratory
Barriers to the Adoption of Land-use and Transportation Integrated (LUTI) Models for Climate Change Mitigation Planning: Insights from the Greater Golden Horseshoe, Canada (TRBAM-25-02944) - A141
Saeed Shakib/University of Toronto, Jason Hawkins/University of Toronto, Peri Dworatzek/University of Toronto, Mark Purdon/University of Toronto, Mark Winfield/University of Toronto, Khandker Nurul Habib/University of Toronto
INTEGRATING ECONOMIC, ENVIRONMENTAL, AND SOCIAL SUSTAINABILITY METRICS: ASSESSMENT OF CROSS-MODAL PASSENGER TRANSPORTATION (TRBAM-25-02951) - A136
Amma Agyekum/University of Massachusetts, Amherst, Jessica Boakye/University of Massachusetts, Amherst, Egemen Okte/University of Massachusetts, Amherst, Martha Koch/University of Massachusetts, Amherst
Caring for people saves our planet: transport's contribution to sustainability (TRBAM-25-04051) - A137
Floridea Di Ciommo/Cambiamo | changingMObility S.c.m., Sandra García García/Cambiamo | changingMObility S.c.m., Maria Alonso Raposo/Cambiamo | changingMObility S.c.m., Sofia Asperti/Cambiamo | changingMObility S.c.m., Amaya Manso Gonzalez/Cambiamo | changingMObility S.c.m., Giuseppe Liguori/Cambiamo | changingMObility S.c.m., Luigi Russi/Cambiamo | changingMObility S.c.m.
Impact of Built Environment and Traffic Emissions on Housing Prices: The case of Tongzhou district, China (TRBAM-25-04104) - A138
Yaoyang Zhao/Southeast University, Jiulonghu, Qian Chen/Southeast University, Jiulonghu, Jian Lu/Southeast University, Jiulonghu, Xiaojian Hu/Southeast University, Jiulonghu
Understanding Land Use Evolution for Vacant Residential and Vacant Commercial Parcels in Miami, Florida (TRBAM-25-04740) - A146
Lauren Hoover/University of Central Florida, Sudipta Dey Tirtha/University of Central Florida, Naveen Eluru/University of Central Florida
Where do Built Environment Attributes Make the Most Impact on Active Travel? (TRBAM-25-04920) - A145
Yuliang Guo/Southeast University, Tao Tao/Southeast University, Xiucheng Guo/Southeast University
Effects of High-Speed Railway on Regional Accessibility and Poverty Alleviation in China Considering Regional Heterogeneity (TRBAM-25-05247) - A148
Jing Fan/Tongji University, Hironori Kato/Tongji University, Tuanshe Li/Tongji University, Xinghua Liu/Tongji University, Ye Li/Tongji University, Junxian Lu/Tongji University
Development of a Differential Spatial Economic Modeling Method for Improved Land use and Multimodal Transportation Planning (TRBAM-25-05433) - A128
Muhammad Safdar/Wuhan University, Ming Zhong/Wuhan University, Linfeng Li/Wuhan University, Asif Raza/Wuhan University, John Douglas Hunt/Wuhan University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Innovations in Shared Micromobility: Insights into User Behavior, Spatial Dynamics, and System Integration

David Kuehn, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Innovative Public Transportation Services and Technologies

This poster session highlights cutting-edge research in micromobility, showcasing insights into user behavior, spatial dynamics, and system integration. Attendees will explore a range of studies that investigate factors influencing micromobility mode choice, the relationship between shared micromobility and other modes, and the impact of public sentiment on micromobility use.

Exploring Spatial Heterogeneity of E-scooter's Relationship with Ridesourcing using Explainable Machine Learning (TRBAM-25-00612) - B530

Yiming Xu/University of Texas, Austin, Junfeng Jiao/University of Texas, Austin, Yang Li/University of Texas, Austin

Shifting Scooter Sentiments: Using Pilots to Allay Fears and Ride the Wave of Public Opinion (TRBAM-25-01021) - B531

Anne Brown/University of Oregon, Calvin Thigpen/University of Oregon, Nicholas Klein/University of Oregon, Kelcie Ralph/University of Oregon

Urban Mobility Revolution: Spatiotemporal Analysis of Free-Floating vs. Electric Bikeshare in Yancheng, China (TRBAM-25-01027) - B520

Xize Liu/Southeast University, Jingxu Chen/Southeast University, Xuewu Chen/Southeast University

Understanding of the Cycling Mode Selection Behavior of Shared Electric Bike and Shared Bike Users Using Multisource Data: A Case Study of Kunming, China (TRBAM-25-01617) - B532

Tianyi Zhang/Kunming University, Yang Liu/Kunming University

Aligning User Returns with System Needs: Reinforcement Learning-Based Incentive Design for User-Based Bike-sharing Rebalancing System (TRBAM-25-01776) - B533

Shuai Zhang/Tongji University, Xinwei Ma/Tongji University, Ying Shen/Tongji University

Optimal Location of Free-Floating Bike-Sharing Dispatching Hubs (TRBAM-25-02103) - B521

Wendong Chen/Southeast University, Yu Gu/Southeast University, Xuewu Chen/Southeast University, Long Cheng/Southeast University, Jonas De Vos/Southeast University

A Spatiotemporal Analysis of Shared Micromobility Trips in First and Last-Mile Public Transit Integration (TRBAM-25-03091) - B534

Abebe Dress Beza/University of Calgary, Merkebe Getachew Demissie/University of Calgary, Lina Kattan/University of Calgary

Dynamic Bicycle-Sharing Dispatch Considering Heterogeneous Vehicles: Integrating Advanced Reinforcement Learning with Continuous Actions (TRBAM-25-03155) - B535

Hanqiang Qian/Beijing University of Technology, Yue Shi/Beijing University of Technology, Zhen Qian/Beijing University of Technology, Anran Li/Beijing University of Technology, Rui Guo/Beijing University of Technology, Yanyan Chen/Beijing University of Technology

Exploring Attitudinal Group Differences in Preferences for Shared E-scooter Use and Its Integration with Public Transit (TRBAM-25-03214) - B523

Kyung Soo Chae/Hanyang University, Sung Hoo Kim/Hanyang University, Xiang Yan/Hanyang University

A Heuristic for Battery-Constrained Charging and Rebalancing of Micromobility Devices (TRBAM-25-03629) - B536

Demetra Protogyrou/North Carolina State University, Leila Hajibabai/North Carolina State University

Towards A Comprehensive Theoretical Framework of Bikeshare Adoption in Low-Income Communities: A Qualitative Approach (TRBAM-25-04770) - B537

Anindya Debnath/University of Arkansas, Fayetteville, Arna Nithila/University of Arkansas, Fayetteville, Suman Mitra/University of Arkansas, Fayetteville

Analyzing Preferences for Shared Micromobility Services in Japanese Urban Areas (TRBAM-25-05146) - B538

Hiroshi Uemura/University of Tokyo, Giancarlos Parady/University of Tokyo, Kiyoshi Takami/University of Tokyo

Integrating Public Transit Effects and Street View Imagery into a Dynamic Spatiotemporal Graph-based Machine Learning Model for Predicting Bike-sharing Ridership (TRBAM-25-05382) - B539

Kaifa Lu/University of Florida, Yanghe Liu/University of Florida, Zhong-Ren Peng/University of Florida

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To What Extent Does Micromobility Enable Car-Light Lifestyles? Evidence From a Nationwide Survey (TRBAM-25-05610) - B526
Hossain Mohiuddin/Morgan State University, Tatsuya Fukushige/Morgan State University, Dillon Fitch-Polse/Morgan State University
Modeling Service Catchment of Bicycle Sharing Stations in Chennai (TRBAM-25-06468) - B527
Adarsh Yadav/Indian Institute of Technology, Madras, Gitakrishnan Ramadurai/Indian Institute of Technology, Madras
Exploring Latent and Manifest Effects on Micromobility Mode Choice (TRBAM-25-00457) - B528
Hauke Reckermann/RheinMain University, Matthias Kowald/RheinMain University
Estimating an E-Scooter Origin-Destination Model Leveraging Yelp POI Data for Enhanced Urban Mobility Insights (TRBAM-25-01255) - B524
Abolfazl Karimpour/State University of New York (SUNY), Sajjad Karimi/State University of New York (SUNY), Robert Kluger/State University of New York (SUNY)
How Do Directed and Undirected Travel Differ? Evidence from Year-Long Bikeshare Trip Data in Seoul (TRBAM-25-01652) - B522
Hongjae Kim/Hanyang University, Ui Hyeon Jeong/Hanyang University, Sung Hoo Kim/Hanyang University
Revealing Hidden Demand in Free-Floating Shared Mobility Systems Using Voronoi Tessellation (TRBAM-25-04092) - B529
Tobias Herbst/Technical University Munich, Markus Lienkamp/Technical University Munich
A Deep Embedded Clustering Model for Understanding Micromobility Travel Patterns (TRBAM-25-04375) - B525
Yueshuai He/University of Louisville, Robert Kluger/University of Louisville

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Addressing Transit Emergencies: Thermal Events and Evacuations
Lisa Staes, USF Center for Urban Transportation Research, presiding
Sponsored By Standing Committee on Transit Safety and Security

Thermal events do occur within the transit environment and learning more about the approaches that can be taken to ensure successful evacuations during these events is vital to the safety of public transit riders and employees. During this poster session, participants will learn about the outcomes of simulation studies of rail tunnel evacuations, they will learn about the psychology of individuals who may panic during emergency events, such as evacuations, and gain a better understanding of how something like the layout of faregates can impact evacuations from metro systems.

Agent-Based Simulation for Emergency Evacuation from Railway Tunnel in the Event of Fire (TRBAM-25-00327) - B510
Hoora Agha Seyed Abolghasem/Iran University of Science and Technology, Morteza Bagheri/Iran University of Science and Technology, Mohammad Reza Talaee/Iran University of Science and Technology
Simulation of Passenger Emergency Evacuation in an Urban Rail Transit Transfer Station Considering Panic Psychology: A Two-Stage Framework (TRBAM-25-00052) - B511
Liang Li/Southeast University, Yanjie JI/Southeast University, Xueqi Ding/Southeast University, Haiyan Zhang/Southeast University
Understanding the Impact of Faregate Layout on Emergency Evacuation of Underground Metro Stations: A Case Study of Cairo Metro, Egypt (TRBAM-25-04291) - B512
Ahmed Mohsen/Cairo University, Hoda Talaat/Cairo University

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Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Critical Topics in Transit Safety

Lisa Staes, USF Center for Urban Transportation Research, presiding

Sponsored By Standing Committee on Transit Safety and Security

Transit safety is complex and crossing multiple topics with various solutions. During this poster session, participants will learn about topics ranging from crowdsourcing, approaches to addressing the challenges public transit agencies are encountering related to persons who are homeless or unsheltered, to design elements in urban roads that can better accommodate bus rapid transit systems, to the psychology of safety – how physical, social, and security factors can impact the preferences of transit riders.

An Empirical Investigation of the Impact of Preferences for Physical, Social, and Security Factors on the Feeling of Safety on Public Transit (TRBAM-25-00924) - B513

Bogdan Kapatsila/University of Iowa, Emily Grise/University of Iowa

Safety Assessment of Cross-Sectional Variations of Urban Roads to Accommodate Rapid Transit Systems (TRBAM-25-01744) - B514

Paolo Intini/University of Salento, Nicola Berloco/University of Salento, Stefano Coropulis/University of Salento, Nicola Introcaso/University of Salento, Vittorio Ranieri/University of Salento

Approaches to Addressing Homelessness on Transit: Interviews with US Operators (TRBAM-25-02285) - B515

Michael Smart/Rutgers University, Ricardo Vera/Rutgers University, Yingning Xie/Rutgers University

Crowdsourcing Safety: The Value of Passenger Feedback for Measuring Driving Safety (TRBAM-25-04076) - B516

Robert Marty/World Bank, Sveta Milusheva/World Bank

4045

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

CANCELLED—Freight Transportation Economics and Regulation Research

Fatemeh Ranaiefar, Fehr & Peers, presiding

Sponsored By Standing Committee on Freight Transportation Economics and Regulation

This session will present the latest research in freight economics with a particular emphasis on regulation.

4046

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Topics in Urban Freight Transportation

Jeffrey Ang-Olson, ICF, presiding

Sponsored By Standing Committee on Urban Freight Transportation

This session includes a variety of papers about urban freight.

Freight Trip Generation in Metropolitan Areas: An International Perspective (TRBAM-25-00465) - B440

Julia Amaral/University of Antwerp, Jose Holguin-Veras/University of Antwerp, Matthew Roorda/University of Antwerp, Abel Kebede Reda/University of Antwerp, Mathieu Gardrat/University of Antwerp, Leise Kelli de Oliveira/University of Antwerp, Elias Goodrich/University of Antwerp, Oriana Calderon/University of Antwerp, Carlos A. Gonzalez-Calderon/University of Antwerp, Tho Le/University of Antwerp, Jesus Gonzalez-Feliu/University of Antwerp, Usman Ahmed/University of Antwerp, Ivan Sanchez-Diaz/University of Antwerp, Prasanta Sahu/University of Antwerp, Takanori Sakai/University of Antwerp, Abdelrahman Ismael/University of Antwerp, Diana Ramirez-Rios/University of Antwerp, Elise Capersen/University of Antwerp, José Luis Moura/University of Antwerp, Luigi dell'Olio/University of Antwerp, Maira Delgado-Lindeman/University of Antwerp, Martin Ruesch/University of Antwerp, Paolo Todesco/University of Antwerp

Order Allocation and Vehicle Routing Problems with Crowdsourced and Professional Couriers (TRBAM-25-01524) - B441

Dongze Li/University of Hong Kong, Wenbo Sun/University of Hong Kong, Fangni Zhang/University of Hong Kong

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Research on the Selection of Subway Logistics Transshipment Points Considering Transportation Capacity (TRBAM-25-01661) - B442
Fu Wenling/Nanjing University, Junhong Hu/Nanjing University, Chenchen LI/Nanjing University, Mingshu Yang/Nanjing University
A Practical Framework for Integrating Delivery and Pickup Operations in Urban E-Commerce Logistics (TRBAM-25-01841) - B443
Claudio Cunha/Universidade de Sao Paulo, Eduardo Rodrigues/Universidade de Sao Paulo, Kauê Fagundes/Universidade de Sao Paulo, Matheus Silva/Universidade de Sao Paulo
Analyzing Failed Deliveries in an Urban B2B Operation: Insights from Actual Route Data to Improve Last Mile Distribution (TRBAM-25-01911) - B444
Claudio Cunha/Universidade de Sao Paulo, Guilherme Alves/Universidade de Sao Paulo
The Key Role of Motorized Two-Wheelers in Boosting Earnings of Paris On-Demand Delivery Workers (TRBAM-25-01918) - B450
Benjamin Motte-Baumvol/No Organization, Laetitia Dablanc/No Organization
Exploring Operational Characteristics of E-Commerce Deliveries (TRBAM-25-01954) - B451
Julia Amaral/University of Antwerp, Leise Kelli de Oliveira/University of Antwerp, Joris Beckers/University of Antwerp
Optimizing Electric Cargo Bike Delivery Routes Considering Rider Fatigue (TRBAM-25-02099) - B452
Zahra Nourmohammadi/University of New South Wales, David Rey/University of New South Wales, Meead Saberi/University of New South Wales
Cargo Consolidation to Reduce Traffic Congestion – Model, Algorithm and Application Case (TRBAM-25-02322) - B453
Mario Monsreal/Texas A&M Transportation Institute, Seckin Ozkul/Texas A&M Transportation Institute, Bill Prieto/Texas A&M Transportation Institute, Jose Rivera/Texas A&M Transportation Institute, William Eisele/Texas A&M Transportation Institute
Optimizing Bidirectional Delivery with Drones and Trucks:A Mixed-Integer Linear Approach to Addressing No-Fly Zone Constraints (TRBAM-25-03826) - B454
Jialu Zeng/South China University of Technology, Mingyang Pei/South China University of Technology
Optimizing Crowd-Shipping Integration in Last-Mile Delivery under Demand and Supply Uncertainties: A Two-Stage Stochastic Approach (TRBAM-25-03876) - B462
Shixuan Tang/University of Hong Kong, Wentao Huang/University of Hong Kong, Sisi Jian/University of Hong Kong
Understanding the Freight (Trip) Attraction of Food Services in Urban Areas of Emerging Economies: A Study in Urban Planning and Food Services (TRBAM-25-04072) - B463
Carlos Granada-Muñoz/Universiteit Antwerpen, Carlos A. Gonzalez-Calderon/Universiteit Antwerpen, John Posada-Henao/Universiteit Antwerpen, Ivan Sanchez-Diaz/Universiteit Antwerpen
Optimizing Loading Space Locations for Walkable Cities (TRBAM-25-04455) - B464
Keita Imamura/Shibaura Institute of Technology, Yuki Oyama/Shibaura Institute of Technology
Spatial and Socioeconomic Factors Influencing Service Times for Urban Deliveries (TRBAM-25-04662) - B472
Oriana Calderon/University of Tennessee, Knoxville, Andres Regal-Ludowieg/University of Tennessee, Knoxville, Jose Holguin-Veras/University of Tennessee, Knoxville
Consolidation of Urban Freight Transportation and Public Transit Systems: A Generic Strategic Framework Using Continuum Approximation (TRBAM-25-04796) - B473
Mohammadhosein Pourgholamali/Illinois Institute of Technology, Mohammad Miralinaghi/Illinois Institute of Technology, Alireza Talebpour/Illinois Institute of Technology, Samuel Labi/Illinois Institute of Technology
A Continuous Approximation Model for Large-Scale Delivery Alternative Optimization: Case Study in Chicago Using an Agent-Based Simulation Framework. (TRBAM-25-05143) - B474
Jesus Javier Osorio Fuenmayor/University of Illinois, Urbana-Champaign, Hyunseop Uhm/University of Illinois, Urbana-Champaign, Abdelrahman Ismael/University of Illinois, Urbana-Champaign, Olcay Sahin/University of Illinois, Urbana-Champaign, Natalia Zuniga-Garcia/University of Illinois, Urbana-Champaign
To Ride or to Fly: Optimal Freight-on-Transit Operations Using Drones (TRBAM-25-05239) - B482
Jesus Javier Osorio Fuenmayor/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign
Large Scale Stochastic Charger Location and Allocation Problem in Last-Mile Delivery (TRBAM-25-05358) - B483
Waquar Kaleem/Argonne National Laboratory, Taner Cokyasar/Argonne National Laboratory, Jeffrey Larson/Argonne National Laboratory, Anirudh Subramanyam/Argonne National Laboratory, Omer Verbas/Argonne National Laboratory, Tanveer Bhuiyan/Argonne National Laboratory

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Quantifying E-Commerce Efficiency: A Consumer-Centric Analysis of Online Shopping (TRBAM-25-05693) - B484
Yuetong Wang/National Renewable Energy Laboratory (NREL), Kyungsoo Jeong/National Renewable Energy Laboratory (NREL), Venu Garikapati/National Renewable Energy Laboratory (NREL)
The Role of Truck Stops in Urban Freight Planning Using GPS Data: A Critical Examination of Urban Logistics in the Context of Current Challenges. (TRBAM-25-05877) - B492
Diana Alarcon-Bohada/Universidad Nacional de Colombia, Ivan Cardenas-Barbosa/Universidad Nacional de Colombia, Sofia Perez-Guzman/Universidad Nacional de Colombia, Carlos A. Gonzalez-Calderon/Universidad Nacional de Colombia, John Posada-Henao/Universidad Nacional de Colombia
On-Demand Multi-Modal Automated Last-Mile Delivery on 3d Urban Networks using Graph Attention Reinforcement Learning (TRBAM-25-06441) - B494
Farzan Moosavi/Toronto Metropolitan University, Bilal Farooq/Toronto Metropolitan University
Consumer Perceptions of Risks and Benefits of Sidewalk Autonomous Delivery Robots for Last Mile Deliveries (TRBAM-25-02732) - B493
Vijay Muppalla/University of Missouri, St. Louis, Trilce Encarnacion/University of Missouri, St. Louis

4047

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A
Current Trends in Agriculture and Food Transportation
James Nolan, University of Saskatchewan, presiding
Sponsored By Standing Committee on Agriculture and Food Transportation

Transportation Issues Affecting Fresh Food Distribution: A Comparison Study of Urban vs Rural United States (TRBAM-25-00580) - B500
Michelle Miller/University of Wisconsin, Madison, Regina Hirsch/University of Wisconsin, Madison, Jasmine Chang/University of Wisconsin, Madison, Junmin Shi/University of Wisconsin, Madison, David Long/University of Wisconsin, Madison
Multi-objective optimization of container with food cold chain using multimodal transport under uncertainties in network structure and ad-hoc situations (TRBAM-25-02192) - B501
Jing Chen/Nanjing University, Shilong Ge/Nanjing University, yong zhang/Nanjing University
Analyzing Freight Trip Dynamics Linked to Grocery Sector Activity in Medellin, Colombia: A Quantitative Approach (TRBAM-25-04833) - B502
Jhan Gil-Marin/Rensselaer Polytechnic Institute (RPI), Carlos A. Gonzalez-Calderon/Rensselaer Polytechnic Institute (RPI), John Posada-Henao/Rensselaer Polytechnic Institute (RPI), Sofia Perez-Guzman/Rensselaer Polytechnic Institute (RPI)
Analysis of Microhubs for Three-Sided Meal Delivery Services (TRBAM-25-05251) - B503
Linxuan Shi/George Washington University, Zhengtian Xu/George Washington University
Mathematical Formulation To Optimize The Locations And Capacities Of Food Waste Digesters (TRBAM-25-05698) - B504
Amirreza Nickkar/Morgan State University, Michael Awotoye/Morgan State University, Celeste Chavis/Morgan State University, Young-Jae Lee/Morgan State University, Callie Babbitt/Morgan State University
Agricultural Export Demand at Inland Ports: A Washington State Case Study (TRBAM-25-06091) - B505
Jake Wagner/Washington State University, Eric Jessup/Washington State University
Fair and Stable Allocation in On-Demand Delivery Services for Meals and Groceries (TRBAM-25-06127) - B506
Hui Shen/Argonne National Laboratory, Krishna Murthy Gurumurthy/Argonne National Laboratory, Yantao Huang/Argonne National Laboratory, Abdelrahman Ismael/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory
Urban Freight Activity Implications from Food Industry Establishments: Comparing Dark Kitchens, Hybrid and In-Person Restaurants (TRBAM-25-05570) - B507
Suprava Mishra/Indian Institute of Technology, Agnivesh Pani/Indian Institute of Technology, Ivan Sanchez-Diaz/Indian Institute of Technology, Heleen Buldeo Rai/Indian Institute of Technology

4048

Wednesday, 08:00 a.m. - 09:45 a.m., Convention Center, Hall A

Current Issues in Trucking Industry Research

Guang-Xiang Chen, National Institute for Occupational Safety and Health, presiding

Sponsored By Standing Committee on Trucking Industry Research

Research on Driver Acceptance of Automatic Truck Platoon Based on Extended TAM (TRBAM-25-00254) - B400

Wenyuan Yang/Southeast University, Kaidi Liang/Southeast University, ZhenDong Qian/Southeast University, Jinliang Yu/Southeast University, Zhenning Qian/Southeast University

Truck Parking Demand Analysis along Nebraska's Major Truck Freight Corridor: Utilizing Deep Learning Algorithms on Imagery Data (TRBAM-25-00469) - B401

Jahangeer Jahangeer/University of Nebraska, Lincoln, Nathan Huynh/University of Nebraska, Lincoln, Li Zhao/University of Nebraska, Lincoln, Aida Riahifar/University of Nebraska, Lincoln, Ruhma Khan/University of Nebraska, Lincoln, Zhenghong Tang/University of Nebraska, Lincoln

Effect of Road Roughness on E-Truck Energy Consumption (TRBAM-25-00589) - B402

Aditya Singh/University of Illinois, Urbana-Champaign, Asad Khan/University of Illinois, Urbana-Champaign, Johann Cardenas Huaman/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign

Application of Classification and Hybrid LSTM-GRU Models for Truck Parking Availability Prediction (TRBAM-25-03001) - B411

Branislav Dimitrijevic/New Jersey Institute of Technology, Hyun Kim/New Jersey Institute of Technology, Mohammadjavad Bazdar/New Jersey Institute of Technology, Dejan Besenski/New Jersey Institute of Technology, Lazar Spasovic/New Jersey Institute of Technology

How Do Demographic and Socio-Political Factors Affect Public Acceptance of Autonomous Passenger Vehicle (APV) Technology for Large Trucks? (TRBAM-25-03458) - B412

Panick Kalambay/University of Washington, Tacoma, Norris Novat/University of Washington, Tacoma, Emmanuel Kidando/University of Washington, Tacoma, Boni Kutela/University of Washington, Tacoma, Angela Kitali/University of Washington, Tacoma

Vehicle Driving Intention Recognition and Trajectory Prediction Considering the Effect of Large Vehicles (TRBAM-25-03469) - B413

Kai Gong/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Lanfang Zhang/Key Laboratory of Road and Traffic Engineering of the Ministry of Education, Xinhong Li/Key Laboratory of Road and Traffic Engineering of the Ministry of Education

Combustion Engine and Electric Truck Network Design with Hybrid Platoons (TRBAM-25-04550) - B414

Ioannis P. Ioannou/Florida Atlantic University, Boca Raton, Evangelos Kaisar/Florida Atlantic University, Boca Raton, Thalis Zis/Florida Atlantic University, Boca Raton, Mihalis Golias/Florida Atlantic University, Boca Raton

The Determinants of Bulk Truck Rates (TRBAM-25-04732) - B420

Hanouf Alhunayshil/Washington State University, Jake Wagner/Washington State University, Wisnu Sugiarto/Washington State University, Eric Jessup/Washington State University

Optimal Weigh-In-Motion Placement for Overloaded Truck Enforcement (TRBAM-25-04868) - B421

Yunkyeong Jung/Korea Advanced Institute of Science and Technology, Daijiro Mizutani/Korea Advanced Institute of Science and Technology, Jinwoo Lee/Korea Advanced Institute of Science and Technology

Network-Level Optimization of Electric Truck Platooning Operations Using Robust Optimization Methods (TRBAM-25-05311) - B422

Siyu Zhang/Monash University, Zhuo Chen/Monash University, Zhuang Dai/Monash University, Yangyang Li/Monash University

Hybrid Truck-Drone Delivery in Aerial Networks under Traffic Congestion (TRBAM-25-05514) - B423

Ruifeng She/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign

Examining Spatiotemporal Demand of Electric Trucks for Deliveries and Recharging (TRBAM-25-05682) - B424

Jihao Deng/Tongji University, Zhiwei Yang/Tongji University, Xiaohong Chen/Tongji University, Quan Yuan/Tongji University

Truck Platooning Coordination with Multiple Times Matching (TRBAM-25-05728) - B430

Danesh Hosseinpanahi/University of Illinois, Chicago, Bo Zou/University of Illinois, Chicago, Pooria Choobchian/University of Illinois, Chicago

An Iterative Algorithm to Impute Traffic Information over Nationwide Traffic Networks (TRBAM-25-05745) - B431

Diyi Liu/George Washington University, Ankur Shiledar/George Washington University, Hyeonsup Lim/George Washington University, Vivek Sujan/George Washington University, Adam Siekmann/George Washington University, Junchuan Fan/George Washington University, Lee Han/George Washington University

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Truck Traffic Prediction at an Intersection in Long Beach, California, using Neural Networks (TRBAM-25-05788) - B432
Sai Nikhila Varma Chittari Vyacharouthu/California State University, Long Beach, Hung Jui Chang/California State University, Long Beach, Hossein Jula/California State University, Long Beach
Detection of Truck Stop Activity Types by Machine Learning with Real-world Trajectory Data (TRBAM-25-05819) - B433
Hui Shen/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Monique Stinson/Argonne National Laboratory
A Choice Experiment Survey of Drayage Fleet Operator Preferences for Zero-Emission Trucks (TRBAM-25-06244) - B410
Youngeun Bae/University of California, Irvine, Stephen Ritchie/University of California, Irvine, Craig Rindt/University of California, Irvine
Charging Infrastructure Decisions by Heavy-duty Vehicle Fleet Operators: An Exploratory Analysis (TRBAM-25-06261) - B404
Youngeun Bae/University of California, Irvine, Craig Rindt/University of California, Irvine, Stephen Ritchie/University of California, Irvine
Small and Large Fleet Perceptions on Zero-emission Trucks and Policies (TRBAM-25-06270) - B403
Youngeun Bae/University of California, Irvine, Stephen Ritchie/University of California, Irvine, Craig Rindt/University of California, Irvine

4049

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon A
Pedestrian Safety
Valerian Kwigizile, Western Michigan University, presiding
Sponsored By Standing Committee on Pedestrians

This session will provide insight into pedestrian safety focusing on cutting edge and novel technologies and methods.

Investigating Pedestrian Safety in Darkness: Insights from a Case-Control Analysis (TRBAM-25-04287)
Rebecca Sanders/Safe Streets Research & Consulting, Brian Almdale/Safe Streets Research & Consulting, Jessica Schoner/Safe Streets Research & Consulting
Brain Response as a Novel Objective Measure to Distinguish Pedestrians' Interaction Experience with Bicyclists in Immersive and Video-based Experiments (TRBAM-25-05566)
Vladimir Maksimenko/National University of Singapore, Liting Yuan/National University of Singapore, Khashayar Kazemzadeh/National University of Singapore, Prateek Bansal/National University of Singapore
Investigating Pedestrian Crossings while Interacting with Autonomous Vehicles: A Comparison in Different Environments (TRBAM-25-03122)
Gabriel Lanzaro/University of British Columbia, Yan Liu/University of British Columbia, Tarek Sayed/University of British Columbia
Shedding Light on Safety: Comparing the Collision Likelihood and Impact Severity of Pedestrian Crash Avoidance Systems Across Day and Night Conditions (TRBAM-25-03034)
Zeinab Bayati/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville
Assessing Pedestrian Safety at Urban Signalized Intersections Across Various Land Use Types: Insights from A Mid-Sized Indian City (TRBAM-25-04001)
Dipanjan Mukherjee/National Institute of Technology, Silchar

4050

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 102B
Human Factor Insights from Naturalistic Driving Studies
Erika Gallegos, Colorado State University, presiding
Lishengsa Yue, Tongji University, presiding
Sponsored By Standing Committee on Human Factors of Vehicles

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Human-Machine Interface Review: A Comparison of Legacy and Touch-Based Center Stack Controls (TRBAM-25-02463)
Gabrial T. Anderson/Virginia Polytechnic Institute and State University, Jacobo Antona-Makoshi/Virginia Polytechnic Institute and State University, Sheila Klauer/Virginia Polytechnic Institute and State University
Examining the Impact of Feedback on Traffic and Safety Behavior of Car Drivers in a Naturalistic Driving Study (TRBAM-25-06053)
Armira Kontaxi/National Technical University of Athens (NTUA), Apostolos Ziakopoulos/National Technical University of Athens (NTUA), George Yannis/National Technical University of Athens (NTUA)
Naturalistic Driving Analysis of Situational, Behavioral, and Psychosocial Determinants of Tailgating (TRBAM-25-02636)
Rashmi Payyanadan/Toyota Motor North America, Josh Domeyer/Toyota Motor North America, Linda Angell/Toyota Motor North America, Tina Sayer/Toyota Motor North America
Analysis of System-Initiated Takeover in Naturalistic Driving: Readiness, Context, and Individual Differences (TRBAM-25-03036)
Shiyan Yang/No Organization, Xuanying Zhu/No Organization, Michael Lenne/No Organization, Angus McKerral/No Organization, Megan Mulhall/No Organization, Bryan Reimer/No Organization, Pnina Gershon/No Organization
Does the Conspicuity of AVs with Visible Sensor Stacks Influence the Following Behavior of Human Drivers? A Pilot Study (TRBAM-25-05209)
Mehran Piri/University of Cincinnati, John Ash/University of Cincinnati, Mohammad Javad Amani/University of Cincinnati

4051

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 103A
Human Factors of Infrastructure Design and Operations
Hany Hassan, Louisiana State University, presiding
Sponsored By Standing Committee on Human Factors of Infrastructure Design and Operations

Rear-End Conflict Assessment for Daytime and Nighttime Conditions using Advanced Sensor Analytics and Extreme Value Modelling Approach (TRBAM-25-00034)
Akshay Gupta/Indian Institute of Technology, Roorkee, Pushpa Choudhary/Indian Institute of Technology, Roorkee, Manoranjan Parida/Indian Institute of Technology, Roorkee
Driver Response to Winter Weather Warning Messages on Changeable Message Signs at Freeway Bridges (TRBAM-25-00082)
Sagar Keshari/Michigan State University, Sakar Pahari/Michigan State University, Magdalena Cavka/Michigan State University, Vahid Bahrami/Michigan State University, John Racine/Michigan State University, Timothy Gates/Michigan State University, Peter Savolainen/Michigan State University
The Effects of Flood Warning Information on Driver Decisions: A Driving Simulator Study (TRBAM-25-00210)
Katherine Garcia/Rice University, Jing Chen/Rice University
Identifying Driving States by Developing a Behavior Spectrum Using Recurrence Matrix Spectrum Radius (TRBAM-25-00826)
Yu Zhang/Chang'an University, Ying Yan/Chang'an University, Hongting Wang/Chang'an University, Huazhi Yuan/Chang'an University, Hongliang Ding/Chang'an University

4052

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Salon C
Doctoral Student Research in Transportation Operations, Part 2 (Part 1, Session 4002)
Huaguo Zhou, Auburn University, presiding
Michael Knodler, University of Massachusetts, Amherst, presiding
Sponsored By Section - Operations, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Intelligent Transportation Systems, Standing Committee on Freeway Operations, Standing Committee on Traffic Signal Systems, Standing Committee on Vehicle-Highway Automation, Standing Committee on Traffic Flow Theory and Characteristics, Standing Committee on Traffic Control Devices

This annual session consists of presentations by doctoral students on cutting-edge research related to transportation operations and traffic control, providing them with a platform to showcase their skills.

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Advancing Public Transportation and Mobility: The Role of Alternative Fuel Buses in Transportation Operation (P25-20252)
MD Rezwan Hossain/University of Central Florida
Integration of BIM Technology in the Field of Road Environment Design using the Optimisation of AI Tools (P25-20255)
Claudia Lo Vecchio/University of Enna Kore
Application of Deep Learning Models in Developing Smart Traffic Management Devices for Pedestrian Safety (P25-20257)
Kaliprasana Muduli/Indian Institute of Technology, Roorkee
Introduction of CAVs in Road Traffic: The Effects and Countermeasures to be Applied in Updating Road Design Criteria (P25-20258)
Andrea Petralia/Kore University of Enna
Commercial Motor Vehicle (CMV) Drivers' Behavior in Transition from Automated to Manual Driving in Highly Automated Vehicles (level 4) (P25-20259)
Ali Riahi Samani/ATG | DCCM
Planning Models for Safe and Innovative Operations between MASS and Port Infrastructure (P25-20262)
Federica Sortino/University of Enna Kore
Evaluating the Corridor Performance and User Experience of an AI-based Variable Speed Limit Control System (P25-20264)
Yuhang Zhang/Vanderbilt University
Enhancing Camera-based Traffic Sign Detection: a Multi-frame Approach for Temporary Traffic Control Zones (P25-20265)
Minghao Zhu/Ohio State University

4053 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 151B
Innovative Approaches to Transportation Planning: Equity, Evaluation, and Emerging Trends
Hannah Twaddell, ICF, presiding
Sponsored By Standing Committee on Transportation Planning Analysis and Application

This session delves into research and methodologies to advance equitable, multimodal transportation planning. Presentation topics include: Considering Complete Streets impacts in travel demand models. Evaluating active transportation projects within regional planning prioritization processes. Anticipating equity impacts of emerging transportation technologies and Pinpointing factors that influence additional trips (induced travel) generated by expanded accessibility.

Quantifying the Impact of Complete Streets: An Elasticity-based Approach to Mode Share Shifts in Travel Demand Models (TRBAM-25-03281)
Sevgi Erdogan/Syracuse University, Cinzia Cirillo/Syracuse University, Arefeh Nasri/Syracuse University, Javier Bas/Syracuse University, Mohammad Al-Khasawneh/Syracuse University, Mohammad Nejad/Syracuse University
Taking a Hard Look: Do Active Transportation Projects Get a Fair Evaluation in Long-Range Regional Transportation Planning? (TRBAM-25-04538)
Emma Dreyer/University of Vermont, Gregory Rowangould/University of Vermont
Exploratory Analysis of Factors Influencing Induced Travel (TRBAM-25-06178)
Aman Agrawal/University of Memphis, Ishant Sharma/University of Memphis, Sabyasachee Mishra/University of Memphis, Angela Antipova/University of Memphis, William Rogers III/University of Memphis
Equity Considerations for Emerging Technologies in Transportation: A Comparative Study of Planning Practices in the United States and South Korea (TRBAM-25-01032)
Phoebe Ho/University of California, Berkeley, Sujae Jeon/University of California, Berkeley, Yeonwoo Yu/University of California, Berkeley, Lindsay Park/University of California, Berkeley, Hwasoo Yeo/University of California, Berkeley, Kunhee Choi/University of California, Berkeley

4054 CM (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 151A

Impact of Attitudes and Life Events on Shaping Travel Behavior

Abolfazl Mohammadian, University of Illinois, Chicago, presiding

Sponsored By Standing Committee on Traveler Behavior and Values

This session explores the dynamic nature of travel behavior and attitudes over time. Presentations will examine the temporal stability of travel preferences, how life events and the built environment influence active travel, and the changing travel patterns of young adults with implications for social sustainability. The session also delves into tour-based departure time choices and the impact of behavioral nudging for greener travel in the Greater Toronto Area, providing insights into strategies for promoting sustainable urban mobility.

Travel behaviour Changes among Young Adults and Associated Implications for Social Sustainability (TRBAM-25-02520)

Attiya Haseeb/Toronto Metropolitan University, Raktim Mitra/Toronto Metropolitan University

Capturing the Dynamics within Tour-Based Departure Time Choice Behavior (TRBAM-25-00665)

Daud Nabi Hridoy/Virginia Polytechnic Institute and State University, Md Sami Hasnine/Virginia Polytechnic Institute and State University

Behavioural Nudging for Greener Travel: A Discrete Choice Experiment in the Greater Toronto Area (TRBAM-25-04018)

Kaili Wang/University of Toronto, Melvyn Li/University of Toronto, Junshi Xu/University of Toronto, Marianne Hatzopoulou/University of Toronto, Khandker Nurul Habib/University of Toronto

Exploring Temporal Stability in Travel Attitudes (TRBAM-25-00253)

Corinne Mulley/Luxembourg Institute of Socio-Economic Research, Veronique Van Acker/Luxembourg Institute of Socio-Economic Research

Life Events, Built Environment, and Active Travel: Temporal Relationships over the Life Course in the Netherlands (TRBAM-25-01309)

Ting Zhou/Eindhoven University of Technology, Astrid Kemperman/Eindhoven University of Technology, Tao Feng/Eindhoven University of Technology

4055 CM (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 150A

The Great Commute Shift: Telework, Travel Behavior, and Transit in a Post-Pandemic World

Yongsung Lee, University of California, Davis, presiding

Venu Garikapati, National Renewable Energy Laboratory (NREL), presiding

Sponsored By Standing Committee on Effects of Information and Communication Technologies (ICT) on Travel Choices, Standing Committee on Traveler Behavior and Values

This lectern session will cover topics related to teleworking and its effects on travel behavior over time including, before and after the pandemic. Presentation topics will range from characterizing teleworkers and discrepancies between the observed and expected telecommuting frequency to its effects on public transit ridership and vehicle miles traveled.

Analyzing the Discrepancy between Expected and Observed Teleworking Frequency as We Transition Out of COVID: A Blinder-Oaxaca Decomposition Approach (TRBAM-25-04687)

Xinyi Wang/Massachusetts Institute of Technology, Patricia Mokhtarian/Massachusetts Institute of Technology

A U-Shaped Paradigm: Understanding the Impact of Telecommuting on Public Transit Ridership Before and After the Pandemic (TRBAM-25-06121)

Fan Yu/Arizona State University, Irfan Batur/Arizona State University, Angela Haddad/Arizona State University, Eleanor Hennessy/Arizona State University, Miguel Guillermo Rodriguez Ocana/Arizona State University, Cynthia Chen/Arizona State University, Xuesong Zhou/Arizona State University, Chandra Bhat/Arizona State University, Ram Pendyala/Arizona State University

Profiling New Generation of Workers in Calgary: Evidence from a Post-COVID Household Travel Survey (TRBAM-25-04467)

Atkia Ibnat/Dalhousie University, Muhammad Habib/Dalhousie University

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Working from Home and Vehicle Miles Traveled: The Mediating Role of Travel Efficiency and Non-work Travel (TRBAM-25-05695)
Rezwana Rafiq/University of California, Irvine, Tanjeeb Ahmed/University of California, Irvine, Michael McNally/University of California, Irvine, Michael Hyland/University of California, Irvine

4056 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 150B
Parking and Mobility Innovations: How They Are Connected and New Insights into Pricing, Infrastructure, and Access
Mohammad Miralinaghi, Illinois Institute of Technology, presiding
Lisa Kay Schweyer, Foursquare Integrated Transportation Planning, presiding
Sponsored By Standing Committee on Transportation Demand Management

This session will showcase new research in parking and mobility. Attendees will learn more about various strategies to help reduce vehicle congestion by leveraging creative uses of parking. This session will include four presentations on parking pricing, payment mechanisms, shared mobility parking, and best practices for park-and-ride facilities.

Adaptive Parking Pricing using Graph Neural Network (TRBAM-25-06433)
Fatemeh Sadeghi/York University, Hesam Rashidi/York University, Mehdi Nourinejad/York University, Matthew Roorda/York University
Who Pays for Parking? An Investigation into Factors Affecting Whether Individuals Park at Their Workplace and How Much They Pay. (TRBAM-25-06148)
Dakota Svendsen/University of British Columbia, Imrul Kayes Shafie/University of British Columbia, Mahmudur Fatmi/University of British Columbia
How to Implement Shared Micromobility Parking: Planning and Engineering Best Practices and Testing Design (TRBAM-25-03162)
Anne Brown/University of Oregon, Calvin Thigpen/University of Oregon, Nicholas Klein/University of Oregon
Comparing the Comparable: A Method for Finding Best Practise Cases for Park and Ride Facilities (TRBAM-25-01944)
Jonas Hamann/Frankfurt University, Tobias Hagen/Frankfurt University

4057

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 152B
Unlocking Organizational Knowledge to Improve Asset Performance: Enhancing Asset Management Through Lessons Learned
Christopher Senesi, HDR, presiding
Sponsored By Standing Committee on Information and Knowledge Management, Standing Committee on Transportation Asset Management, Standing Committee on Ferry Transportation

As transportation agencies continue to face increasing demands for efficiency, reliability, and sustainability, capturing and leveraging lessons learned in asset management has never been more crucial. In this session, you'll hear how transportation agencies – across a variety of modes including roadway, transit, rail, ports, and maritime – are effectively integrating information and knowledge management into their asset management practices. From developing asset strategies and plans to conducting thorough condition assessments and managing asset risks, industry experts will share practical tools, real-world examples, and forward-thinking approaches to capture institutional knowledge and drive long-term asset performance.

From Guidelines to Greatness: Leveraging Existing Guidance for Efficient Knowledge Management in Asset Management (P25-20348)
Patrick Cowley/Utah Department of Transportation
Continuous Improvement in Asset Management: Guiding Vision, Resources, and Scalable Practices (P25-20347)
Robert Kumapley/Port Authority of New York and New Jersey
Leveraging Institutional Knowledge to Strengthen Asset Reliability and Life Cycle Management (P25-20346)
Catherine Peele/North Carolina Department of Transportation

(continued)

TAM Travel: SEPTA's Asset Management Story (P25-20349)
Laura Zale/Southeastern Pennsylvania Transportation Authority (SEPTA)
Lessons Learned from Implementing a New EAM System, Leveraging Big Data, and GIS to Automate and Improve Workflows (P25-20350)
John Fasana/Washington County (OR)

4058

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146A
New Options for Transportation Funding: Emerging National Research
Daniel Hodge, Cambridge Econometrics, presiding
Sponsored By Standing Committee on Economics and Finance

This session explores recent national research into new transportation funding options, including results of a 15-year national survey of American public option of federal tax options to support transportation; a study of the effectiveness of blue ribbon commissions in addressing state transportation funding issues; a novel multifactorial state road funding index; and a review of ridehail taxation in the United States. The lectern session will present four papers, followed by Q&A with audience members.

Blue Ribbon Commissions: Are They Effective for Addressing State Transportation Funding Issues? (TRBAM-25-06087)
Adiba Nahreen/University of Texas, Austin, Gian-Claudia Sciara/University of Texas, Austin, Andrew Waxman/University of Texas, Austin
What Do Americans Think About Federal Tax Options to Support Transportation? Results from Year 15 of a National Survey (TRBAM-25-03947)
Asha Weinstein Agrawal/Mineta Transportation Institute, Hilary Nixon/Mineta Transportation Institute
A Novel Multifactorial State Road Funding Index (TRBAM-25-00403)
Eric Dennis/Citizens Research Council of Michigan, Craig Thiel/Citizens Research Council of Michigan, Eric Lupher/Citizens Research Council of Michigan
A Review of Ridehail Taxation in the United States (TRBAM-25-06294)
Lewis Lehe/University of Illinois, Urbana-Champaign, Saipraneeth Devunuri/University of Illinois, Urbana-Champaign, Javier Rondan/University of Illinois, Urbana-Champaign, Ayush Pandey/University of Illinois, Urbana-Champaign, Daniel Vignon/University of Illinois, Urbana-Champaign

4059

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 101
Geotechnical Investigation and Design in the Face of Climate Uncertainty
Matthew Riegel, HNTB, presiding
Sponsored By Standing Committee on Soil and Rock Properties and Site Characterization

Time Dependent Evaluation of Deep-Rooted Vetiver in Highway Slope Repair Using ERI and LiDAR (TRBAM-25-06010)
Avipriyo Chakraborty/Jackson State University, Rahul Biswas/Jackson State University, Sadik Khan/Jackson State University, Fariha Rahman/Jackson State University, Rakesh Salunke/Jackson State University, Ian La Cour/Jackson State University, A Q M Zohuruzzaman/Jackson State University
EFFECT OF MOISTURE ON THE MECHANICAL PROPERTIES OF LIMESTONE AND LIMEROCK USED AS PAVEMENT BASE AGGREGATES IN HIGH FLOOD-RISK CONDITIONS (TRBAM-25-04470)
Don Guy Biessan/Auburn University, Benjamin Bowers/Auburn University, J. Brian Anderson/Auburn University, Scott George/Auburn University, William Armstead/Auburn University, Christopher Huner/Auburn University
Critical Review of Critical Shear Stress: The Case for a Dimensionless Interface Friction Factor to Define the Erosion Resistance of Soils (TRBAM-25-04409)
Jennifer Nicks/Federal Highway Administration (FHWA)

(continued)

Advanced Forensic Evaluation of a Sinkhole Formation on Highway Embankment Slope; Implementation of Combined UAV, LiDAR, and 3D/4D ERI (IP) Techniques (TRBAM-25-04451)
Masoud Nobahar/Louisiana Transportation Research Center (LTRC), Mostafa Ebrahimi/Louisiana Transportation Research Center (LTRC), Md Fahimuzzaman Khan/Louisiana Transportation Research Center (LTRC), Rakesh Salunke/Louisiana Transportation Research Center (LTRC), Sadik Khan/Louisiana Transportation Research Center (LTRC)

4060

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 204AB
Managing and Modeling Climatic Impacts on Geomaterials Use in Pavements
Benjamin Worel, Minnesota Department of Transportation, presiding
Sponsored By Standing Committee on Geo-Environmental and Climatic Impacts on Geomaterials

Geo-Environmental and Climatic Impacts on Geomaterials challenging models used for frost heaving, stabilizing macadam bases, preventing landslides, and Alberta Smart Road machine learning models.

Mitigating Landslides of Cold Region Slopes subjected to Climate Change and Wildfire with Fungal Soil Treatment (TRBAM-25-04449)
Xiong Yu/Case Western Reserve University
Investigation on Characteristic State of Subgrade Frost Heaving-Melting-Settlement Based on Water-Heat-Stress Multi-field Coupling Numerical Simulation Method (TRBAM-25-01605)
Guocui Teng/Southeast University, Xianhua Chen/Southeast University, Peipei Kong/Southeast University, Xuan Li/Southeast University
Feasibility study of lithium slag as cementitious material with high content application in cement stabilized macadam base (TRBAM-25-03199)
Lingqing Yuan/Tongji University, Liping Liu/Tongji University, Lijun Sun/Tongji University, Qunyan Liu/Tongji University, Mingchen Li/Tongji University
Predictive Modeling of Temperature Variation in Granular Base and Subgrade Using Machine Learning on a Smart Road Test Section in Edmonton, Alberta (TRBAM-25-02690)
Malik Noor Ul Amin Awan/University of Alberta, Silas Henrique Barbosa de Carvalho Linares/University of Alberta, Leila Hashemian/University of Alberta, Mohammad Shafiee/University of Alberta, Alireza Bayat/University of Alberta

4061

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 207B
Ground Improvement and Pile-Supported Embankments
Mary Nodine, Federal Highway Administration (FHWA), presiding
Theresa Loux, Aero Aggregates, presiding
Sponsored By Standing Committee on Transportation Earthworks

Propagation of Compaction Quality from Subgrade to Base Layer in Pavement Structures (TRBAM-25-04610)
Isaac Zuniga/TFHRC/HTP, Michael Adams/TFHRC/HTP, Jennifer Nicks/TFHRC/HTP, Cesar Tirado/TFHRC/HTP, Dr. Soheil Nazarian/TFHRC/HTP, Ismaail Ghaaowd/TFHRC/HTP
Numerical Study on the Hole Shrinkage Formation and Its Influence on the Compaction Pile Foundation (TRBAM-25-01193)
Huaiyuan Li/No Organization, Jinke Li/No Organization, Junling Qiu/No Organization, Kunlong Zheng/No Organization, Ke Wang/No Organization
State of the Practice of Rigid Inclusions for Transportation Applications (P25-20345)
Jie Han/University of Kansas, Sameep Lamsal/University of Kansas, Haohua Chen/University of Kansas
Static Truck Load Tests on Instrumented Geosynthetic-Reinforced Pile-Supported MSE Wall Built over Soft Soil (TRBAM-25-00181)
Murad Abu-Farsakh/Louisiana Department of Transportation and Development, MohammadAli Izadifar/Louisiana Department of Transportation and Development

4062

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 202A

Applications of Machine Learning for Characterization and Evaluation of Asphalt Mixtures

Mena Souliman, University of Texas, Tyler, presiding

Sponsored By Standing Committee on Asphalt Mixture Evaluation and Performance

This session will delve into the emerging role of artificial intelligence and machine learning in optimizing asphalt mixture evaluation, performance prediction, and field application. Four presentations will showcase novel approaches for applying ML models to address challenges such as moisture susceptibility, reflective cracking, Balanced Mix Design (BMD) performance, and field compaction strategies.

Prediction of Moisture Susceptibility of Asphalt Mixtures Containing RAP Materials Using Machine Learning Algorithms (TRBAM-25-00259)

Abolfazl Afshin/University of Mississippi, Ali Behnood/University of Mississippi

Asphalt Concrete Overlay Thermal Reflective Cracking Stress Intensity Factor Prediction Using Machine Learning (TRBAM-25-00303)

Fangyu Liu/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign, Masih Beheshti/University of Illinois, Urbana-Champaign, Hasan Ozer/University of Illinois, Urbana-Champaign

Machine Learning-Based Prediction and Optimization of Balanced Mixture Design (BMD) Performance Indices (TRBAM-25-01423)

Bilin Tong/Virginia Polytechnic Institute and State University, Wenjiang Huang/Virginia Polytechnic Institute and State University, Jhony Habbouche/Virginia Polytechnic Institute and State University, Ilker Boz/Virginia Polytechnic Institute and State University, Qing Guo/Virginia Polytechnic Institute and State University, Stacey Diefenderfer/Virginia Polytechnic Institute and State University, Gerardo Flintsch/Virginia Polytechnic Institute and State University

Development of Field Compaction Curves for Asphalt Mixtures Based on Laboratory Workability Tests and Machine Learning Modeling (TRBAM-25-03914)

Shihui Shen/Penn State Altoona, Zhen Liu/Penn State Altoona, Shuai Yu/Penn State Altoona

4063

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 202B

Sustainable Cementitious Materials and Concretes

Nishant Garg, University of Illinois, Urbana-Champaign, presiding

Christopher Jones, Kansas State University, presiding

Sponsored By Standing Committee on Advanced Concrete Materials and Characterization, Standing Committee on Properties of Concrete and Constituent Materials, Standing Committee on Durability of Concrete

Presenters will cover the latest advances in cementitious materials and concretes to help produce more sustainable practices.

Examining the Effetcs of Biochar Characteristics on Early-age Hydration and Fresh Properties of Cement Paste (TRBAM-25-04357)

In Kyu Jeon/Texas A&M University, College Station, Yong-Rak Kim/Texas A&M University, College Station, Jeffrey Bullard/Texas A&M University, College Station

Improving the Performance of PLC and LC3 Concrete Using Belitic Calcium Sulfoaluminate (BCSA) Cement (TRBAM-25-00977)

Fabian Paniagua/CTS Cement Manufacturing Company, Julio Paniagua/CTS Cement Manufacturing Company, Visa Isteri/CTS Cement Manufacturing Company, Elisabeth Essolebe/CTS Cement Manufacturing Company, Eric Bescher/CTS Cement Manufacturing Company

Development of Geopolymer-Based Green Construction Materials for Highway Infrastructure Using High-Content Sugarcane Bagasse Ash (TRBAM-25-02626)

Atif Khan/University of Louisiana, Lafayette, Mohammad Khattak/University of Louisiana, Lafayette, Thomas Pesacreta/University of Louisiana, Lafayette

Using Nano-CSH Seeds to Reduce the Global Warming Potential of Concrete Mixtures (TRBAM-25-01443)

Jason Weiss/Oregon State University, Steve Schaef/Oregon State University, Paul Sieler/Oregon State University

(continued)

One-Part and Two-Part Geopolymer Controlled Low Strength Material (CLSM) Using Off-Specification Fly Ash and Bottom Ash (TRBAM-25-05006)
Alexis VanDomelen/Missouri University of Science and Technology, Ahmed Gheni/Missouri University of Science and Technology, Eslam Gomaa/Missouri University of Science and Technology, Mohamed ElGawady/Missouri University of Science and Technology

4064

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 201
Artificial Intelligence and Machine Learning in Winter Maintenance
Antony Coventry, Campbell Scientific, Inc., presiding
Sponsored By Standing Committee on Winter Maintenance, Standing Committee on Road Weather

A Comparative Analysis of Transformer and Traditional Machine Learning Models for Road Surface Temperature Prediction (TRBAM-25-05258)
Mohammad Hossein Tavakoli Dastjerdi/University of Virginia, Zhen Liu/University of Virginia, Muchun Liu/University of Virginia
Integrating Convolutional Neural Networks and Explainable AI for Enhanced Winter Road Surface Conditions Classifications using Stationary RWIS Imagery (TRBAM-25-01468)
Yong Wook Lee/University of Alberta, Mingjian Wu/University of Alberta, Tae Kwon/University of Alberta
Advancing Winter Road Maintenance: An AI-Driven Web Platform for Real-Time Road Condition Monitoring and Spatial Analysis (TRBAM-25-01405)
Michael Urbiztondo/University of Alberta, Mingjian Wu/University of Alberta, Tae Kwon/University of Alberta
A Study on Frost-Induced Black Ice Prediction and Contributing Atmospheric Factors Using Explainable Machine Learning Models: A Focus on Random Forest and XGBoost (TRBAM-25-00029)
Jinhwan Jang/Korea Institute of Civil Engineering and Building Technology (KICT)
Aurora: Connected Vehicle Friction (P25-20268)
Björn Zachrisson/NIRA Dynamics AB

4065 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146C
Driving Health Forward: How Mobility Innovations and Transportation Impact Care and Communities
Cassandra Gascon, Massachusetts Department of Transportation, presiding
Sponsored By Standing Committee on Transportation and Public Health

This session explores the intersection of transportation systems, mobility innovations, healthcare access, and health impacts. Discussions will highlight advancements in the field and examine how transportation barriers, emerging mobility solutions, and vehicle electrification influence healthcare visits, community health outcomes, and environmental equity. The insights are supported by a diverse set of data sources and methodologies, including national surveys, machine learning, and agent-based modeling approaches.

The Role of Emerging Mobility Solutions in Shaping Care-Seeking Behaviors in Rural Communities: A National Survey with Stated Choice Experiment (TRBAM-25-02131)
Javier Pena-Bastidas/University of Alabama, Jun Liu/University of Alabama, Hee Y. Lee/University of Alabama, Steven Jones/University of Alabama
How Do Transportation Barriers Affect Healthcare Visits? A Machine Learning Approach Using Mobile-Based Trajectory Data (TRBAM-25-02595)
Mohammad Maleki/Southern Methodist University, Janille Smith-Colin/Southern Methodist University
Air Quality, Health Impacts and Equity Assessment for Transport Interventions using a Regional-Scale Agent-Based Transportation System Model (TRBAM-25-02911)
Cristian Poliziani/Lawrence Berkeley National Laboratory, Ling Jin/Lawrence Berkeley National Laboratory, Xiaodan Xu/Lawrence Berkeley National Laboratory, Nazanin Rezaei/Lawrence Berkeley National Laboratory, Yuhan Wang/Lawrence Berkeley National Laboratory, James Butler/Lawrence Berkeley National Laboratory, Haitam Laarabi/Lawrence Berkeley National Laboratory, Zachary Needell/Lawrence Berkeley National Laboratory, Thomas Wenzel/Lawrence Berkeley National Laboratory, C. Anna Spurlock/Lawrence Berkeley National Laboratory

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Last-Mile Delivery Fleet Electrification and Community Health Impacts (TRBAM-25-05838)
Jaesik Choi/University of Texas, Arlington, Kate Hyun/University of Texas, Arlington

4066 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 146B
Coordinating Transportation Systems and Services in and Around Military Communities
Corey Hull, The Ray, presiding
Sponsored By Standing Committee on Transportation for National Defense, Standing Committee on Rural, Intercity Bus, and Specialized Transportation, Joint Subcommittee on Transportation in Military Communities (with AEP10 and AP055)

This session will focus on how military communities can initiate and lead discussions on the adoption of autonomous shuttles, emphasizing the substantial benefits these systems can bring. By empowering military bases to embrace autonomous shuttle technologies, we can unlock transportation independence for individuals with disabilities, reduce street congestion, and lower greenhouse gas emissions, all while enhancing environmental justice and overall quality of life. In addition, these systems promise cost savings in transit operations, increased frequency, and higher ridership for military and surrounding communities alike.We will explore strategic planning for integrating autonomous shuttles, detailing the next steps for both military bases and adjacent communities. Key topics include how to disseminate valuable lessons learned from early deployments, and how to ensure the sustainability of autonomous shuttles through electric vehicle (EV) integration, PV4EV charging systems, and efforts to reduce single-occupancy vehicle use.

Solutions near Veterans' Hospitals (P25-20841)
Heather Ansley/Paralyzed Veterans of America
Research Trends (P25-20842)
James Allen/U.S. Army Corps of Engineers (USACE)
Military Community Perspective (P25-20843)
Chris Landgraf/U.S. Marine Corps
Military Community Perspective (P25-20844)
Ray Amoruso/Hampton Roads Transit

4067 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 140
Driving Equity Forward: Addressing Disparities in Electric Vehicle Adoption and Infrastructure
Brett Williams, Center for Sustainable Energy, presiding
Shivam Sharda, National Renewable Energy Laboratory (NREL), presiding
Sponsored By Standing Committee on Transportation Energy, Standing Committee on Alternative Fuels and Technologies

Improving public health and quality of life through decarbonizing transportation and reducing greenhouse gas emissions is a key government objective. The strategic focus is on electrification but since mobility is frequently a household's second largest capital expense, cost factors and therefore equity weigh heavily on successfully bridging policy and practice. In this session researchers will share their discoveries, locally and around the world, in equity considerations and recommendations including electric vehicle availability, public and private infrastructure, incentives, and finance.

Spatial Disparities in Electric Vehicle Availability in the United States (TRBAM-25-01871)
Lujin Zhao/George Washington University, Michael Mann/George Washington University, John Helveston/George Washington University
Advancing Equity in Regional Freight Carbon Tax Policy with a Combined Integrated Modeling and Bi-level Programming Approach (TRBAM-25-03720)
Zongbao Wang/Wuhan University, Ming Zhong/Wuhan University, John Douglas Hunt/Wuhan University
National and State Progress in Equitable Electric Charging Station Distribution (TRBAM-25-05520)
Fatemeh Janatabadi/George Mason University, Alireza Ermagun/George Mason University
Advancing Equitable Electric Vehicle Adoption: Addressing Home Charging Barriers and Costs (TRBAM-25-05205)
Parsa Pezeshknejad/University of Vermont, Lilac Damon/University of Vermont, Sarah Grajdura/University of Vermont, Dana Rowangould/University of Vermont

4068 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 145A

Advancing Rail System Efficiency: From Accessibility to Ridership

Alireza Khani, University of Minnesota, Twin Cities, presiding

Sponsored By Standing Committee on Public Transportation Planning and Development, Standing Committee on Transit Management and Performance, Standing Committee on Transit Data

This session explores rail system efficiency, focusing on the interaction between transit accessibility and ridership. Presentations will examine spatial factors influencing ridership, the built environment's effect on urban rail use, and demand models for predicting ridership at stations, offering insights into optimizing rail networks. Attendees will gain insights from recent research to advance rail system efficiency.

The Evolution of Coupling Coordination Between Urban Rail Transit Accessibility and Station Area Development (TRBAM-25-02694)

Lei Ge/University of Cambridge, Jie Liu/University of Cambridge, Zhiyu Liu/University of Cambridge, Qiu Wang/University of Cambridge

From a Spatio-Temporal Perspective: The Impact of the Built Environment of MetroRidership (TRBAM-25-03338)

Wei Luo/Beijing University of Civil Engineering and Architecture, Huixin Zhang/Beijing University of Civil Engineering and Architecture, Yuhui Tian/Beijing University of Civil Engineering and Architecture, Jianyu Wang/Beijing University of Civil Engineering and Architecture, Anan Yang/Beijing University of Civil Engineering and Architecture

Direct Demand Models for Station-level Metro Ridership: An Application to Analysis of Metro Ridership in Bengaluru, India (TRBAM-25-05927)

NURUL HASAN/Indian Institute of Science, Bangalore, Sangram Nirmale/Indian Institute of Science, Bangalore, Abdul Pinjari/Indian Institute of Science, Bangalore

Improving WMATA Metrorail System Efficiency (P25-21512)

Mark Irvine/Washington Metropolitan Area Transit Authority

4069 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 145B

New Transit Challenges, New Data Approaches: Electric Buses and Transit Travel Behavior

Eric Lind, University of Minnesota, presiding

Sponsored By Standing Committee on Transit Data, Standing Committee on Artificial Intelligence and Advanced Computing Applications, Standing Committee on Innovative Public Transportation Services and Technologies, Standing Committee on Transit Management and Performance

Public transportation agencies are navigating a whirlwind of societal challenges, including ever-changing travel behavior, and demands to reduce carbon footprints by introducing electric buses. These challenges also pose opportunities to utilize the untapped information existing in datasets available to those agencies. Using cutting-edge methods based on a mix of traditionally available and emerging transit data sources, four authors present their work to guide improvement in understanding of the new demands.

Designing Electric Bus Simulation Scenarios Based on Open Data and Tracking Experiments (TRBAM-25-04044)

Andreas Keler/Technical University of Munich, Satoshi Nakao/Technical University of Munich, Jan-Dirk Schmöcker/Technical University of Munich

Empowering Electric Bus Deployment with Standardized Transit Data (TRBAM-25-00012)

Zackary Aemmer/U.S. Department of Energy (DOE), Don MacKenzie/U.S. Department of Energy (DOE)

Long-Term Trends in Activity Participation Observed with Crowdsourced Data from an Experiment with the "OneBusAway" Application (TRBAM-25-05556)

Hyungsub Jee/Kyoto University, Jan-Dirk Schmöcker/Kyoto University, Wilson Lozano/Kyoto University, Sean Barbeau/Kyoto University, Kari Watkins/Kyoto University

A Typology-Informed Origin-Destination-Transfer Model for a Bus Transit Network using Mobile Ticketing Data (TRBAM-25-05643)

Mohammed Mohammed/University of Massachusetts, Amherst, Tolu Oke/University of Massachusetts, Amherst, Jimi Oke/University of Massachusetts, Amherst

4070

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 144AB

Latest Research in Trucking Economics

Daniel Haake, Cambridge Systematics, Inc., presiding

Sponsored By Standing Committee on Trucking Industry Research, Joint Subcommittee on Truck Size and Weight (with AR000 and AF000)

Estimating Truckload Spot Market Rates Using Publicly Available Data (TRBAM-25-04475)

April Gadsby/OST-R/Bureau of Transportation Statistics, Monique Stinson/OST-R/Bureau of Transportation Statistics

Development of a Comprehensive Framework for the Assessment of the Effects of Electric Trucks' Weight Increase on Road Infrastructure: A New York City case Study (TRBAM-25-05512)

Zerun Liu/New York University, Tu Lan/New York University, Zilin Bian/New York University, Kaan Ozbay/New York University

Market Mechanisms to Support Zero-Emission Truck Fleets in California (TRBAM-25-06069)

Anuj Dhole/University of California, Davis, Aditya Ramji/University of California, Davis, Lewis Fulton/University of California, Davis, Daniel Sperling/University of California, Davis

4071 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 143AB

Integrating Advanced Air Mobility into Aviation System Plans

Gregory Sanders, Woolpert, Inc., presiding

Sponsored By Standing Committee on Aviation System Planning, Standing Committee on Aviation Administration and Policy, Standing Committee on Aviation Economics and Forecasting, Standing Committee on New Users of Shared Airspace

Airport systems at the state and regional level are tasked with integrating Advanced Air Mobility into a planning framework that has experienced limited changes over the past fifteen years. These next fifteen years offer an opportunity for the system planning process to evolve along with the aviation industry. This session is focused on keeping an eye towards the future by exploring potential partnerships available to stakeholders and evaluating new and unique planning considerations as Advanced Air Mobility is incorporated into system plans and the airport environment.

North Carolina DOT Perspective (P25-20769)

Jason Schronce/North Carolina Department of Transportation

Oregon Department of Aviation Perspective (P25-20770)

Kenji Sugahara/Oregon Department of Aviation

Georgia DOT Perspective (P25-20771)

Clement Solomon/Georgia Department of Transportation

4072 **CM** (1.75)

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, 143C

Artificial Intelligence: Sustainability Optimization at Airports

Benjamin Pecheux, Mead & Hunt, Inc., presiding

Sponsored By Standing Committee on Environmental Issues in Aviation, Standing Committee on Aviation System Planning, Standing Committee on Airport Terminals and Ground Access

Artificial intelligence offers many opportunities to streamline operations, offer additional data analytics and automation to airports. As the aviation industry continues to progress toward its sustainability goals, AI can provide additional opportunities to enhance understanding of complex issues and improve/optimize operations, tracking and implementation. Participants will learn how these tools can be used to make informed process changes at airports and improve communications and workflows throughout the airport system.

A Model for the Airport Gate Assignment Problem with GHG Emission Considerations (TRBAM-25-01364)

Stavroula Bagioneta/National Technical University of Athens (NTUA), Konstantia Kontodimou/National Technical University of Athens (NTUA), Konstantinos Kepaptsoglou/National Technical University of Athens (NTUA)

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Aligning Vision with AI: Utilizing AI to Break Down Silos and Maximize Sustainability Efforts at Major Airports. (P25-20589)
Savannah Morgan/Dallas-Fort Worth International Airport
Use of AI for Operational Efficiency (P25-21224)
Scott James/Noblis

4073

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Safety Performance and Analysis for Safe Vehicles
Tim Colling, Michigan Technological University, presiding
Sponsored By Standing Committee on Safety Performance and Analysis

Join the TRB Committee on Safety Performance and Analysis for a selection of papers related to safe vehicles, including advanced vehicle technologies, connected vehicles, and automated vehicles.

Spatio-Temporal Accident Detection through Traffic Impact Analysis Using Connected Vehicle Data (TRBAM-25-00827) - B517
Lennart Querfurth/Mercedes-Benz Group AG, Hubert Rehborn/Mercedes-Benz Group AG, Bruce Bernhardt/Mercedes-Benz Group AG, Yuxin Guan/Mercedes-Benz Group AG, Weimin Huang/Mercedes-Benz Group AG, Silja Hoffmann/Mercedes-Benz Group AG
Crash-based Safety Testing of Autonomous Vehicle: Insights from Generating Safety-Critical Scenario based on In-Depth Crash Data (TRBAM-25-00906) - B518
Rui Zhou/Central South University, Helai Huang/Central South University, Guoqing Zhang/Central South University
Modelling Bus/Minibus Crash Injury Severity In Dhaka City, Bangladesh (TRBAM-25-01641) - B519
B. M. Assaduzzaman Nur/Bangladesh University of Engineering and Technology, Shayeda Shoulin/Bangladesh University of Engineering and Technology, Md Moin Morshed Rafe/Bangladesh University of Engineering and Technology, Labiba Jannat Noushin/Bangladesh University of Engineering and Technology, B. M. Ashikujzaman Nur Shoron/Bangladesh University of Engineering and Technology, Md. Mizanur Rahman/Bangladesh University of Engineering and Technology
What Can We Learn from Field Tests of Commercially Available Automatic Emergency Braking Systems: A Focus on System Limitations (TRBAM-25-01653) - B524
Nastaran Moradloo/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville
Investigation on the Association Between Vehicle Make and Road Injury Severity (TRBAM-25-01946) - B521
Joao Chingui/Chang'an University, Ying Yan/Chang'an University, Wenxuan Wang/Chang'an University
Influences of Individual Heterogeneity on Vehicle Damage in Two-Vehicle Lane-Changing Related Crashes: A Semi-Parameter Copula-Based Model Considering Temporal Instability (TRBAM-25-02168) - B522
Ruifeng Gu/Hong Kong Polytechnic University, Penglin Song/Hong Kong Polytechnic University, N.N. Sze/Hong Kong Polytechnic University, Shile Zhang/Hong Kong Polytechnic University
Analysis of ADAS- and ADS-equipped Vehicle Crashes Using Mixed-effects Logistic Regression (TRBAM-25-02183) - B514
Meghna Chakraborty/UNC Highway Safety Research Center, Sagar Keshari/UNC Highway Safety Research Center
Crash Injury Severity Analysis under Different Levels of Driving Automation (TRBAM-25-02341) - B515
Shengxuan Ding/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Natalia Barbour/University of Central Florida, Dongdong Wang/University of Central Florida, Zijin Wang/University of Central Florida
Are We Ready for Automated Vehicles? Evaluating Automated Driving Systems' Safety and Reliability Using Propensity Score Matching (TRBAM-25-03517) - B523
Muhammad Adeel/University of Tennessee, Knoxville, Asad Khattak/University of Tennessee, Knoxville, Sheikh Muhammad Usman/University of Tennessee, Knoxville, Nastaran Moradloo/University of Tennessee, Knoxville
Improving Representative Accuracy of Connected Vehicles' Hard-Braking Events for Crashes Through Maximizing their Spatio-temporal Correlation (TRBAM-25-03841) - B525
Swastik Khadka/University of Texas, Arlington, Sijan Shrestha/University of Texas, Arlington, Pengfei (Taylor) Li/University of Texas, Arlington, Qingyan (Ken) Yang/University of Texas, Arlington
Safety Evaluation of Automated Vehicles Using Surrogate Safety Measures (TRBAM-25-04100) - B526
Bahareh Bakhti/University of Kansas, Alexandra Kondyli/University of Kansas
Examining Spatial Disparities in Safety Benefits from Automated Vehicle Adoption in Alabama and Kentucky (TRBAM-25-04566) - B527
Javier Pena-Bastidas/University of Alabama, Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Teng Wang/University of Alabama, Steven Jones/University of Alabama, Reg Souleyrette/University of Alabama

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Examining the Role of Vehicle Dimensions and Advanced Driving Assistance Systems on Pedestrian and Bicyclist Injury Severity Outcomes (TRBAM-25-05004) - B530
Natakorn Phuksuksakul/Thammasat University, Naveen Eluru/Thammasat University, Md. Mazharul Haque/Thammasat University, Sebastien Glaser/Thammasat University, Shamsunnahar Yasmin/Thammasat University
Network-wide Spatiotemporal Extreme Value Theory Model for Estimating Crash Risks From Traffic Conflicts Using Autonomous Vehicle Sensor Data (TRBAM-25-05082) - B531
Sunny Singh/QUT: Queensland University of Technology, Yasir Ali/QUT: Queensland University of Technology, Md. Mazharul Haque/QUT: Queensland University of Technology
Integrating Connected Vehicle Hard Braking Event Data for Proactive Road Network Safety Screening (TRBAM-25-05230) - B528
Sunday Okafor/Garver, Steven Jones/Garver, Jeffrey Bullard/Garver, Praveena Penmetsa/Garver, Kofi Adanu/Garver, Jun Liu/Garver
Safety Validation of Automated Vehicles Using Aggregate Markov Chain Theory (TRBAM-25-05379) - B510
Chengyuan Ma/University of Wisconsin,Madison, Hang Zhou/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison
Leveraging Automated Vehicle Technology to Enhance Driving Safety in Dilemma Zones: A Validation Study (TRBAM-25-05696) - B529
Song Wang/University of Cincinnati, Zhixia Li/University of Cincinnati, Zhengxin Liu/University of Cincinnati, Wenjing Zhao/University of Cincinnati, Tangzhi Liu/University of Cincinnati
Investigating the Role of Advanced Driver Assistance Systems (ADAS) in Reducing Sideswipe Collisions in Rural Ohio (TRBAM-25-05769) - B536
Abdul Ngereza/Cleveland State University, Boni Kutela/Cleveland State University, Ibrahim Ibrahim/Cleveland State University, Panick Kalambay/Cleveland State University, Ntemi Masanja/Cleveland State University, Emmanuel Kidando/Cleveland State University, Angela Kitali/Cleveland State University
Evaluating Safety Benefits of Various Automation Levels and Penetration Rates of Automated Vehicles: A Case Study from the Netherlands (TRBAM-25-06028) - B538
Dimitra Michalaka/Citadel Military College, Amna Chaudhry/Citadel Military College, Eleonora Papadimitriou/Citadel Military College, Joshua Wetmore/Citadel Military College
Identifying High-Risk Locations on Expressways Using Connected Vehicle Data: An Empirical Analysis (TRBAM-25-06076) - B534
Xueao Li/Tongji University, Xiaodong Li/Tongji University, Junhua Wang/Tongji University, Ting Fu/Tongji University, Qiangqiang Shangguan/Tongji University, Qiangqiang Shangguan/Tongji University
Evaluating Traffic Safety Information Strategies for Identified Hazardous Infrastructures Using Autonomous Vehicle Demonstration Data (TRBAM-25-06120) - B535
Hojae Kim/Hanyang University, Nuri Park/Hanyang University, Songha Lee/Hanyang University, Juneyoung Park/Hanyang University, Samgyu Yang/Hanyang University
Effects of Advanced Driving Assistance Systems (ADAS) on Driver Injury Severity Outcomes: A Joint Multinomial Logit and Generalized Ordered Logit Model (TRBAM-25-06397) - B532
Natakorn Phuksuksakul/Thammasat University, Heshani Rupasinghe/Thammasat University, Dilini Kariyawasam Pathiranalage/Thammasat University, Shamsunnahar Yasmin/Thammasat University
Exploring Factors Influencing Crash Occurrence Involving Autonomous Vehicle: Random Parameters Model with Heterogeneity in Means and Variances Approach (TRBAM-25-01258) - B539
Haocheng Li/Central South University, Amjad Pervez/Central South University, Jaeyoung Lee/Central South University
Predicting Crash Likelihood at Intersections Using Connected Vehicle Data (TRBAM-25-02400) - B516
B M Tazbiul Hassan Anik/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Zubayer Islam/University of Central Florida
Characteristics Analysis of Automated Vehicle Pre-crash Scenarios (TRBAM-25-06320) - B520
Yixuan Li/Tongji University, Xuesong Wang/Tongji University, Tianyi Wang/Tongji University, Qian Liu/Tongji University
The Future Driver: Exploring the Safety Challenges of Level 4 Automated Vehicles During Manual Control (TRBAM-25-04163) - B513
Cesar Andriola/University of Wisconsin, Madison, Madhav Chitturi/University of Wisconsin, Madison, David Noyce/University of Wisconsin, Madison
A Comprehensive Risk Metric for Freeway Vehicles Based on Predicted Positions (TRBAM-25-02148) - B540
Chuang Cui/Southeast University, Bocheng An/Southeast University, Linheng Li/Southeast University, Xu Qu/Southeast University, Wenquan Li/Southeast University

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A Car-following Safety Active Control Framework Based on Short-term Safety Evolution Pattern Prediction (TRBAM-25-01012) - B541
Huansong Zhang/Southeast University, Jiachen Yang/Southeast University, Yongjun Shen/Southeast University, Qiong Bao/Southeast University
Do Electric Vehicles Lead to More Severe Crashes? A Causal Inference Approach Using Doubly Robust Estimation (TRBAM-25-02957) - B542
Guocong Zhai/Old Dominion University, Kun Xie/Old Dominion University, Di Yang/Old Dominion University, Hong Yang/Old Dominion University
Leveraging Computer Vision for Enhanced Pedestrian Crash Typing 2 Analysis: A Multi-step, Multi-class Framework (TRBAM-25-04975) - B512
Jason (Dayong) Wu/Texas A&M Transportation Institute, Minh Le/Texas A&M Transportation Institute, Mahin Ramezani/Texas A&M Transportation Institute, Amir Hossein Oliaee/Texas A&M Transportation Institute
Incorporating the Influence of Vehicle Mix on Crash Frequency and Severity (TRBAM-25-03192) - B533
Shahrior Pervaz/University of Central Florida, Manmohan Joshi/University of Central Florida, Tanmoy Bhowmik/University of Central Florida, Dewan Ashraful Parvez/University of Central Florida, Kai Wang/University of Central Florida, John Ivan/University of Central Florida, Naveen Eluru/University of Central Florida
Identifying Risk Factors for Bus Crashes in a Dense and Dynamic Road Environment: Insights from Using Computer Vision Tools (TRBAM-25-04113) - B543
Zhuangyuan Fan/University of Hong Kong, Ting Lian/University of Hong Kong, Feiyang Zhang/University of Hong Kong, Becky P.Y. Loo/University of Hong Kong
A Novel Traffic Safety Field Model Considering Vehicle Motion Relationship (TRBAM-25-05546) - B544
Yazhou Li/Southeast University, Hao Yu/Southeast University, Yuchen Wang/Southeast University, Weiying Shen/Southeast University
Investigating Factors Contributing to Autonomous Vehicle Crash Severity Using Machine Learning and Recursive Feature Elimination (RFE) (TRBAM-25-03219) - B511
Linda Lim/University of California, Berkeley, Jiayu "Joyce" Chen/University of California, Berkeley, Mabel Espinoza/University of California, Berkeley, Scott Moura/University of California, Berkeley
Identifying Patterns and Risk Factors in SUV-Related Pedestrian Crashes Using Cluster Correspondence Analysis (TRBAM-25-00341) - B537
Swastika Barua/Texas State University, Reuben Tamakloe/Texas State University, Rohit Chakraborty/Texas State University, Boni Kutela/Texas State University, Subasish Das/Texas State University

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Information Systems and Technology
Guohui Zhang, University of Hawai'i, Manoa, presiding
Ziyuan Pu, Southeast University, presiding
Hao Frank Yang, Johns Hopkins University, presiding
Sponsored By Standing Committee on Information Systems and Technology

The AED30 Information Systems and Technology Committee is concerned with research needs and strategic leadership regarding the use of advanced computing and technology to support optimal transportation solutions and outcomes. This poster session will feature selected papers reviewed by the AED30 Committee for the 2024 Annual Meeting. Topics include: advancing sensing technologies, computer vision and perception, data and sensor fusion, emerging data sources, machine learning / predictive models, and applications of big data.

Research on The Evaluation Method of Planar Signal Intersections Service Level Based on the UAV Video (TRBAM-25-00071) - A156
Xiao Tang/Beijing Jiaotong University, Zhenlin Wei/Beijing Jiaotong University, Zihan Liu/Beijing Jiaotong University
Vehicle Trajectory From Aerial Video Using Oriented Object Detection (TRBAM-25-00217) - A150
Kevin Riehl/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Shaimaa El-Baklish/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Anastasios Kouvelas/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Michail Makridis/ETH Zurich: Eidgenossische Technische Hochschule Zurich
TransIR: Transformer-Based Image Reconstruction Model for Vehicle Re-Identification (TRBAM-25-00245) - A160
Xiaoying Yi/Southeast University, Qi Liu/Southeast University, Yikang Rui/Southeast University, Bin Ran/Southeast University

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Real-Time Nighttime Traffic Flow Detection Based on High-Altitude Video Using Density Map Method (TRBAM-25-00374) - A146
Zhenyu Shan/Southwest Jiaotong University, Qianxia Cao/Southwest Jiaotong University, Mingxin Yan/Southwest Jiaotong University
Understanding the Impacts of Point Cloud Density on Automated Traffic Sign Change Detection using LiDAR Technology (TRBAM-25-00429) - A145
Ahmed Khataan/UBC School of Engineering, Suliman Gargoum/UBC School of Engineering
Enhanced Mesoscopic Network Model Calibration with Both Global High-Resolution Satellite Imagery and Local Traffic Sensor Data (TRBAM-25-00756) - A151
Jiachao Liu/Carnegie Mellon University, Pablo Guarda/Carnegie Mellon University, Koichiro Niinuma/Carnegie Mellon University, Sean Qian/Carnegie Mellon University
Thermal-Forecast: Traffic Trajectory Prediction in Challenging Nighttime Conditions using Thermal Imaging (TRBAM-25-01097) - A140
Muhammad Monjurul Karim/University of Washington, Bingzhang Wang/University of Washington, Yinhai Wang/University of Washington
Methodology for Georeferencing Roadside Pan-Tilt-Zoom CCTV Camera Views to Highway GPS Coordinates (TRBAM-25-01306) - A141
Christopher Gartner/Purdue University, Jijo Mathew/Purdue University, Jairaj Desai/Purdue University, James Sturdevant/Purdue University, Edward Cox/Purdue University, Darcy Bullock/Purdue University
Methodology for Automatically Detecting Pan-Tilt-Zoom CCTV Camera Drift in Advanced Traffic Management System Networks (TRBAM-25-01328) - A142
Christopher Gartner/Purdue University, Jijo Mathew/Purdue University, Darcy Bullock/Purdue University
Efficient Vehicle Trajectory Extraction from Aerial Drone Videos (TRBAM-25-01628) - A152
Yinghao Wang/Southwest Jiaotong University
Identification of Partially Malfunctioning Sensors from the Perspective of Network Consistency (TRBAM-25-01734) - A153
Zijian Wang/Tongji University, Minhua Shao/Tongji University
Synchronizing Sky and Street: UAV-CCTV Integration for Traffic Monitoring (TRBAM-25-02293) - A171
Siyuan Tang/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Maged Shoman/University of Central Florida
RAF-RCNN: Adaptive Feature Transfer from Clear to Rainy Conditions for Improved Object Detection (TRBAM-25-02384) - A161
Chuheng Wei/University of California, Riverside, Guoyuan Wu/University of California, Riverside, Matthew Barth/University of California, Riverside
Feature Corrective Transfer Learning: End-to-End Solutions to Object Detection in Non-Ideal Visual Conditions (TRBAM-25-02428) - A162
Chuheng Wei/University of California, Riverside, Guoyuan Wu/University of California, Riverside, Matthew Barth/University of California, Riverside
Infrastructure-Based Cooperative Perception at a Traffic Intersection: Overview and Challenges (TRBAM-25-02631) - A154
Faizan Mir/National Renewable Energy Laboratory (NREL), Stanley Young/National Renewable Energy Laboratory (NREL), Rimple Sandhu/National Renewable Energy Laboratory (NREL), Qichao Wang/National Renewable Energy Laboratory (NREL), Charles Tripp/National Renewable Energy Laboratory (NREL), Todd Osborn/National Renewable Energy Laboratory (NREL)
Macroscopic Traffic State Reconstruction Using LiDAR-Based Lagrangian Sensing (TRBAM-25-02638) - A155
Mladen Čičić/University of California, Berkeley, Ismet Erdagi/University of California, Berkeley, Maria Laura Delle Monache/University of California, Berkeley, Aleksandar Stevanović/University of California, Berkeley
Detecting Traffic Sensor Malfunctions through Lane-to-Lane Correlation Analysis: A Comparative Study Using NGSIM and PeMS Datasets (TRBAM-25-02662) - A130
Jooneui Hong/University of California, Irvine, Wenlong Jin/University of California, Irvine
Leveraging Image Semantic Segmentation for Road Infrastructure Localization in Traffic Safety Applications (TRBAM-25-02723) - A143
Mehrdad Nasri/University of Washington, Shuyi Yin/University of Washington, Yinhai Wang/University of Washington, Venky Shankar/University of Washington
Sensor-Based Linear Feature Clustering and Connecting in Map Making and Autonomous Driving (TRBAM-25-02902) - A131
Zhenhua Zhang/HERE Chicago

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Attention Empowered GAN for Lens Satin Removal and Image (TRBAM-25-03139) - A144
Yan Shi/University of Washington, Chenxi Liu/University of Washington, Yinhai Wang/University of Washington
A Conditional Time-Series Diffusion Model for High-Speed Train Multi-Sensor Signal Imputation (TRBAM-25-03221) - A132
Zhiqiang Yang/Beijing Jiaotong University, Honghui Dong/Beijing Jiaotong University, Ruojin Wang/Beijing Jiaotong University, Huipeng Zhang/Beijing Jiaotong University
Multi-Modal Traffic Object Detection Model Based on Fusion of Data Layer and Feature Layer (TRBAM-25-03385) - A133
Di Wu/Southeast University, Jiankun Peng/Southeast University, Shaojie Wang/Southeast University, Chunye Ma/Southeast University
Incident Detection from Novel Data Sources: Leveraging Satellite Imagery Alongside GPS Traces (TRBAM-25-03911) - A134
Ekin Ugurel/University of Washington, Steffen Coenen/University of Washington, Minda Chen/University of Washington, Cynthia Chen/University of Washington
Florida Intersection Perception Dataset for Autonomous Vehicle Development and Traffic Safety Analysis (TRBAM-25-04119) - A170
Shaoyan Zhai/University of Central Florida, Mohamed Abdel-Aty/University of Central Florida, Dongdong Wang/University of Central Florida, Lei Han/University of Central Florida, Yang-Jun Joo/University of Central Florida
Enhancing Traffic Safety Analysis with Digital Twin Technology: Integrating Vehicle Dynamics and Environmental Factors into Microscopic Traffic Simulation (TRBAM-25-04152) - A135
Guanhao Xu/Oak Ridge National Laboratory, Jianfei Chen/Oak Ridge National Laboratory, Zejiang Wang/Oak Ridge National Laboratory, Anye Zhou/Oak Ridge National Laboratory, Max Schrader/Oak Ridge National Laboratory, Joshua Bittle/Oak Ridge National Laboratory, Yunli Shao/Oak Ridge National Laboratory
Enhancing Pavement Sensor Data Harvesting for AI-Driven Transportation Studies (TRBAM-25-04339) - A136
Manish Kumar Krishne Gowda/Purdue University, Andrew Balmos/Purdue University, James Krogmeier/Purdue University, Shin Boonam/Purdue University
A Novel Low-Cost Double U-Net Model for Predicting Traffic Sign Reflectivity Intensity from Camera Data (TRBAM-25-04385) - A157
Linlin Zhang/University of Missouri, Praveen Arachchilage/University of Missouri, Xiang Yu/University of Missouri, Yaw Adu-Gyamfi/University of Missouri
A Semantic Alignment Monocular 3D Object Detection Method from Roadside Perspective (TRBAM-25-04884) - A147
Pei Liu/Southeast University, Zihao Zhang/Southeast University, Haipeng Liu/Southeast University, Chengzhi JI/Southeast University, Yifan Zhuang/Southeast University, Ziyuan Pu/Southeast University
Kaninfradet3D:A Road-side Camera-LiDAR Fusion 3D Perception Model based on Nonlinear Feature Extraction and Intrinsic Correlation (TRBAM-25-04887) - A148
Nanfang Zheng/Southeast University, Pei Liu/Southeast University, Yufei Ji/Southeast University, Yiqun Li/Southeast University, Yifan Zhuang/Southeast University, Ziyuan Pu/Southeast University
Multi-Camera Machine Vision for Detecting and Analyzing Vehicle-Pedestrian Conflicts at Signalized Intersections: Deep Neural-Based Pose Estimation Algorithms (TRBAM-25-05047) - A123
Ahmed Mohamed/University of Cincinnati, Mohamed Ahmed/University of Cincinnati
Exploring AV LiDAR Configuration and Potential for Road Condition Evaluation: A Case Study on Lane Marking Retroreflectivity (TRBAM-25-05352) - A122
Dmitry Manasreh/University of Cincinnati, Munir Nazzal/University of Cincinnati, William Berner/University of Cincinnati, Ala Abbas/University of Cincinnati
Computer Vision-Based Model for Detecting Turning Lane Features on Florida's Public Roadways from Aerial Images (TRBAM-25-05388) - A137
Richard Antwi/Florida A&M University-Florida State University, Samuel Takyi/Florida A&M University-Florida State University, Michael Kimollo/Florida A&M University-Florida State University, Alican Karaer/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University, Maxim A Dulebenets/Florida A&M University-Florida State University, Thobias Sando/Florida A&M University-Florida State University
Turning Features Detection from Aerial Images: Model Development and Application on Florida's Public Roadways (TRBAM-25-05438) - A138
Richard Antwi/Florida A&M University-Florida State University, Michael Kimollo/Florida A&M University-Florida State University, Samuel Takyi/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Thobias Sando/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University, Maxim A Dulebenets/Florida A&M University-Florida State University

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Transportation Landmark-Based Navigation System for Autonomous Ground Vehicles in GNSS-Contested Urban Areas (TRBAM-25-05652) - A121
Sagar Dasgupta/University of Alabama, Muhammad Sami Irfan/University of Alabama, Mizan Rahman/University of Alabama
Automated FHWA Vehicle Classification System via LiDAR and Camera Data Fusion (TRBAM-25-05902) - A158
Elizabeth Arthur/University of Missouri, Columbia, Linlin Zhang/University of Missouri, Columbia, Yaw Adu-Gyamfi/University of Missouri, Columbia
Vulnerable Road User Detection and Classification for Roadside LiDAR Units with Deep Embedding (TRBAM-25-05994) - A167
Tianya Zhang/University of Tennessee, Chattanooga, Tam Ngoc Bao Bang/University of Tennessee, Chattanooga, Hussam Abubakr/University of Tennessee, Chattanooga, Mina Sartipi/University of Tennessee, Chattanooga
Integrated Model-Data-Driven Method for Full Spatiotemporal Reconstruction of Vehicle Trajectory in Sparse Sensor Data Environments (TRBAM-25-06128) - A120
Juyuan Yin/No Organization, Hongzhi Yang/No Organization, Bing Li/No Organization, Pinqing Zhao/No Organization, Boyang Li/No Organization
LiDAR Vehicle Trajectory Reconstruction with Arterial Shockwave Detection and Space-Time Analysis (TRBAM-25-06135) - A166
Anjiang Chen/Rutgers University, Peter Jin/Rutgers University
Roadside CCTV Traffic Sensor Coverage and Spatial Accuracy Analysis with Line-of-Sight Simulation over 3D Digital Surface Model (TRBAM-25-06203) - A168
Yi Ge/Rutgers University, Peter Jin/Rutgers University, Tianya Zhang/Rutgers University

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Emerging Practices for Transportation Planning Models and Processes
Claudia Bilotto, WSP, presiding
Sponsored By Standing Committee on Transportation Planning Policy and Processes, Standing Committee on Transportation Planning Analysis and Application

This session focuses on a wide variety of transportation planning, policy, and process issues.

Developing a Conceptual Model for Statewide Associations of MPOs Across the U.S. (TRBAM-25-00146) - A180
Tia Boyd/USF Center for Urban Transportation Research, Taylor Dinehart/USF Center for Urban Transportation Research, Jeff Kramer/USF Center for Urban Transportation Research
Synthetic Participatory Planning of Shared Automated Electric Mobility Systems (TRBAM-25-00212) - A172
Jiangbo Yu/McGill University, Graeme McKinley/McGill University
Talking the Talk: Understanding Coordination Practices between State DOTs and MPOs (TRBAM-25-00297) - A181
Tia Boyd/USF Center for Urban Transportation Research, Jeff Kramer/USF Center for Urban Transportation Research
Addressing the Elephant in the Room: Presenting a Framework to Improve Public Involvement in Public-Private Partnerships (TRBAM-25-01557) - A176
Eric Boyer/University of Texas, El Paso
Using Agent-based Transport Simulations and Surrogate Models to Develop Adaptive Plans under Uncertainty (TRBAM-25-03754) - A177
Orlando Roman/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Tanvi Maheshwari/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Canh Do/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Bryan Adey/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Pieter Fourie/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Qiming Ye/ETH Zurich: Eidgenossische Technische Hochschule Zurich, Prateek Bansal/ETH Zurich: Eidgenossische Technische Hochschule Zurich
Understanding and Remedying Slow Climate and Equity Progress under California Regional Planning Policy (TRBAM-25-06066) - A178
Gian-Claudia Sciara/University of Texas, Austin, Tamika Butler/University of Texas, Austin, Phoebe Chiu/University of Texas, Austin

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Effectiveness of Dispute Resolution Processes in State Departments of Transportation (TRBAM-25-06425) - A182
Husam Mohd Ankir/California Polytechnic State University, San Luis Obispo, Chaimae Nacir/California Polytechnic State University, San Luis Obispo, Shantanu Kumar/California Polytechnic State University, San Luis Obispo, Ghada Gad/California Polytechnic State University, San Luis Obispo, Mohammed Mehany/California Polytechnic State University, San Luis Obispo, Kurt Dettman/California Polytechnic State University, San Luis Obispo
INDUCED VEHICLE MILES TRAVELED IN RURAL COUNTIES (TRBAM-25-05778) - A186
Jim Damkowitch/DKS Associates, Inc., Udit Molakatalla/DKS Associates, Inc., Donald Hubbard/DKS Associates, Inc., Anurag Pande/DKS Associates, Inc.

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Interfaces Between Network and Data Models
Joseph Chow, New York University, presiding
Sponsored By Standing Committee on Transportation Network Modeling

This session addresses topics related to the interfaces between network and data models and examines case studies from Nova Scotia, Canada; Shenzhen and Beijing-Tianjin-Hebei Urban Agglomeration, China; Austin, Texas; and Chicago, Illinois.

Estimating trip length distributions from sparse license plate recognition data: the role of path reconstruction and regionalization (TRBAM-25-01063) - A190
Cheng Hu/Central South University, Jinjun Tang/Central South University, Zhitao Li/Central South University, Yaopeng Wang/Central South University, Chuyun Zhao/Central South University
A Combined Car-Following and Overtaking Approach to Reconstructing Vehicle Trajectories: A Case Study in Shenzhen (TRBAM-25-01209) - A191
Jingfeng Ma/Southeast University, Gang Ren/Southeast University, Wenxie Lin/Southeast University, Ruiyu Wang/Southeast University, Changjian Wu/Southeast University, Du Jianwei/Southeast University
Multi-Stage Network Pruning Optimization Method for GNN-based Traffic State Prediction Model (TRBAM-25-01623) - A192
Zhao Liu/Southeast University, Fan Ding/Southeast University, Yunqi Dai/Southeast University, Huachun Tan/Southeast University, Yu Han/Southeast University
Determinants of Active School Travel Levels among Children: A Case Study in a Mountainous City (TRBAM-25-02225) - A196
Rui Tang/Kunming University, Zhuangbin Shi/Kunming University, Mingwei He/Kunming University, Shisheng Min/Kunming University, Yang Liu/Kunming University
A Study on the Influencing Factors and Impact Mechanisms of Urban Low-Carbon Travel Based on Interpretable Machine Learning (TRBAM-25-03415) - A197
Hanbang Ning/Wuhan Institute of Technology, Keyuan Ding/Wuhan Institute of Technology, Ran Peng/Wuhan Institute of Technology
Integrated Activity-Based Modeling for Evaluating the Effects of Vehicle Type Choice Model on Transportation Network and Greenhouse Gas (GHG) Emissions (TRBAM-25-04372) - A188
Hasan Shahrier/Dalhousie University, Arunakirinathan Vajeeran/Dalhousie University, Muhammad Habib/Dalhousie University
Daily Activity Pattern Prediction Using Bidirectional Encoder Representations from Transformers (BERT) (TRBAM-25-04457) - A198
Mahan Mollajafari/Concordia University, Zachary Patterson/Concordia University, Bilal Farooq/Concordia University
A Core-Satellite Modelling Approach for Provincial Travel Demand Models: Case Study of Nova Scotia, Canada (TRBAM-25-04539) - A187
Arunakirinathan Vajeeran/Dalhousie University, Muhammad Habib/Dalhousie University
An Integrated Method for Inferring Multimodal Travel Trip Chains using Mobile Network Data (TRBAM-25-04573) - A211
Yuhang Liu/Southeast University, Feixiong Liao/Southeast University, Wei Wang/Southeast University, Yuchen Wang/Southeast University, Jun Chen/Southeast University
Integration of Node Centralities and Edge Topologies using GCN, LSTM, and CNN for Spatio-Temporal Traffic Flow Forecasting under Congestion Pricing Concept (TRBAM-25-05772) - A200
Kotpati Naidu/C&M Associates, Inc., Qixing Wang/C&M Associates, Inc., Jinjian Liang/C&M Associates, Inc., James Liddle/C&M Associates, Inc., Alireza Soroush/C&M Associates, Inc.

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The spatial efficiency evaluation and classification of Multi-modal passenger transportation hubs: A case study in Beijing-Tianjin-Hebei Urban Agglomeration, China (TRBAM-25-00770) - A201
Jiangbo Yu/Beijing University of Technology, Jiancheng Weng/Beijing University of Technology, Jiaolong Chai/Beijing University of Technology, Pengfei Lin/Beijing University of Technology, Guo Cong/Beijing University of Technology
A Graph Transformer Model Fused with Knowledge Graph Embeddings to Predict Traffic Flow during Incidents (TRBAM-25-02513) - A210
Md Mobasshir Rashid/University of Central Florida, Samiul Hasan/University of Central Florida
Identifying Work Zone Closure Time Windows for Minimal Traffic Impacts: A Case Study on IH-35 Highway in Austin, Texas (TRBAM-25-04635) - A202
Yu Li/University of Texas, Austin, Aupal Mondal/University of Texas, Austin, Natalia Juri/University of Texas, Austin
Improving Reliability in Shared Trip Predictions for Ride-Hailing Services Using XGBoost and Conformal Prediction: A Case Study of Chicago (TRBAM-25-06157) - A203
Mohammadali Yousefzadeh/Shiraz University, Farideddin Peiravian/Shiraz University
Virtual Nodes Improve Long-term Traffic Prediction (TRBAM-25-02692) - A204
Xiaoyang Cao/Massachusetts Institute of Technology, Dingyi Zhuang/Massachusetts Institute of Technology, Jinhua Zhao/Massachusetts Institute of Technology, Shenhao Wang/Massachusetts Institute of Technology
Agent-Based Modeling of Driver Behavior in Ride-Hailing: A Supply-Side Simulation Study (TRBAM-25-02908) - A205
Shuoyan Xu/University of Toronto, Ya Gao/University of Toronto, Eric Miller/University of Toronto
Reconstruction of OD Demand Using Mobile Phone Data: A Regression Model with Spatially Adaptive Coefficients (TRBAM-25-03182) - A206
Xiting Zhang/McGill University, Xudong Wang/McGill University, Luis Miranda-Moreno/McGill University, Lijun Sun/McGill University
Enhancing Population Synthesis with Generative Multi-Source Imputation (TRBAM-25-04709) - A212
Farbod Abbasi/Concordia University, Zachary Patterson/Concordia University, Bilal Farooq/Concordia University
Characterization of Spatiotemporal Evolutionary Patterns of Metro Networks Based on K-means DTW Barycenter Averaging Clustering (TRBAM-25-05863) - A207
Yizeng Wang/Shanghai Jiao Tong University, Hao Hu/Shanghai Jiao Tong University, Hao Chai/Shanghai Jiao Tong University, Zhipeng Zhang/Shanghai Jiao Tong University, Zhimian Chen/Shanghai Jiao Tong University, Chengwei Zhang/Shanghai Jiao Tong University
Time-Attention Enhanced Graph Convolutional Neural Networks for Traffic Assignment in Large-Scale Networks (TRBAM-25-04792) - A208
Yuxin Shi/University of Wisconsin,Madison, Keke Long/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison, Wei Ma/University of Wisconsin,Madison

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Emerging Practices for Transportation Network Modeling
Yanfeng Ouyang, University of Illinois, Urbana-Champaign, presiding
Sponsored By Standing Committee on Transportation Network Modeling

This session focuses on various emerging topics in transportation network modeling.

Dynamic Campus Origin-Destination Mobility Prediction using Graph Convolutional Neural Network on WiFi Logs (TRBAM-25-04889) - A213
Godwin Badu-Marfo/Ryerson University, Bilal Farooq/Ryerson University
A Cooperative Trajectory Optimization Strategy for Different Initial Train Conditions under Virtual Coupling (TRBAM-25-03496) - A225
Yanghao Wang/Tongji University, Dongxiu Ou/Tongji University
A Time-Dependent Travel-Activity Network Flow Model for Electric Vehicle Commuters with Charging-Discharging Activities (TRBAM-25-02332) - A233
Xueqi Zeng/Tongji University, Chi Xie/Tongji University
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Sudipta Roy/University of Central Florida, Gabriel Dadashev/University of Central Florida, Lampros Yfantis/University of Central Florida, Bat-hen Nahmias-Biran/University of Central Florida, Samiul Hasan/University of Central Florida
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Dorine Duives/Delft University of Technology, Arco Van Beek/Delft University of Technology
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Sahas Sok/University of Minnesota, Twin Cities, Kwangho Baek/University of Minnesota, Twin Cities, Alireza Khani/University of Minnesota, Twin Cities
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Yamam Alayasreih/Technical University of Munich, Gabriel Tilg/Technical University of Munich, Florian Dandl/Technical University of Munich, Mehdi Keyvan-Ekbatani/Technical University of Munich, Klaus Bogenberger/Technical University of Munich
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Amirali Zarrinmehr/No Organization, Hanie Moloukzade/No Organization
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Dawei Li/Southeast University, Qianzhuo Chen/Southeast University, Yuchen Song/Southeast University

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Ryota Okazaki/Shibaura Institute of Technology, Yuki Oyama/Shibaura Institute of Technology
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Xiangyu He/Southwest Jiaotong University, Chengxi Hu/Southwest Jiaotong University, Xiaodong Qian/Southwest Jiaotong University, Yiling Huang/Southwest Jiaotong University, Zhanbo Sun/Southwest Jiaotong University
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Chao Yu/Hong Kong Polytechnic University, Jing Tian/Hong Kong Polytechnic University, Wei Ma/Hong Kong Polytechnic University
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Shuhan Qiu/Tongji University, Guoyang Qin/Tongji University, Melvin Wong/Tongji University, Xiannan Huang/Tongji University, Jian Sun/Tongji University
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Shiyu Shen/University of Illinois, Urbana-Champaign, Yuhui Zhai/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign
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Yeonwoo Jeong/Seoul National University, Chungwon Lee/Seoul National University, Gyugeun Yoon/Seoul National University
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Yining Liu/University of Illinois, Urbana-Champaign, Yanfeng Ouyang/University of Illinois, Urbana-Champaign
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Yantao Huang/Argonne National Laboratory, Abdelrahman Ismael/Argonne National Laboratory, Hui Shen/Argonne National Laboratory, Hyunseop Uhm/Argonne National Laboratory, Olcay Sahin/Argonne National Laboratory, Joshua Auld/Argonne National Laboratory
Designing Large-Scale Hydrogen Distribution network: A practical approach for scenario analysis (TRBAM-25-02677) - A278
Pedro de Camargo/Argonne National Laboratory, Sheik Tanveer/Argonne National Laboratory
Optimizing Sustainable Relay Transport Networks: A Case Study in Japan (TRBAM-25-01971) - A280
Zeying Wen/Hiroshima University, Tao Feng/Hiroshima University, Junyi Zhang/Hiroshima University, Xin Dou/Hiroshima University
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MaoCan Song/No Organization, Lin Cheng/No Organization
A Relaxed Singly Constrained Static Traffic Assignment Model with Elastic Demand: Application to Telework and Urban Development Scenarios in Austin, Texas (TRBAM-25-01388) - A281
Jake Robbennolt/University of Texas, Austin, Dale Robbennolt/University of Texas, Austin, Stephen Boyles/University of Texas, Austin

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Hiroshi Shimamoto/University of Miyazaki
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Nicolas Da Silva Fradique/Ecole Nationale des Travaux Publics de l'Etat, Angelo Furno/Ecole Nationale des Travaux Publics de l'Etat, Emmanuel Vinot/Ecole Nationale des Travaux Publics de l'Etat, Nicolas Retiere/Ecole Nationale des Travaux Publics de l'Etat, Rémy Rigo-Mariani/Ecole Nationale des Travaux Publics de l'Etat, Loïc Bonnetain/Ecole Nationale des Travaux Publics de l'Etat
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Georgios Laskaris/National Technical University of Athens (NTUA), Christina Iliopoulou/National Technical University of Athens (NTUA), Konstantinos Kepaptsoglou/National Technical University of Athens (NTUA)
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Bingjie Liang/Beijing Jiaotong University, Wenqi Lu/Beijing Jiaotong University, Bin Ran/Beijing Jiaotong University
A Lagrangian Heuristic-Based Roadside Unit Deployment Method for Balancing Delay and Coverage (TRBAM-25-00843) - A288
Bingjie Liang/Hong Kong University, Guangzhou, Wenqi Lu/Hong Kong University, Guangzhou, Bin Ran/Hong Kong University, Guangzhou
Electric Bus Scheduling for Hybrid Charging Systems Considering Energy Consumption Uncertainty (TRBAM-25-01037) - A290
Siyuan Yang/Tongji University, Kun An/Tongji University, Zhenning Niu/Tongji University
Creating Intelligent Policy-based Geofence for Urban Network: A Dynamic Speed Limit Strategy via Deep Reinforcement Learning (TRBAM-25-01078) - A291
Wenqi Lu/Hong Kong University, Guangzhou, Bingjie Liang/Hong Kong University, Guangzhou, Renfei Wu/Hong Kong University, Guangzhou, Ziwei Yi/Hong Kong University, Guangzhou, Bin Ran/Hong Kong University, Guangzhou
The Expressway Network Design Problem for Multiple Urban Subregions Based on the Macroscopic Fundamental Diagram (TRBAM-25-01584) - A292
Yunran Di/University of Wisconsin, Madison, Weihua Zhang/University of Wisconsin, Madison, Haotian Shi/University of Wisconsin, Madison, Heng Ding/University of Wisconsin, Madison, Jinbiao Huo/University of Wisconsin, Madison, Bin Ran/University of Wisconsin, Madison
Temporal Equilibrium for Electrified Ride-Sourcing Markets Considering Charging Capacity and Driving Fatigue (TRBAM-25-01703) - A232
Yuhao Liu/New York University, Shanghai, Zhibin Chen/New York University, Shanghai, Chi Xie/New York University, Shanghai, Kai Liu/New York University, Shanghai
Perturbed Utility Stochastic Traffic Assignment (TRBAM-25-01873) - A293
Rui Yao/No Organization, Mogens Fosgerau/No Organization, Mads Paulsen/No Organization, Thomas Rasmussen/No Organization
A Branch-and-Cut Algorithm for a Benders Decomposition Framework in Optimizing Park-and- Ride Facility Locations (TRBAM-25-02215) - A216
Yibei Zhang/Southeast University, Lin Cheng/Southeast University, MaoCan Song/Southeast University, Chenhao Zhang/Southeast University
Exploring the Spatial Distribution Structure of Intercity Human Mobility Networks in China under Multimodal Transportation Systems (TRBAM-25-03266) - A294
Haosong Wen/Southeast University, Wei Wang/Southeast University, Weijie Yu/Southeast University, Xuedong Hua/Southeast University, De Zhao/Southeast University

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A Machine Learning Approach for Network Equilibrium Estimation (TRBAM-25-03342) - A295
Van Anh Le/University Gustave Eiffel, Mostafa Ameli/University Gustave Eiffel, Alexander Skabardonis/University Gustave Eiffel
Studying Road Network Performance using the Concept of Resilience: A Zonal Approach (TRBAM-25-03368) - A296
Piyush Lalwani/Indian Institute of Technology, Delhi, Sai Chand/Indian Institute of Technology, Delhi
Link-Dependent Resilient Bus Routing and Scheduling in a Multimodal Network for Uncertain Metro System Disruptions (TRBAM-25-03406) - A297
Zhiya Su/Hong Kong University of Science and Technology, Enoch Lee/Hong Kong University of Science and Technology, Hong Lo/Hong Kong University of Science and Technology
A Graph Transformer Model with Shortest Path Information for Developing Data-Driven Traffic Assignment Solutions (TRBAM-25-03567) - A220
Md Mobasshir Rashid/University of Central Florida, Samiul Hasan/University of Central Florida
An Exact System Optimum Method for Potential Congestion Relief in Public Transport (TRBAM-25-06179) - A298
Xia Zhou/Monash University, Mark Wallace/Monash University, Daniel D. Harabor/Monash University, Zhenliang Ma/Monash University
A Relaxation-Based Column Generation for Station-Routing Optimization of Police Patrol Vehicles in Accident Response (TRBAM-25-01465) - A300
Asya Atik/North Carolina State University, Leila Hajibabai/North Carolina State University
Identifying Road Network Robustness to Extreme Flooding (TRBAM-25-01722) - A301
Yican Du/University of California, Berkeley, Marta González/University of California, Berkeley
Integrated Train Operation Adjustments Utilizing High-Speed Train Resources for Emergency Situations (TRBAM-25-03274) - A302
ShangYang Li/Beijing Jiaotong University, JunHua Chen/Beijing Jiaotong University, Han Zheng/Beijing Jiaotong University, ZanYang Cui/Beijing Jiaotong University, Ming Wang/Beijing Jiaotong University
Distributionally Robust Transportation Network Design with Imperfect Forecasts (TRBAM-25-02632) - A303
Zhichen Liu/University of Michigan, Yafeng Yin/University of Michigan
A User Equilibrium Model for a Dynamic Ridesharing Market (TRBAM-25-00435) - A304
Jun Wang/Hong Kong University, Guangzhou, Jing Wang/Hong Kong University, Guangzhou, Hai Yang/Hong Kong University, Guangzhou, Yunmeng Liu/Hong Kong University, Guangzhou

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Transportation Performance Management Innovations
Anna Batista, High Street Consulting Group, LLC, presiding
Michael Grant, ICF, presiding
Sponsored By Standing Committee on Performance Management

Poster session highlighting innovations in transportation performance management.

Fundamental Value Hierarchy for Transportation Planning Investment Decisions - Evaluating Emerging Technology (P25-20578) - A128
Bobby Cottam/Burns & McDonnell
Data-Driven Safety Projects Post-Implementation Evaluation (P25-20579) - A127
Yazan Abukhalil/Iowa State University
Navigating the TPM Path: UDOT's Transportation Performance Management Strategy and Overcoming Implementation Challenges (P25-20580) - A126
Patrick Cowley/Utah Department of Transportation, Dan Adams/Langdon Group Inc.
Performance Stat Sessions at the Texas Department of Transportation (TxDOT) (P25-20581) - A125
Jim Padilla/Texas Department of Transportation
Piloting a Data Driven Congestion Management Process (P25-20582) - A124
Samantha Carr/South Carolina Department of Transportation, Chowdhury Siddiqui/South Carolina Department of Transportation
Facilitated Methodologies to Identify KYTC Performance Measures (P25-20583) - A118
Candice Wallace/Kentucky Transportation Cabinet, Jon Wilcoxson/Kentucky Transportation Center, Tracy Nowaczyk/Kentucky Transportation Cabinet, Bryan Gibson/Kentucky Transportation Cabinet

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Application of Performance Measures for Regional Transportation Planning and Investment Decisions in South Carolina (P25-20584) - A117
Chowdhury Siddiqui/South Carolina Department of Transportation, Kwanpyo Ko/South Carolina Department of Transportation, Fahim Ahmed/South Carolina Department of Transportation
Connecting Performance-Based Plans to State LRTPs and STIPs (P25-20585) - A116
Catherine Duffy/ICF
Electric Vehicle Financial Policy: Exploring the Intersection of Equity, Justice, and Resource Distribution (P25-20849) - A108
Ann Mary Varghese/Indian Institute of Technology, Kharagpur
In Search of a Multi-Modal Asset Management Maturity Model (P25-20850) - A107
Matt Versdahl/Washington State Department of Transportation

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Influencing Transportation Asset Management Decision Making: Tools and Techniques for Success
Richard Boadi, WSP, presiding
Sponsored By Standing Committee on Transportation Asset Management

Transportation Asset Management (TAM) continually advances across multiple fronts, incorporating advanced decision-making techniques and extending its scope beyond bridges and pavements to include a broader range of highway assets. Additionally, the integration of AI is driving progress in data collection and analysis. The presenters in this session will highlight methods and tools that enhance decision-making capabilities and support the success of a comprehensive TAM program.

A Review and Classification of Multi-Criteria Decision-Making Methods for Highway Asset Management (TRBAM-25-01716) - A115
Cristina Pronello/Politecnico di Torino, Italy, Yiyao Xu/Politecnico di Torino, Italy
Asset Investment Planning and Optimization Methodology in Consideration of Asset Lifecycles: Port Authority of New York and New Jersey Case Study (TRBAM-25-02350) - A114
Maurizio Morgese/CAIT, Mahmoud Halfawy/CAIT, Nick Hutton/CAIT, Robert Kumapley/CAIT, Ali Maher/CAIT
An Overview of the Current State of Practice of Ancillary Asset Data within State Departments of Transportation (TRBAM-25-02589) - A113
Amin Khoshkenar/University of Kentucky, Hala Nassereddine/University of Kentucky, Bassam Ramadan/University of Kentucky, Rachel Catchings/University of Kentucky, Gabriel Dadi/University of Kentucky
Multi-objective Optimization Method for Integrated Roadway Asset Maintenance and Rehabilitation Considering Traffic Impacts (TRBAM-25-03010) - A112
Siyuan Meng/University of Massachusetts, Amherst
Sustainability in Road Infrastructure: A Phase-wise Review of Indicators and Assessment Methods (TRBAM-25-03879) - A100
David Holguin-Mejia/Purdue University, Samuel Labi/Purdue University, Konstantina (Nadia) Gkritza/Purdue University, Kumares Sinha/Purdue University
Technology Review for Complete Streets Data Collection (TRBAM-25-04631) - A111
Ariel Steele/Georgia Department of Transportation, Yichang Tsai/Georgia Department of Transportation, John Harvey/Georgia Department of Transportation
Real-Time AI Visual Analytics for Infrastructure Asset Management: A Case Study on Real-World Roadside Drainage Systems (TRBAM-25-04643) - A110
Adrian Burde/Leidos, Inc., Hamed Tabkhi/Leidos, Inc., Sepehr Sabeti/Leidos, Inc.

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Best Presentations from 18th Annual Inter-University Symposium on Infrastructure Management and 3rd Transportation Asset Management Competition

Cristina Torres-Machi, University of Colorado, Boulder, presiding

Sponsored By Standing Committee on Transportation Asset Management, Standing Committee on Pavement Management Systems, Standing Committee on Bridge and Structures Management

AJE30, the Standing Committee on Transportation Asset Management hosts an annual Transportation Asset Management competition in which young professionals are encouraged to tackle critical issues. This session includes a variety of topics of the presentations submitted, including the winning presentation "Redefining Resilience in Delaware: A Proposed Vulnerability, Criticality, and Community Resilience Framework for Fast-Forwarding Roadway Infrastructure Resilience Planning".

Redefining Resilience in Delaware: A Proposed Vulnerability, Criticality, and Community Resilience Framework for Fast-Forwarding Roadway Infrastructure Resilience Planning (P25-20607) - B401

Lauren Gardner/Vanderbilt University, Collin Yarbrough/Southern Methodist University, Muhammad Ishfaq/University of Delaware, Austin Jarrell/Federal Highway Administration (FHWA)

A Framework to Assess Flooding Priorities to Improve Resilience (P25-20610) - A106

Abhik Borthakur/Applied Pavement Technology, Inc., Shafkat Alam Khan/Applied Pavement Technology, Inc., Brian Feighan/Applied Pavement Technology, Inc., Prashant Ram/Applied Pavement Technology, Inc.

A Machine Learning Framework for Enhancing Road Resilience (P25-20611) - A105

Mohammad SafariTaherkhani/University of Maryland, College Park, Narjes Shayesteh/University of Maryland, College Park, Kaveh Farokhi Sadabadi/University of Maryland

Actions to Increase Capacity on Railway Lines (P25-20612) - B400

Jose Pañero/Ministerio de Transportes y Movilidad Sostenible

Comparative Analysis of Flexible Pavement Preservation Methods Using Pavement Performance Models (P25-20613) - A104

Alireza Sassani/Iowa State University, Omar Smadi/Iowa State University, Sara Arezoumand/Iowa State University

Multi-Period Flow-Based Refueling Location Models to Support the Deployment of Decarbonization Infrastructure for Transportation Systems (P25-20614) - A103

Adrian Hernandez/Northwestern University, Pablo Durango-Cohen/Northwestern University, Hani Mahmassani/Northwestern University

Incorporating Equity into Transportation Asset Management: Status and Recommendations from Professionals (P25-20615) - A102

Fawzi Khalife/Colorado State University, Mehmet Ozbek/Colorado State University, Rebecca Atadero/Colorado State University, Fort Collins, Erin Arneson/Colorado State University, Fort Collins

State Highway Infrastructure Financing Using Matching Funds from the IIJA (P25-20616) - A101

Qingbin Cui/University of Maryland, College Park, Saeel Shrivallabh Pai/Purdue University, Samuel Labi/Purdue University, Deepak Benny/Purdue University

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A

Advancements in Emergency Response, Incident Management, and Post-Crash Care: Innovative Approaches to Enhancing First Responder Safety and Efficiency

Sean Parr, Miami-Dade Fire Rescue Department, presiding

Sponsored By Section - Transportation Systems Resilience, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Transportation Safety Management Systems, Standing Committee on Traffic Law Enforcement, Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity

This session explores innovations in emergency response and incident management, including the impact of Move-Over laws, optimization of ambulance dispatch, and data-driven methods for identifying high-risk roadways. Topics also cover police injury severity, emergency medical supply forecasting, and enhancing post-crash care through machine learning and cross-agency coordination, with insights from U.S. and international studies

A Metric for Assessing Emergency Medical Service (EMS) Crash Response Time Reliability (TRBAM-25-00241) - B430

Sajjad Karimi/University of Louisville, Robert Kluger/University of Louisville, Teng Wang/University of Louisville, Reg Souleyrette/University of Louisville

Advancing Vision Zero and the Safe System Approach Through Cross-Agency Coordination in Florida (TRBAM-25-00478) - B431

Tia Boyd/USF Center for Urban Transportation Research, Taylor Dinehart/USF Center for Urban Transportation Research, Jeff Kramer/USF Center for Urban Transportation Research, Lama Alfaseeh/USF Center for Urban Transportation Research, Sarah Caper/USF Center for Urban Transportation Research, Christopher Fellerhoff/USF Center for Urban Transportation Research

How Do Motorists' Pre-Crash Behaviors Contribute to the Injury Severity of Police Officers? Using Interpretable Machine Learning to Untangle the Behavioral Pathways in Police-Involved Crashes (TRBAM-25-00712) - B402

Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Zihe Zhang/University of Alabama, Steven Jones/University of Alabama

A Deep Reinforcement Learning Approach for Combined Solution of Ambulance Dispatch and Relocation Problems (TRBAM-25-01564) - B403

Weihan Bi/Tongji University, Yu Shen/Tongji University, Surong Zhang/Tongji University, Lan Wang/Tongji University, Yuchuan Du/Tongji University

Exploring the Non-Linear Relationship between Highway Emergency Services and Travel Satisfaction: Insights from Hong Kong-Zhuhai-Macao Bridge (TRBAM-25-01597) - B404

Sen Wei/Chang'an University, Hanqing Yang/Chang'an University, Minghui Xie/Chang'an University, Yuanqing Wang/Chang'an University, Yanan Gao/Chang'an University

An Optimization Method for Forecasting and Scheduling the Demand for Emergency Medical Supplies in Sudden Public Health Events (TRBAM-25-01894) - B410

Jianqiu Chen/No Organization, Shixuan Zhou/No Organization, Benxiao Lou/No Organization, Kexing Fan/No Organization, Guobin Gu/No Organization, Dan Zhou/No Organization, Yanzhi Pang/No Organization, Chun Bao/No Organization

Move Over or Slow Down? A Simulation-Based Evaluation of the Safety Impact of Motorist Actions in Compliance with Move Over Laws (TRBAM-25-02136) - B421

Jiayi Kong/University of Alabama, Xiao Zou/University of Alabama, Jun Liu/University of Alabama, Weike Lu/University of Alabama

Move-Over Laws and Incident Response Personnel Safety in the United States (TRBAM-25-02288) - B422

Olga Bredikhina/Alabama Transportation Institute, Justin Fisher/Alabama Transportation Institute, Trayce Hockstad/Alabama Transportation Institute, Praveena Penmetsa/Alabama Transportation Institute, Jun Liu/Alabama Transportation Institute, Steven Jones/Alabama Transportation Institute

Real-Time Incident Detection Through Predictive Modeling of Crowdsourced Waze Data (TRBAM-25-02405) - B411

Md Tufajjal Hossain/New Jersey Institute of Technology, Joyoung Lee/New Jersey Institute of Technology, Dejan Besenski/New Jersey Institute of Technology, Lazar Spasovic/New Jersey Institute of Technology

Identifying High Risk Roadway Segments for Dynamic First Responder Allocation (TRBAM-25-02541) - B412

Syed Mohammad Adil/Connect Dynamics, Inc., Aayush Thakur/Connect Dynamics, Inc.

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Examining the Spatially Varying Correlates of Police Injury Severity: A Study of Pennsylvania (TRBAM-25-02845) - B420
Xiao Zou/University of Alabama, Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama
Emergency Vehicle Lighting Applications for Safety Service Patrols: A Synthesis Study (TRBAM-25-04169) - B413
Abiral Aashish/University of Florida, Shraddha Sagar/University of Florida, Grady Carrick/University of Florida, Charles Brown/University of Florida, Sivaramakrishnan Srinivasan/University of Florida, Nithin Agarwal/University of Florida
Enhancing Alternative Fuel Vehicle Emergency Response Through the Integration of Retrieval-Augmented Generation Enabled Large Language Model and Extended Reality (TRBAM-25-04759) - B423
Ziming Liu/Colorado School of Mines, Jiuyi Xu/Colorado School of Mines, Jun Liu/Colorado School of Mines, Yangming Shi/Colorado School of Mines
Data Driven Analysis to Inform National Strategies on Improving Post-Crash Care (TRBAM-25-04781) - B414
Soyoung Jung/Dongyang University, Xiao Qin/Dongyang University
Evaluating the Representation of 'Move Over' Laws in State Driver Education Materials: Gaps in Accuracy and Public Awareness (P25-20462) - B424
Ram Patel/Clements High School, Deepak Sharma/California State University, Fullerton, Scott Parr/Embry Riddle Aeronautical University

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Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Resilient Transportation
Xianfeng Yang, University of Maryland, College Park, presiding
Sponsored By Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity

Spatially Equitable Allocation of Medical Resources for Pandemic Containment: A Service Level-Based Approach (TRBAM-25-00319) - B506
Guodong Li/Southwest Jiaotong University, Chun Feng/Southwest Jiaotong University, Ting Zhang/Southwest Jiaotong University, Carole Nguepnang/Southwest Jiaotong University, Xue Jiang/Southwest Jiaotong University
Resilience in Motion: Analyzing Evacuation Decisions During Seismic Emergencies (TRBAM-25-00401) - B507
Daeyeol Chang/Morgan State University
A Legal Analysis of Labor Trafficking Cases with A Transportation Lens (TRBAM-25-00556) - B474
Trayce Hockstad/Alabama Transportation Institute, Kezban Yagci Sokat/Alabama Transportation Institute
Developing an Accessibility Index to Subway Stations: A Multi-Criteria Accessibility Evaluation Model Based Analysis (TRBAM-25-00639) - B482
Ingrid C. Claudino/University of Aveiro, Margarida Coelho/University of Aveiro, Joaquim Macedo/University of Aveiro
Machine Learning-Enhanced Column Generation for a Maximal Covering Location-Allocation (TRBAM-25-01472) - B483
Kuangying Li/North Carolina State University, Hiruni Niwunhella/North Carolina State University, Leila Hajibabai/North Carolina State University, Ali Hajbabaie/North Carolina State University
Dynamic Truck-and-Drone Routing Problem with Multiple Tasks after Disasters (TRBAM-25-01514) - B484
Wenbo Sun/University of Hong Kong, Fangni Zhang/University of Hong Kong
Two-Stage Deployment and Operation Plan of PCR Sample Collection Booths under Demand Uncertainty (TRBAM-25-01643) - B492
Zhibin Chen/New York University, Shanghai, Yuhao Liu/New York University, Shanghai, Pengyu Yan/New York University, Shanghai, ChengHe Guan/New York University, Shanghai
Harmonizing Commercial Vehicle (Trucks) Weight Requirements for Emergency Transportation of Critical Commodities (TRBAM-25-02230) - B493
Sushant Sharma/Texas A&M Transportation Institute, Bradley Trefz/Texas A&M Transportation Institute, Jeffery Warner/Texas A&M Transportation Institute, David Bierling/Texas A&M Transportation Institute, Curtis Morgan/Texas A&M Transportation Institute, Jack Merritt/Texas A&M Transportation Institute
Maladaptation in Supply Chain Management (TRBAM-25-03808) - B494
Yvonne Lont/Delft University of Technology, Jan Kwakkel/Delft University of Technology, Tina Comes/Delft University of Technology
Application of the Scenario Development Approach to Cope with Uncertainty Due to Geopolitical Dynamics in the Middle East: The Case Study of the Port of Trieste, Italy (TRBAM-25-04218) - B500
Caterina Caramuta/University of Trieste, Giovanni Longo/University of Trieste, Alessia Grosso/University of Trieste

(continued)

Modeling Drone-guided Evacuation in Subway Fire Scenario: Case Study In Lumu Station of Suzhou Subway (TRBAM-25-04284) - B501
Zhe Li/Soochow University, Tianle Li/Soochow University, Weike Lu/Soochow University, Guojing Hu/Soochow University, Jun Liu/Soochow University, Yong Zhang/Soochow University
Enhancing Critical Facility Accessibility by Leveraging Connected Vehicle Data: Insights from a Case Study in Bay County, Florida (TRBAM-25-04600) - B502
Shrikant Fulari/Florida State University, Onur Alisan/Florida State University, Eren Ozguven/Florida State University, Mark Horner/Florida State University, Marcia Mardis/Florida State University, Faye Jones/Florida State University
Information Switching Patterns of Risk Communication in Social Media during Disasters (TRBAM-25-04609) - B503
Khondhaker Al Momin/University of Oklahoma, Arif Mohaimin Sadri/University of Oklahoma, Kristin Olofsson/University of Oklahoma, K.K. "Muralee" Muraleetharan/University of Oklahoma, Hugh Gladwin/University of Oklahoma
Transportation and Human Trafficking: Stakeholder Analysis and the Role of Task Forces in the Fight Against Human Trafficking (TRBAM-25-04990) - B504
Felipe Aros-Vera/Ohio University, Mario Penaranda-Marquez/Ohio University, Mariam Arteta-Padilla/Ohio University, John Morgan/Ohio University, John Habermann/Ohio University, John Betak/Ohio University
Post-Tornado Roadway Debris Detection from Satellite Images: An Integrated GIS and Image Processing Approach on Florida's Public Roadways (TRBAM-25-05347) - B505
Richard Antwi/Florida A&M University-Florida State University, Prince Lawson/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University

4083

Wednesday, 10:15 a.m. - 12:00 p.m., Convention Center, Hall A
Emergency Evacuation and Case Study
Xianfeng Yang, University of Maryland, College Park, presiding
Sponsored By Standing Committee on Disaster Response, Emergency Evacuations, and Business Continuity

Opportunities and Limitations of Mobile Location Data to Estimate Evacuation Traffic: A Case Study Analyzing Hurricane Michael (TRBAM-25-00062) - B454
William Seites-Rundlett/University of Colorado, Boulder, Cristina Torres-Machi/University of Colorado, Boulder, Ross Corotis/University of Colorado, Boulder
Swarm Intelligence Applications for Emergency Evacuation Planning: A State-of-the-Art Survey (TRBAM-25-00236) - B450
Razieh Khayamim/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Marta Borowska-Stefańska/Florida A&M University-Florida State University, Szymon Wiśniewski/Florida A&M University-Florida State University, Maxim Dulebenets/Florida A&M University-Florida State University
Evacuation and Reentry Curves for Wildfire Evacuations Using Network Mobility Data (TRBAM-25-00356) - B462
Ian Borody/University of Alberta, Stephen Wong/University of Alberta
Investigation of the Effects of Cross-Sectional Configuration on Pedestrian Evacuation: A Simulation-Based Approach (TRBAM-25-00544) - B463
Hassan Heidari/Isfahan University of Technology, Seyed Javad Hashemifar/Isfahan University of Technology, Meisam Akbarzadeh/Isfahan University of Technology, Alireza Basiri/Isfahan University of Technology
Development of a Novel Optimization Approach for Emergency Evacuation Planning under Pandemic Settings (TRBAM-25-00647) - B451
Razieh Khayamim/Florida A&M University-Florida State University, Ren Moses/Florida A&M University-Florida State University, Eren Ozguven/Florida A&M University-Florida State University, Marta Borowska-Stefańska/Florida A&M University-Florida State University, Szymon Wiśniewski/Florida A&M University-Florida State University, Seckin Ozkul/Florida A&M University-Florida State University, Maxim Dulebenets/Florida A&M University-Florida State University
Hurricane Evacuation Analysis with Large-Scale Mobile Device Location Data during Hurricane Ian (TRBAM-25-00726) - B443
Luyu Liu/Auburn University, Xiaojian Zhang/Auburn University, Shangkun Jiang/Auburn University, Xilei Zhao/Auburn University

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The Impact of Pedestrians' Tendency Towards Unfair Competition on Emergency Evacuation Considers the Effects of Sunk Costs and Obstacles (TRBAM-25-00863) - B432
Shanwei Liu/Shanghai Jiao Tong University, Chaoyang Li/Shanghai Jiao Tong University, Bozhezi Peng/Shanghai Jiao Tong University, Xiao Li/Shanghai Jiao Tong University, Zhuomu Wu/Shanghai Jiao Tong University
Transferring Household Evacuation Choice Behavioral Models to Create a Digital Twin for Future Storm Responses: Opportunities and Challenges (TRBAM-25-00929) - B452
Ruijie Bian/Louisiana Transportation Research Center (LTRC), Jiayun Shen/Louisiana Transportation Research Center (LTRC), Pamela Murray-Tuite/Louisiana Transportation Research Center (LTRC), Yunpeng Han/Louisiana Transportation Research Center (LTRC), Xiangyu Meng/Louisiana Transportation Research Center (LTRC)
Assessing Evacuation Destination Preference during Hurricane Ian: A Gravity Model Approach with Large-Scale Mobile Device Location Data (TRBAM-25-02275) - B444
Alessandra Recalde/University of Florida, Luyu Liu/University of Florida, Xiaojian Zhang/University of Florida, Xilei Zhao/University of Florida
Optimization of Hurricane Evacuation Orders: Combining Reinforcement Learning and the AI-Driven Weather Forecasting (TRBAM-25-03301) - B472
Kairui Feng/Princeton University, Wei Ma/Princeton University
Evacuation Route Choice during the 2021 Marshall Fire (TRBAM-25-04929) - B442
Matthew Mapa/University of Florida, Yuran Sun/University of Florida, Erica Kuligowski/University of Florida, Ruggiero Lovreglio/University of Florida, Thomas Cova/University of Florida, Xilei Zhao/University of Florida
A Hybrid Machine Learning and Microsimulation Framework for Simulating Metro Station Evacuation (TRBAM-25-05103) - B473
Ifratul Hoque/Dalhousie University, Sadia Tahsin Quadir/Dalhousie University, MD Jahedul Alam/Dalhousie University, Madeha Sattar Khan/Dalhousie University, Maria Mehrin/Dalhousie University, Mushirah Tasnim/Dalhousie University, Zeba Fariha/Dalhousie University, AFM Saiful Amin/Dalhousie University
Optimizing Wildfire Evacuation Warnings: An Agent-Based Approach for Effective Protective Action Recommendations (TRBAM-25-05145) - B440
Chenqiang Liu/Oregon State University, Louisa Wildman/Oregon State University, Brian Staes/Oregon State University, Ashley Bosa/Oregon State University, Brittany Brand/Oregon State University, Thomas Cova/Oregon State University, Michael Lindell/Oregon State University, Haizhong Wang/Oregon State University
Designing Evacuation Routes Considering Risk and Clearance Times (TRBAM-25-05162) - B433
Daniel Rivera-Royero/University of California, Davis, Miguel Jaller/University of California, Davis
Understanding the Effect of Facebook’s Neighborhood Social Connections on Hurricane Evacuation (TRBAM-25-05179) - B464
Tasnuba Binte Jamal/University of Central Florida, Md Mobasshir Rashid/University of Central Florida, Samiul Hasan/University of Central Florida
Investigating Wildfire Evacuation Decision Using Hybrid Choice Modeling (TRBAM-25-05265) - B441
Yuran Sun/University of Florida, Ruggiero Lovreglio/University of Florida, Erica Kuligowski/University of Florida, Rosie Morrison/University of Florida, Thomas Cova/University of Florida, Ana Forrister/University of Florida, Xilei Zhao/University of Florida
Improving a Regional-Scale Hurricane Evacuation Traffic Simulation Framework for Digital Twin Creation (TRBAM-25-05337) - B453
Yunpeng Han/Louisiana Transportation Research Center (LTRC), Ruijie Bian/Louisiana Transportation Research Center (LTRC), Xiangyu Meng/Louisiana Transportation Research Center (LTRC)
Who Needs Public Transit to Evacuate? A National Household Survey Insight (TRBAM-25-00714) - B434
Ningzhe Xu/University of Alabama, Jun Liu/University of Alabama, Steven Jones/University of Alabama
A Data-Driven Approach to Predict Decision Point Choice During Normal and Evacuation Wayfinding in Multi-story Buildings (P25-21533) - B508
Yan Feng/Delft University of Technology, Panchamy Krishnakumari/Delft University of Technology

4084

Wednesday, 01:30 p.m. - 03:00 p.m., Convention Center, Ballroom ABC

Chair's Plenary Session

Sponsored By Executive Committee

The program for the Chair's Plenary Session includes the introduction of new Executive Committee members and officers; recognition of special guests; and the presentation of TRB's most prestigious awards. Each year TRB strives to cover the topics most important to the transportation industry.

Welcome (P25-21534)
Carol Lewis/Texas Southern University
Introduction of Incoming Officers and New Members of the TRB Executive Committee and Distinguished Guests (P25-21535)
Carol Lewis/Texas Southern University
Recognition of TRB Supporters (P25-21536)
Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design
Recognition of the Deen Lecturer and TRB Standing Committee Awards (P25-21537)
George Grimes/Independent Researcher
Presentation of the Roy W. Crum Distinguished Service Award and the Robert E. Skinner, Jr. Distinguished Transportation Research Management Award (P25-21538)
Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design
Presentation of the W. N. Carey, Jr., Distinguished Service Award (P25-21539)
Victoria Sheehan/Transportation Research Board
Presentation of the W. N. Carey, Jr., Distinguished Service Award (P25-21540)
Carol Lewis/Texas Southern University
Transportation Research and Development Priorities (P25-21541)
Victoria Sheehan/Transportation Research Board, Firas Ibrahim/OST-R/Office of Research, Development & Technology, Sarah Sharples/Department for Transport, United Kingdom
Fireside Chat: International Perspectives on Implementing Innovation (P25-21542)
Carol Lewis/Texas Southern University, Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design, Sylvain Haon/International Association of Public Transport, Patrick Mallejacq/PIARC, the World Road Association, Binyam Reja/World Bank, Susanna Zammataro/International Road Federation (IRF)
Executive Committee Chair's Final Remarks (P25-21543)
Carol Lewis/Texas Southern University
Closing Remarks and Adjourn (P25-21544)
Leslie Richards/University of Pennsylvania Stuart Weitzman School of Design

4085

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, 146B

Visualization in Transportation Lightning Talks

Charles Lattimer, University of Maryland, presiding
Matthew Haubrich, HDR, presiding
Sepehr Sabeti, Leidos, Inc., presiding
Jennifer Steen, HDR, presiding
Shawn Blaesing, Iowa Department of Transportation, presiding
Sponsored By Standing Committee on Visualization in Transportation

AED80 is once again hosting a session of Lightning Talks on Visualization in Transportation. The session will include presentations on all aspects of visualization including the following areas of interest: Data Visualization-Visual Analytics-System Performance BIM for Infrastructure Visual Simulation-Simulators-Real-time interactive tools-VR/AR Other presentations which could be showcased in one of the above interest areas The session will be divided into tracks roughly encompassing the above areas of interest, and talks will be limited to 3-4 minutes each to keep the session fast paced and lively.

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The Allure of Alluvial Diagrams (P25-21047)
Austin Foster/Mead & Hunt, Inc.
Empowering Exploration: The Power of Access-to-Opportunity Interactive Visualizations (P25-21048)
William Hereth/Wasatch Front Regional Council
Visualizing National Traffic Impacts of 2024 Total Solar Eclipse (P25-21049)
Charles Lattimer/University of Maryland
High-Fidelity Immersive VR Environments and Real-Time Human Sensing for Advancing Roadway Work Zone Safety (P25-21050)
Fatemeh Banani Ardecani/University of North Carolina, Charlotte
Integrated Traffic and Process Simulation for Advanced Logistics Analysis. Case Study for a Railroad Terminal (P25-21051)
Gustavo Riente de Andrade/Infraplan Consultoria Ltda
TSMO Planning and Decision Making (P25-21052)
Kathryn Felton/Virginia Department of Transportation
Allowable Lane Closures During Holiday Periods (P25-21053)
Kathryn Felton/Virginia Department of Transportation
4D Modeling for Transportation Projects - Case Studies (P25-21054)
Kevin Gilson/WSP
Visualizing Changes in Regional Traffic after the Collapse of the Francis Scott Key Bridge (P25-21055)
Michael Pack/University of Maryland, College Park
Visualizing Dynamic Model Outputs in Traditional GIS Software (P25-21056)
Pedro Camargo/Outer Loop Consulting
Measuring and Visualizing Freeway Traffic Conditions: Using Connected Vehicle Data (P25-21057)
Rahul Suryakant Sakhare/Purdue University
Turning Data into Actionable Insights through Interactive Dashboards (P25-21058)
Sage Donaldson/Arizona Department of Transportation
TransitViz: A Generative AI Framework to Visualize Transit Data using Large Language Models (P25-21059)
Saipraneeth Devunuri/University of Illinois, Urbana-Champaign
VPL and Ontologies within BIM Framework for Stone-Paved Roads (P25-21060)
Salvatore Antonio Biancardo/University of Naples Federico II
BikePed Portal: Managing and Visualizing Data Quality Metrics (P25-21061)
Tammy Lee/Portland State University
PORTAL: Visualizing and Assessing Highway Stations Data (P25-21062)
Tammy Lee/Portland State University
The Integration of Online Bidding and OpenBIM Digital Delivery Models (P25-21063)
Terry Cline/Infotech, Inc
Virtual Reality Integrated Training Programs for Enhancing Work Zone Safety (P25-21064)
Zhu Qing/University of Missouri
BIM Performance Analytics (P25-21065)
Philip Bell/Progression Dynamics LLC

4086

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, 202A
Recycling Agents: State of the Practice and Where the Research Is Taking Us
John D'Angelo, D'Angelo Consulting, LLC, presiding
Sponsored By Standing Committee on Production and Use of Asphalt

RAP usage in the U.S. has grown, providing both cost and environmental benefits. In 2021, NAPA reported RAP saved 4.7 million tons of asphalt binder and 89 million tons of aggregate, valued at $3.4 billion. Every 10% RAP reduces costs by $3/ton and lowers emissions by 5.9%. There's growing interest in high RAP dosages, with a focus on recycling agents and their performance. This session will explore current research and practices to guide future efforts in using recycling agents for durable, high-performance asphalt pavements.

Recycling Agents as a High Recycled Asphalt Materials Strategy: Dosing, Effectiveness and Further Concerns (P25-20270)
Amy Epps Martin/Texas A&M University

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Laboratory and Field Performance of RA Test Sections (P25-20271)
Andrew Hanz/MTE Services, Jo Sias/University of New Hampshire, Eshan Dave/University of New Hampshire
FHWA's Research Activities for Recycling Agents (P25-20272)
David Mensching/Federal Highway Administration (FHWA)
Effective Evaluation of Recycling Agents for the Current and Future of the Asphalt Industry (P25-20273)
Yogesh Kumbargeri/Western Research Institute, Didier Lesueur/Western Research Institute

4087

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, 202B
Texture Evaluation and Friction Response: The Rub on Safety
Colin McClenahen, Pennsylvania Department of Transportation, presiding
Lisa McDaniel, Federal Highway Administration (FHWA), presiding
Sponsored By Standing Committee on Pavement Surface Properties and Vehicle Interaction

This session invites a discussion of five selected papers first looking at optimal surface texture resolution for prediction of tire/pavement friction. Next, how skid resistance varies along a curve as well as directional variation due to traffic polish and wear. Followed by lab and field comparisons of portable Continuous Friction Measuremetnt Equipment (CFME) to a portable skid tester. Then, linking tire/pavement friction to roadway safety and crash reductions by developing Safety Performance Functions (SPFs) and Crash Modification Factors (CMFs) for skid resistance. Ending with an analysis of tire/pavement friction related to motorcycle crashes including SPFs and CMFs.

Determining the Optimal Pavement Texture Resolution for Characterization and Tyre/Road Friction Prediction (TRBAM-25-01955)
Lintao Yang/Tongji University, Huizhao Tu/Tongji University, Hongren Gong/Tongji University, Hao Li/Tongji University, Lijun Sun/Tongji University
Directional Characteristics of Pavement Skid Resistance Deterioration along Horizontal Curve (TRBAM-25-00122)
Yuxiao Zhang/Chang'an University, Bo Zhou/Chang'an University, T.F. Fwa/Chang'an University
Comparative Analysis of Portable Continuous Friction Measurement Equipment (CFME) and the California Portable Skid Tester (CA PST) for Caltrans Implementation: Laboratory and Field Assessment (TRBAM-25-03467)
Seyed-Farzan Kazemi/Atlas Technical Consultants, Steven Seifert/Atlas Technical Consultants, Baron Colbert/Atlas Technical Consultants, Raul Chavez/Atlas Technical Consultants, Ian Broddrick/Atlas Technical Consultants, Peter Sebaaly/Atlas Technical Consultants
Safety Performance Functions and Crash Modification Factors for Skid Resistance on Interstate and Non-Interstate Highways (TRBAM-25-00955)
Atul Subedi/Utah State University, Sailesh Acharya/Utah State University, Patrick Singleton/Utah State University, Michelle Mekker/Utah State University
How Does Pavement Friction Impact Motorcycle Crashes? A Florida Analysis (TRBAM-25-01444)
Zhengyu Wang/University of South Florida, Huiqing Lyu/University of South Florida, Pei-Sung Lin/University of South Florida, Qing Lu/University of South Florida, Emmeth Duran/University of South Florida, Peter Hsu/University of South Florida

4088 **CM** (1.75)

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, 146A
Addressing Transportation Workforce Connections to Elevated Cybersecurity Risk
Kevin Heaslip, University of Tennessee, Knoxville, presiding
Sponsored By Standing Committee on Systems, Enterprise, and Cyber Resilience, Joint Subommittee on Cybersecurity (with AED30 and AMR10)

Enterprises throughout our industry face an elevated cybersecurity risk level from insider threats to external breaches and lack of workforce resources when it comes to IT and OT systems. What are the policies around utilizing AI for cybersecurity, how does an enterprise look at long-term workforce planning and management, and what are we doing as an industry to address the cybersecurity workforce gaps that will elevate the current and future workforce?

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Managing Risk from Insider Threats (P25-20737)
Michael Wigal/CISA
Workforce Approaches at a Statewide level (P25-20738)
Chris Young/Texas Department of Transportation
Attracting and Recruiting students into Emerging Technology areas (P25-20739)
Rich Granger/Ohio Department of Transportation
Cybersecurity and Workforce Behavior in Connection with Autonomous Vehicle Acceptance and Use (P25-21220)
Rae Zimmerman/New York University

4089

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Asphalt Binders: Advances in Alternative Binders and Recycling Technology
Lorena Garcia Cucalon, Kraton Polymers, presiding
Kamilla Vasconcelos, Universidade de Sao Paulo, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement

Evaluation on Rheological Characteristics and Modification Mechanism of an Innovative Rapeseed oil-based Biopolymer in Asphalt Modification (TRBAM-25-00718) - A155
Xiujie Quan/Southeast University, Conglin Chen/Southeast University, Tao Ma/Southeast University, Yang Zhang/Southeast University
Engineering Bio-based Alternatives to Bitumen Using Solubility Science-based Approaches (TRBAM-25-01707) - A162
Yongping Hu/University of Nottingham, Anand Sreeram/University of Nottingham, Gordon Airey/University of Nottingham
Performance of Enzymatic Hydrolysis Lignin as a High-Quality Renewable Asphalt Binder (TRBAM-25-01750) - A152
Lijun Sun/Southeast University, Xingyu Gu/Southeast University, Xiaoyu Xu/Southeast University
Effects of bio-renewable additives derived from high oleic rapeseed oil on the thermal and fatigue cracking resistance of hard asphalt (TRBAM-25-01860) - A154
Xiujie Quan/Southeast University, Conglin Chen/Southeast University, Tao Ma/Southeast University, Yang Zhang/Southeast University
Understanding Recycling Agent Modification Mechanisms through Rheological and Compositional Impacts (TRBAM-25-00083) - A158
Andrew Fried/North Carolina State University, Cassie Castorena/North Carolina State University
Biomass waste to produce bio-oilsrich in phenolic compounds as rejuvenators for sustainable pavements (TRBAM-25-00130) - A148
Shinan Liu/Southeast University, Houzhi Wang/Southeast University, Jun Yang/Southeast University
Optimizing Modified Asphalt Binder Performance: Role of Recycled Polyethylene and Waste Cooking Oil (TRBAM-25-00944) - A156
Raja Abubakar Khalid/University of North Dakota, Duncan Oteki/University of North Dakota, Daba Gedafa/University of North Dakota, Nabil Suleiman/University of North Dakota
Research on the micro-mechanism and factors of hot recycled asphalt binder cracking (TRBAM-25-02318) - A147
Qifeng Yang/Pennsylvania State University, Zhen Liu/Pennsylvania State University, Zhen Liu/Pennsylvania State University, Zhou Zhou/Pennsylvania State University, Kaiwen Lei/Pennsylvania State University
UPCYCLING WASTE TIRES AND PLASTIC FOR ENHANCED BINDER PERFORMANCE: A UAE BASED CASE STUDY ON REPLACING SBS MODIFED BINDERS WITH UPCYCLED WASTE MODIFIED BINDERS (TRBAM-25-02331) - A160
Haider Ibrahim/Khalifa University of Science and Technology, Ahmed Zuhair/Khalifa University of Science and Technology, Gohar Alam/Khalifa University of Science and Technology, Ahmed Faheem/Khalifa University of Science and Technology
Assessing the Impact of LDPE on Binder Modification and Rheological Performance: Effect of Plastic Source Variability (TRBAM-25-03230) - A151
Aakash Singh/Indian Institute of Technology, Varanasi, Ankit Gupta/Indian Institute of Technology, Varanasi
Role of Pyrolysis Wax on Enhancing the Performance of Waste Plastic Modified Asphalt Prepared with Wet Process (TRBAM-25-03800) - A146
Sepehr Mohammadi/Michigan Technological University, Dongzhao Jin/Michigan Technological University, Daniel Kulas/Michigan Technological University, Ali Zolghadr/Michigan Technological University, David Shonnard/Michigan Technological University, Zhanping You/Michigan Technological University

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Impact of Recycled Binder Availability on Rheological Properties of Extracted Asphalt Binders from RAP Mixtures (TRBAM-25-04270) - A157
Raquel Moraes/National Center for Asphalt Technology (NCAT), Fan Yin/National Center for Asphalt Technology (NCAT), Chen Chen/National Center for Asphalt Technology (NCAT), Nam Tran/National Center for Asphalt Technology (NCAT)
Enhancing Asphalt Binder Performance with Recycled Facemasks: A Sustainable Solution for Pavement Engineering (TRBAM-25-04342) - A161
Sayla Prova/University of Texas, Tyler, Tanvir Ahmed/University of Texas, Tyler, Mayzan Isied/University of Texas, Tyler, Mena Souliman/University of Texas, Tyler
Performance Evaluation and Statistical Analysis of the use of Fast Pyrolysis Bio-oils and Bio-waxes from Post-Consumer Waste for Modification of Asphalt Binders (TRBAM-25-05132) - A153
Ataslina de Paula da Silva/Iowa State University, Ronald Williams/Iowa State University, Xianglan Bai/Iowa State University, Keith Vorst/Iowa State University

4090

Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Asphalt Binders: Advances in Aging Research
Diana Sanchez, AtkinsRéalis, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement

Thermal aging behavior and microscopic mechanism of high viscosity modified asphalt (TRBAM-25-01290) - A122
Yufeng Tian/Tongji University, Lei Xu/Tongji University, Daquan Sun/Tongji University, Zhongbo Chen/Tongji University, Hangtian Ni/Tongji University, Jianxiang Guo/Tongji University, Mingjun Hu/Tongji University
Investigation on aging behavior of hydroxy-terminated polybutadiene polyurethane modified asphalt (TRBAM-25-01518) - A120
Hui Li/Tongji University, Jiaxing Ren/Tongji University, Xin Zuo/Tongji University, Xue Zhang/Tongji University, Lei Wang/Tongji University, Yang Sun/Tongji University, Yuzhao Han/Tongji University
Effect of Short-term Aging on Asphalt Binder with Modified Waste Engine Oil Residue as Extender (TRBAM-25-01980) - A123
Bhavesh Jaykumar Bhambhani/Indian Institute of Technology, Satish Chandra/Indian Institute of Technology, Gottumukkala Bharath/Indian Institute of Technology
Developing a Short-Term Aging Protocol for Warm Mix Asphalt Binders: A Study Integrating Laboratory and Field Findings (TRBAM-25-02127) - A118
Farzad Yazdipanah/University of Nebraska, Lincoln, Muhammad Ahmad/University of Nebraska, Lincoln, Jamilla Teixeira/University of Nebraska, Lincoln, Mahdieh Khedmati/University of Nebraska, Lincoln, Hamzeh F. Haghshenas/University of Nebraska, Lincoln
Exploring the Aging Process of Asphalt-Rubber Composite Binder: Insights into Biphasic Interactions (TRBAM-25-02389) - A113
Jie Ma/Purdue University, Jin Li/Purdue University
Evaluation of REOB Modified Bitumen: Fingerprinting, Ageing Susceptibility and Low Temperature Properties (TRBAM-25-02560) - A115
Lucas Mortier/Technische Universitat Wien, Sayeda Nahar/Technische Universitat Wien, Xueyan Liu/Technische Universitat Wien, Hinrich Grothe/Technische Universitat Wien
Investigation on Aging Behaviors of Modified Emulsified Asphalt Residue under Multiple Environmental Conditions (TRBAM-25-02813) - A110
Yang Sun/Tongji University, Hui Li/Tongji University, Yuzhao Han/Tongji University, Jiaxing Ren/Tongji University, Lei Wang/Tongji University, Bing Yang/Tongji University
The Impact of Aging on the Performance of Microencapsulated Phase Change Materials in Asphalt Binder Across Variable Temperature Range (TRBAM-25-03611) - A117
Ayyaz Fareed/Rowan University, Anil Baditha/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Melisa Nallar/Rowan University, Ping Lu/Rowan University
Characterisation of Ageing and Rejuvenation Related Microstructure and Micromechanics of Bitumen (TRBAM-25-03781) - A116
Yongping Hu/University of Nottingham, Gordon Airey/University of Nottingham, Anand Sreeram/University of Nottingham, Yike Yin/University of Nottingham, Wei Si/University of Nottingham, Bo Li/University of Nottingham, Derya Kaya Ozdemir/University of Nottingham, Lu Zhou/University of Nottingham

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Effect of PAV Ageing on the Multiscale Morphological Behavior of Modified Binder with Varying Molecular Structure of SBS Copolymer (TRBAM-25-04147) - A114
Dr. Sk Islam/Indian Institute of Technology, Roorkee, Gondaimei Rongmei Naga/Indian Institute of Technology, Roorkee, Sham Ravindranath/Indian Institute of Technology, Roorkee
Development of an Accelerated Long-Term Aging Protocol for Simulating Asphalt Concrete Mixture Aging in Regions with Extreme Climatic Conditions (TRBAM-25-04903) - A124
Awais Zahid/Arizona State University, Tempe, Nafiur Rahman/Arizona State University, Tempe, Ashraf Alrajhi/Arizona State University, Tempe, Geoffrey Rowe/Arizona State University, Tempe, Hasan Ozer/Arizona State University, Tempe
Assessment and Forecasting of Asphalt Aging DegreeBasedon PCA-BPNN model: A Case Study of Ningxia Region (TRBAM-25-05150) - A121
Zichao Wu/Tongji University, Yanlin Chen/Tongji University, Qian Xiang/Tongji University, Zhitao Zhang/Tongji University, Yuefeng Zheng/Tongji University, Feipeng Xiao/Tongji University
Regeneration Performance Analysis and Prediction of Aged Asphalt in Continental Arid Climates (TRBAM-25-05249) - A111
Yanlin Chen/Tongji University, Zichao Wu/Tongji University, Qian Xiang/Tongji University, Junqi Liang/Tongji University, Zhitao Zhang/Tongji University, Feipeng Xiao/Tongji University
Long-term Aging of Asphalts Using a Simplified Version of the Universal Simple Aging Test Protocol: A Rheological Assessment (TRBAM-25-05399) - A112
Luiz Buzon/Universidade de Sao Paulo, Patricia Osmari/Universidade de Sao Paulo, Adalberto Faxina/Universidade de Sao Paulo
Relating Asphalt Field Aging Over a Ten-Year Period to Simulated Laboratory Aging (TRBAM-25-05834) - A125
Jessica Lewis/Mississippi State University, Braden Smith/Mississippi State University, Codrin Daranga/Mississippi State University, Gaylon Baumgardner/Mississippi State University, Isaac Howard/Mississippi State University

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Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Asphalt Binders: Innovative Modifiers
Jenny Liu, Missouri University of Science and Technology, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement

Controllable decrosslinking of waste tire rubber for asphalt modification: from elastic filler to sustainable binder (TRBAM-25-01665) - A128
Hanbing wang/Shanghai Jiao Tong University, Shifeng Wang/Shanghai Jiao Tong University
Effect of Dry-method Styrene-butadiene-styrene Content on Epoxy Reclaimed Asphalt Binder (TRBAM-25-01717) - A136
Xingyu Yi/Southeast University, Ruikun Dong/Southeast University, Jun Yang/Southeast University, Yiik Diew Wong/Southeast University
Synergistic Mechanism of Calcium Sulfate Whisker and Polyurethane on Asphalt Binder: Experimental and Computational Investigation (TRBAM-25-01770) - A133
Ningyuan Hao/Chang'an University, Mingliang Zhang/Chang'an University, Zhe Hu/Chang'an University, Jiupeng Zhang/Chang'an University, Lei Lyu/Chang'an University, Junbo Li/Chang'an University, Rui Gu/Chang'an University, Jianzhong Pei/Chang'an University
Polymer-softener Modified Binder to Reduce Potential Fatigue and Thermal Cracking (TRBAM-25-02883) - A143
ABDULGAFAR SULAIMAN/University of Illinois, Urbana-Champaign, Imad Al-Qadi/University of Illinois, Urbana-Champaign
Evaluate the Impact of Microencapsulated Phase Change Materials in Asphalt Binder with an Extended Thermoregulation Range (TRBAM-25-03612) - A127
Ayyaz Fareed/Rowan University, Anil Baditha/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Melisa Nallar/Rowan University
Bio-based Polyurethane Modified Asphalt: Preparation process, high and low temperature properties (TRBAM-25-03817) - A144
Junfeng Gao/Chongqing Jiaotong University, Guixiu Guo/Chongqing Jiaotong University, Hainian Wang/Chongqing Jiaotong University, Dongzhao Jin/Chongqing Jiaotong University, Junfeng Gao/Chongqing Jiaotong University
Investigation of the Rheological and Microscopic Properties of Epoxy Asphalt with Different Aged Styles (TRBAM-25-03889) - A132
Zhu Zhang/Southeast University, Fujian Ni/Southeast University, Jiwang Jiang/Southeast University, Yajin Han/Southeast University
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Effects of Amine and Silane Based Antistripping Agents on Performance Characteristics of SBS Polymer Modified Asphalt Binder (TRBAM-25-04073) - A130
SONALI SNEHAJAN/Indian Institute of Technology, Bombay, DHARAMVEER SINGH/Indian Institute of Technology, Bombay
Influence of Nano-Modifiers on Healing and Fatigue Properties of Asphalt Binders (TRBAM-25-04129) - A126
Mohit Chaudhary/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Ben Cox/Rowan University
Development of High - Performance Modified Asphalt Binder Utilizing Multiple Plastic and 2 Rubber Alloy (TRBAM-25-04493) - A135
Danni Li/University of Tennessee, Knoxville, Hongru Yao/University of Tennessee, Knoxville, Gaylon Baumgardner/University of Tennessee, Knoxville, Kai Huang/University of Tennessee, Knoxville, Hongyu Zhou/University of Tennessee, Knoxville, Baoshan Huang/University of Tennessee, Knoxville
Multi-performance and low-carbon evaluation of polymer modification process for asphalt emulsion (TRBAM-25-04970) - A131
Ling Xu/Tongji University, Feipeng Xiao/Tongji University, Giuseppe Loprencipe/Tongji University, Paola Mascio/Tongji University, Cesare Rossi/Tongji University, Salvatore Bruno/Tongji University
Comparison of Micronized Rubber Powder (MRP) modified asphalt with polymer modified based on rheological and chemical propertie (TRBAM-25-05195) - A141
MdTorikul Islam/Arkansas State University, Khaja Sameer Sadat/Arkansas State University, Zahid Hossain/Arkansas State University
Multiscale study of bio-based polyurethane modified asphalt: macro-micro experiments and molecular dynamics simulations (TRBAM-25-05468) - A134
Junfeng Gao/Chongqing Jiaotong University, Guixiu Guo/Chongqing Jiaotong University, Hainian Wang/Chongqing Jiaotong University, Dongzhao Jin/Chongqing Jiaotong University, Zhanping You/Chongqing Jiaotong University, Junfeng Gao/Chongqing Jiaotong University
Advanced Thermal Characterization of Styrene-Butadiene-Styrene (SBS)-Modified Asphalt Binders at Various SBS Contents and Long-Term Aging Levels (TRBAM-25-05925) - A142
Reem Hassan/FAMU-FSU College of Engineering, Michael Elwardany/FAMU-FSU College of Engineering, Pejoohan Tavassoti/FAMU-FSU College of Engineering, Mike Aurilio/FAMU-FSU College of Engineering, Rebekah Sweat/FAMU-FSU College of Engineering, Aditi Sharma/FAMU-FSU College of Engineering
Rheological properties of SBS/CR composite modified epoxy asphalt with aged binders (TRBAM-25-00138) - A137
Yulou Fan/Southeast University, Yixin Zhou/Southeast University, Chenguang Shi/Southeast University, Jun Yang/Southeast University
Characterization and Comparative Study of Fatigue Performance of Epoxy Recycled Asphalt Binders Based on Modified Paris' Law (TRBAM-25-00721) - A138
Bingshen Chen/Southeast University, Yulou Fan/Southeast University, Yixin Zhou/Southeast University, Chenguang Shi/Southeast University, Houzhi Wang/Southeast University, Xiao Wang/Southeast University, Chong Zhan/Southeast University, Wei Huang/Southeast University, Jun Yang/Southeast University, Ruochong Yang/Southeast University

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Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Antioxidants in Asphalt
Emad Kassem, University of Idaho, presiding
Sponsored By Standing Committee on Binders for Flexible Pavement

Effects of Antioxidants on Chemical and Rheological Properties of Asphalt Binders from Different Crude Oil Sources (TRBAM-25-00024) - A103
Yuan Zhang/South China University of Technology, Ke Pei/South China University of Technology, Jiaqi Gao/South China University of Technology, Zixuan Cao/South China University of Technology, Jiangmiao Yu/South China University of Technology, Yong Deng/South China University of Technology, Guilian Zou/South China University of Technology
Investigation of the antioxidant effect of phenolic compounds on asphalt (TRBAM-25-00129) - A102
Shinan Liu/Southeast University, Houzhi Wang/Southeast University, Jun Yang/Southeast University

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A Closer Look at the Rheology of Asphalt Binders Enhanced with Promising Antioxidants from a Global Consortium (TRBAM-25-00325) - A105
Georgios Pipintakos/University of Antwerp: Universiteit Antwerpen, Johannes Mirwald/University of Antwerp: Universiteit Antwerpen, Anand Sreeram/University of Antwerp: Universiteit Antwerpen, Antonio Roberto/University of Antwerp: Universiteit Antwerpen, Yongping Hu/University of Antwerp: Universiteit Antwerpen, Shi Xu/University of Antwerp: Universiteit Antwerpen, Dheeraj Adwani/University of Antwerp: Universiteit Antwerpen, Amit Bhasin/University of Antwerp: Universiteit Antwerpen
Validation of Antioxidant Additives for Enhancing Fatigue Resistance and Low-Temperature Performance of Asphalt Pavements (TRBAM-25-01330) - A106
Yongping Hu/University of Nottingham, Gordon Airey/University of Nottingham, Anand Sreeram/University of Nottingham, Xu Cheng/University of Nottingham, Wei Si/University of Nottingham, Bo Li/University of Nottingham, Georgios Pipintakos/University of Nottingham
Assessing Antioxidant Potential of Zinc Diethyldithiocarbamate to Combat Asphalt Aging: Mechanistic, Rheological, and Chemical Perspectives (TRBAM-25-02672) - A104
Dheeraj Adwani/University of Texas, Austin, Johannes Mirwald/University of Texas, Austin, Georgios Pipintakos/University of Texas, Austin, Anand Sreeram/University of Texas, Austin, Ramez Hajj/University of Texas, Austin, Amit Bhasin/University of Texas, Austin
Investigating the Impact of Antioxidant Dosage and Class on Asphalt Binders: A Chemo-Rheological Testing and Characterization (TRBAM-25-04188) - A107
Behnam Jahangiri/GENEX Systems, Hamzeh Haghshenas/GENEX Systems, Adrian Andriescu/GENEX Systems, David Mensching/GENEX Systems
A Probabilistic Machine-Learning Approach for Asphalt Binder Formulation – Case Study on Antioxidant Dosage Optimization (TRBAM-25-04166) - A108
Tianhao Yan/FHWA - Turner-Fairbank Highway Research Center, Maryam Sakhaeifar/FHWA - Turner-Fairbank Highway Research Center, Hamzeh Haghshenas/FHWA - Turner-Fairbank Highway Research Center, Adrian Andriescu/FHWA - Turner-Fairbank Highway Research Center, David Mensching/FHWA - Turner-Fairbank Highway Research Center

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Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A
Pavement Material Behavior and Testing Methodologies
Eyoab Zegeye, Minnesota Department of Transportation, presiding
Sponsored By Standing Committee on Asphalt Mixture Evaluation and Performance, Section - Materials

Posters in this session focus on understanding material properties and testing techniques to evaluate performance, particularly in terms of durability, safety, and material composition.

Using IDEAL-CT Test to Quantify the Effect of Asphalt Mastic on the Fatigue Resistance of Asphalt Mixtures (TRBAM-25-00423) - A182
Manish Kumar Yadav/Indian Institute of Technology, Roorkee, Nikhil Saboo/Indian Institute of Technology, Roorkee
Evaluating the Performance of Rutting Tests for North Dakota's Mixtures Containing 1 Reclaimed Asphalt Pavement (TRBAM-25-00487) - A166
Duncan Oteki/University of North Dakota, Andebut Yeneneh/University of North Dakota, Raja Abubakar Khalid/University of North Dakota, Daba Gedafa/University of North Dakota, Nabil Suleiman/University of North Dakota
Using Experiments and Simulations to Engineer Self-healing Asphalt Capsules (TRBAM-25-00583) - A180
Yujia Lu/University of Illinois, Urbana-Champaign, Ramez Hajj/University of Illinois, Urbana-Champaign
Evaluating the Impact of Loading Rate and Temperature on the Fatigue Properties of Foamed Bituminous Mixture (TRBAM-25-01995) - A181
Hebah Jahan/CSIR-CENTRAL ROAD RESEARCH INSTITUTE, Siksha Kar/CSIR-CENTRAL ROAD RESEARCH INSTITUTE, Aravind Swamy/CSIR-CENTRAL ROAD RESEARCH INSTITUTE
Assessing Moisture Susceptibility of OGFC Mixes Containing SBS and Epoxy Modified Asphalt Binders Under Varied Aging and Moisture Conditioning Levels (TRBAM-25-02201) - A188
Anas Abualia/Louisiana Department of Transportation and Development, Louay Mohammad/Louisiana Department of Transportation and Development, Ahmed Hemida/Louisiana Department of Transportation and Development, Samuel Cooper, III/Louisiana Department of Transportation and Development, Samuel Cooper, Jr/Louisiana Department of Transportation and Development

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Experimental Study on Early Traffic Damage in Cold Recycled Asphalt Mixtures (TRBAM-25-02334) - A171
Rani Bastari Alkam/University of Nottingham, Gordon Airey/University of Nottingham, Nick Thom/University of Nottingham, Ignacio Artamendi/University of Nottingham
Long-Term Deterioration of Asphalt Binders and Mixtures in Bridge Deck Pavements (TRBAM-25-02468) - A196
Jinquan Wang/Southeast University, Maijian Liu/Southeast University
Development of a Tribological Test for Measuring Asphalt Lubrication Characterization (TRBAM-25-02531) - A177
Rui Wang/University of Wisconsin, Madison, Runhua Zhang/University of Wisconsin, Madison, Hussain Bahia/University of Wisconsin, Madison
Evaluating the Stiffness and Fatigue Behavior of Fiber-Reinforced Asphalt Mixtures Using Small and Large Diameter Asphalt Samples (TRBAM-25-04125) - A197
Ali Raza Khan/Rowan University, Mohit Chaudhary/Rowan University, Ayman Ali/Rowan University, Yusuf Mehta/Rowan University, Mohamed Elshaer/Rowan University
An Improved Method to Calculate Stripping Inflection Point (SIP) and Its Application in Evaluating Moisture Susceptibility of Asphalt Mixtures (TRBAM-25-04237) - A191
Ping Jiang/Missouri University of Science and Technology, Bo Lin/Missouri University of Science and Technology, Yizhuang Wang/Missouri University of Science and Technology, Jenny Liu/Missouri University of Science and Technology, Alireza Ghanoon/Missouri University of Science and Technology
Determination of Laboratory Aging Conditions for Hot Mix Asphalt Cracking Test (TRBAM-25-04308) - A176
Mohammadreza Barzegar/Washington State University, Haifang Wen/Washington State University, Chi-Lin Chiang/Washington State University, Maziar Mivehchi/Washington State University, Joe DeVol/Washington State University
Developing a Durable Alternative Friction Course (AFC) for Suburban Environment in Florida (TRBAM-25-04356) - A167
Trung Tran/National Center for Asphalt Technology (NCAT), Chen Chen/National Center for Asphalt Technology (NCAT), Nam Tran/National Center for Asphalt Technology (NCAT), Fan Yin/National Center for Asphalt Technology (NCAT)
Towards a Better Understanding of the Fatigue Behavior of Asphalt Concrete with Recycled Materials at Low Strain Levels (TRBAM-25-04607) - A170
Renan Santos Maia/University of Illinois, Urbana-Champaign, Bibek Regmi/University of Illinois, Urbana-Champaign, Ramez Hajj/University of Illinois, Urbana-Champaign
Radiation-Thermal-Moisture Coupling Effects on Viscoelasticity Properties of Reclaimed Asphalt Rejuvenated by Rubberized Asphalt (TRBAM-25-04926) - A187
Zifeng Zhao/Tongji University, Feipeng Xiao/Tongji University, Emanuele Toraldo/Tongji University, Maurizio Crispino/Tongji University, Arianna Antoniazzi/Tongji University
Predictive Modeling of IDEAL-CT Test Data using Random Forests and Artificial Neural Networks (TRBAM-25-05471) - A198
Mustafa Mansour/University of Akron, Tanvir Quasem/University of Akron, Ala Abbas/University of Akron, Munir Nazzal/University of Akron, Syed Husain/University of Akron
Using Principal Component Analysis and K-Means Clustering to Analyze the Cracking Behavior of Asphalt Mixtures (TRBAM-25-05824) - A192
Mehdi Sadeghi/Oklahoma State University, Sina Mousavi Rad/Oklahoma State University, Mohamed Elkashef/Oklahoma State University
Characterizing and Correlating Multi-Scale Fatigue Performance in In-Situ Asphalt Pavements: A Case Study of Top-Down Cracking (TRBAM-25-05885) - A190
Duo Xu/Southeast University, Jiwang Jiang/Southeast University, Fujian Ni/Southeast University
A Novel Fatigue Test Method for Bitumen-stone Joints under Cyclic Tension-compression Loading (TRBAM-25-06067) - A172
Lu Zhou/University of Nottingham, Gordon Airey/University of Nottingham, Yuqing Zhang/University of Nottingham, Weidong Huang/University of Nottingham, Yongping Hu/University of Nottingham
Development of Precision Statements for the Asphalt Mixture Performance Tester Dynamic Modulus Test: A Framework for Small-Scale Specimens (TRBAM-25-01392) - A168
Kazuo Kuchiishi/Virginia Transportation Research Council, Cassie Castorena/Virginia Transportation Research Council, Youngsoo Kim/Virginia Transportation Research Council, Benjamin Underwood/Virginia Transportation Research Council
Determination of Damage Characteristic Curve of Asphalt Mixtures Using Indirect Tension Test (TRBAM-25-04273) - A178
Lei Xue/North Carolina State University, Youngsoo Kim/North Carolina State University, Benjamin Underwood/North Carolina State University

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Wednesday, 03:45 p.m. - 05:30 p.m., Convention Center, Hall A

Current Issues in Air Quality and Greenhouse Gas Mitigation

Shams Tanvir, California State University, Long Beach, presiding

Sponsored By Standing Committee on Air Quality and Greenhouse Gas Mitigation

On the Assessment of Automated Vehicles' Impact on Efficiency, Energy, and Environment in Mixed Autonomy Traffic (TRBAM-25-00113) - B506

Lingyu Shen/Southeast University, Qixiu Cheng/Southeast University, Yue Pan/Southeast University, Zelin Wang/Southeast University

The Effects of Restaurant Drive-Through Vehicle Mobile Emissions on Air Quality (TRBAM-25-00151) - B507

Tryston Calder/The Land Group, Sondra Miller/The Land Group

Electric versus Gasoline Vehicle Particulate Matter Non-Exhaust and Greenhouse Gas Exhaust Emissions: A Network-wide Comparative Analysis (TRBAM-25-00242) - B518

Hesham Rakha/Virginia Polytechnic Institute and State University, Mohamed Farag/Virginia Polytechnic Institute and State University, Hosein Foroutan/Virginia Polytechnic Institute and State University

Modeling and Evaluating Carbon Emission Reductions of Vehicle Electrification for urban Ride-Hailing service (TRBAM-25-00432) - B512

Zhe Zhang/Shanghai Jiao Tong University, Qing Yu/Shanghai Jiao Tong University, Kun Gao/Shanghai Jiao Tong University, HONG-DI HE/Shanghai Jiao Tong University, Yang Liu/Shanghai Jiao Tong University, Haichao Huang/Shanghai Jiao Tong University

Quantitative Estimation of CO2 Emission Reductions from Bike-Sharing Systems Based on Modal Shift Effects (TRBAM-25-00445) - B528

Simon Hu/Zhejiang University, Bing Zhu/Zhejiang University, Ioannis Kaparias/Zhejiang University, Der-Horng Lee/Zhejiang University

The Impacts of Sidewalk Autonomous Delivery Robots on Vehicle Travel and Emissions (TRBAM-25-00529) - B508

Yu-chen Chu/University of Washington, Seattle, Brian Taylor/University of Washington, Seattle

Overtaking-Enabled Eco-Driving for Actuated Signalization (TRBAM-25-00760) - B509

Shuoyuan Li/Tongji University, Haoran Wang/Tongji University, Jia Hu/Tongji University

Impact of Road Networks and Urban Functions on CO2 Emissions from Passenger Cars: An Empirical Case Study from Hangzhou (TRBAM-25-00781) - B529

Bing Zhu/Zhejiang University, Simon Hu/Zhejiang University, Xiqun Chen/Zhejiang University, Claudio Roncoli/Zhejiang University, Der-Horng Lee/Zhejiang University

Evaluation of emission characteristics generated from waste plastic modified asphalt mixtures (TRBAM-25-00903) - B500

Soumyadeep Deb/Indian Institute of Technology, Roorkee, Praveen Kumar/Indian Institute of Technology, Roorkee, Nikhil Saboo/Indian Institute of Technology, Roorkee

Research on Traffic Carbon Emission Reduction Pathways in New York State based on System Dynamics (TRBAM-25-00993) - B494

Ye Chen/No Organization, Shuxia (Susan) Lu/No Organization

Online Optimization to Minimize Carbon Footprint from Electric Vehicle Charging under Grid Operation Constraints (TRBAM-25-01004) - B493

Zixuan KANG/Hong Kong Polytechnic University, Zhongnan Ye/Hong Kong Polytechnic University, Shu-Chien Hsu/Hong Kong Polytechnic University

Fuzzy or Precise: Comparative Analysis of Driver Acceptance of Eco-driving Guidance (TRBAM-25-01065) - B548

Shan Xue/Southeast University, Jiyao Wang/Southeast University, Dengbo He/Southeast University, Ran Tu/Southeast University

Cutting Carbon on a Dime: Optimization of Transportation Policy Scenarios for Cost-Effective Emissions Reduction (TRBAM-25-01222) - B524

Timothy Fraser/Cornell University, Leah Smith/Cornell University, Kaylen Li/Cornell University, Alireza Yazdiani/Cornell University, Yan Guo/Cornell University, Osama Awadalla/Cornell University, H. Oliver Gao/Cornell University

From Vehicle to Road Network: a CO2 Emission Analysis Based on Fundamental Diagram (TRBAM-25-01556) - B530

Yingjie Guo/Tongji University, Xiaohong Chen/Tongji University, Sheng Xiang/Tongji University, Haobing Liu/Tongji University

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Eco-Driving and Suppression of Traffic Waves in Mixed Heter-ogeneous Traffic Streams Using Connected-Automated Vehicle (TRBAM-25-01561) - B492
Yunyang Gu/Southeast University, Yueru Xu/Southeast University, Yuan Zheng/Southeast University
Hierarchical Quantification of Carbon Emissions in Transportation Infrastructure Maintenance: Identifying Key Contributors and Targeting Reduction Departments (TRBAM-25-01567) - B531
Qin Nie/Tongji University, Bing Zhang/Tongji University, Haobing Liu/Tongji University
Characterizing particle number emissions from container diesel trucks based on portable emission measurement systems (TRBAM-25-01748) - B510
Ruimin Hao/Shanghai Jiao Tong University, Hongmei Zhao/Shanghai Jiao Tong University, Wenjian Jia/Shanghai Jiao Tong University, Zhong-Ren Peng/Shanghai Jiao Tong University, HONG-DI HE/Shanghai Jiao Tong University
The effect of remote work on urban transportation emissions: evidence from 141 cities (TRBAM-25-01786) - B482
Sophia Shen/International Transport Forum, Xinyi Wang/International Transport Forum, Nicholas Caros/International Transport Forum, Jinhua Zhao/International Transport Forum
A Multi-Scenario Analysis of Carbon Reduction Strategies for Ride-Hailing Services in Shanghai (TRBAM-25-01793) - B532
Ziqiang Xu/Tongji University, Shan Wang/Tongji University, Haobing Liu/Tongji University
Built Environment, Car Ownership and PM2.5: Causality Evidence from a Randomized Experiment (TRBAM-25-01893) - B549
Lin Shi/Harvard University, Yiliang Jiang/Harvard University, Faan Chen/Harvard University, Kaiyi Zhu/Harvard University, Xiaohong Chen/Harvard University
Fuel consumption multidimensional features analysis on urban roads based on structural equation model (TRBAM-25-02014) - B483
Qianqian Pang/Southeast University, Shuyan Chen/Southeast University, Yongfeng Ma/Southeast University, Shuai Wang/Southeast University
Urban Emissions Hotspots of Food Delivery Motor Scooters: The Case of Seoul (TRBAM-25-02094) - B484
Hyunju Shin/Hanyang University, Yujeong Yun/Hanyang University, Byongchan Shin/Hanyang University, Yusung Min/Hanyang University, Cheol Oh/Hanyang University, Gunwoo Lee/Hanyang University
Digital Twin for Urban Traffic Emission Nowcasting and Forecasting: A Case Study in Kista, Stockholm (TRBAM-25-02164) - B526
Jonas Jostmann/KTH Royal Institute of Technology, Songhua Hu/KTH Royal Institute of Technology, Anton Gustafsson/KTH Royal Institute of Technology, Paolo Santi/KTH Royal Institute of Technology, Carlo Ratti/KTH Royal Institute of Technology, Zhenliang Ma/KTH Royal Institute of Technology
Cooperative Eco-driving for Mixed Platoons at Signalized Intersections with Wireless Charging Lanes (TRBAM-25-02242) - B474
Guosheng Xiao/Southwest Jiaotong University, Zhihong Yao/Southwest Jiaotong University, Shimiao Zhang/Southwest Jiaotong University, Yangsheng Jiang/Southwest Jiaotong University
Characterization of Activity Data and Patterns of Agricultural Tractors in the San Joaquin Valley of California (TRBAM-25-02372) - B473
Tom Durbin/University of California, Riverside, Chas Frederickson/University of California, Riverside, George Scora/University of California, Riverside, Alexander Vu/University of California, Riverside, Kent Johnson/University of California, Riverside, yi tan/University of California, Riverside, Seungju Yoon/University of California, Riverside, Matthew Crowder/University of California, Riverside, Athanasios Alexandrou/University of California, Riverside
Understanding the impact of cleaner electricity on high-speed railways decarbonization: a Monte Carlo analysis of uncertainties (TRBAM-25-02423) - B472
Yao Wang/Chang'an University, Yuanqing Wang/Chang'an University, Minghui Xie/Chang'an University
Understanding the impact of Zone 30 on city-wide road travel time and traffic emission: A big-data-driven approach (TRBAM-25-02544) - B527
Songhua Hu/Massachusetts Institute of Technology, Giacomo Orsi/Massachusetts Institute of Technology, Paolo Santi/Massachusetts Institute of Technology, Umberto Fugiglando/Massachusetts Institute of Technology, Carlo Ratti/Massachusetts Institute of Technology, Songhua Hu/Massachusetts Institute of Technology
Evaluating Spatial Effect of Transportation Planning Factors on Taxi CO2 Emissions (TRBAM-25-02557) - B522
Zhipeng Peng/University of Central Florida, Said Easa/University of Central Florida, Chenzhu Wang/University of Central Florida, Chenzhu Wang/University of Central Florida
Analyzing Spatiotemporal Truck Emission Pattern Using Explainable Machine Learning (TRBAM-25-02576) - B523
Zhipeng Peng/University of Central Florida, Said Easa/University of Central Florida, Chenzhu Wang/University of Central Florida

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An Assessment of Black Carbon Levels in Urban Transit Units and Facilities Across Three Cities: A Comparative Study (TRBAM-25-02582) - B516
Alejandro Perez Villasenor/McGill University, Luis Miranda-Moreno/McGill University, Jill Baumgartner/McGill University
Evaluation of Climate Action Plans: A comparative analysis of transportation initiatives in multiple Canadian Municipalities. (TRBAM-25-02612) - B464
Hetvi Joshi/Dalhousie University, Hasan Shahrier/Dalhousie University, Muhammad Habib/Dalhousie University
A Data-Driven Approach to Eco-Routing for Freight Trucks: Time-Dependent Path Analysis and Emission Optimization (TRBAM-25-02816) - B463
Yunfei Ma/McMaster University, Elkafi Hassini/McMaster University, Saiedeh Razavi/McMaster University
Cost-effective mapping of hyperlocal air pollution in on-road and ambient non-road environments (TRBAM-25-02929) - B462
Tie Zheng/Tsinghua University, Shaojun Zhang/Tsinghua University, Ye Wu/Tsinghua University
The Carbon Emission Calculation of Autonomous Electric Vehicles under Different Traffic Situations (TRBAM-25-03053) - B454
Ziheng Zhang/Southeast University, Xiang Wang/Southeast University, Kai Huang/Southeast University, Zhiyuan Liu/Southeast University
Multi-Agent Variable Speed Control Strategy in Freeway Continuous Bottleneck Areas Considering Carbon Reduction Demand (TRBAM-25-03142) - B453
Shu Xi/Beijing Jiaotong University, Xumei Chen/Beijing Jiaotong University, Peikun Li/Beijing Jiaotong University, Jiaxin Ma/Beijing Jiaotong University, Hao Wang/Beijing Jiaotong University
Decarbonization of Trucking for Freight-heavy Industries: Reclassify Truck Trip Patterns Considering Carbon Emissions (TRBAM-25-03159) - B452
Zhengtao Qin/Tongji University, Ruixu Pan/Tongji University, Xu Ma/Tongji University, Dr. Anne Goodchild/Tongji University, Quan Yuan/Tongji University
Well-to-Wheel Energy Use and Emissions Impacts of Conventional and Alternative Fuels on Live Clams Delivery to Atlanta Metro Area: Diesel vs. Battery Electric from Solar (TRBAM-25-03164) - B542
Huiying Fan/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Eduardo Gomez/Georgia Institute of Technology, Samuel Costa/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
Emission Disparities in Urban Mobility: Environmental Equity Insights from Large-Scale Taxi Data (TRBAM-25-03195) - B533
Xinghua Li/Tongji University, Wenxuan Peng/Tongji University, Shenglan Lu/Tongji University, Yuntao Guo/Tongji University, Xinwu Qian/Tongji University, Haobing Liu/Tongji University
ECO-COOPERATIVE ADAPTIVE CRUISE CONTROL USING SINGLE-AGENT AND MULTI-AGENT REINFORCEMENT LEARNING FOR PLATOONS IN MIXED TRAFFIC (TRBAM-25-03390) - B519
Zhiwei Yang/University of Queensland, Saint Lucia, Zuduo Zheng/University of Queensland, Saint Lucia, Jiwon Kim/University of Queensland, Saint Lucia, Hesham Rakha/University of Queensland, Saint Lucia
Longitudinal Analysis of Trends in Greenhouse Gas Emissions and Fleet Renewal for Transportation Network Companies in Toronto, Canada (TRBAM-25-03540) - B513
João Pedro Bazzo/University of Toronto, Marc Saleh/University of Toronto, Marianne Hatzopoulou/University of Toronto
Quantifying the Impact of Bicycle Highways on Cyclist PM2.5 Exposure: A Case Study in Beijing (TRBAM-25-03546) - B545
Yuxin Wang/Beijing Jiaotong University, Yizheng Wu/Beijing Jiaotong University, Lewen Wang/Beijing Jiaotong University, Yun Jiang/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Lei Yu/Beijing Jiaotong University
Micro- to Macro-Level Fuel Consumption Modeling of Diesel Heavy-Duty Trucks: A Hierarchical Bayesian Approach (TRBAM-25-03616) - B534
Chenjie Lv/Tongji University, Yu Jin/Tongji University, Haobing Liu/Tongji University
Relationship between Air, Noise and Temperature as Environmental Quality Considerations for Users of Urban Green Spaces: A Comparative Study of European Cities (TRBAM-25-03696) - B451
Meng-Yi Jin/Shanghai Jiao Tong University, Kiran Apsunde/Shanghai Jiao Tong University, Brian Broderick/Shanghai Jiao Tong University, John Gallagher/Shanghai Jiao Tong University
Implications of Off-peak Commercial Deliveries for Air Quality and Environmental Justice (TRBAM-25-03766) - B514
Sara Torbatian/University of Toronto, Marc Saleh/University of Toronto, Laura Minet/University of Toronto, Milad Saeedi/University of Toronto, Shayamila Mahagammulla Gamage/University of Toronto, Daniel Yazgi/University of Toronto, Youngseob Kim/University of Toronto, Tufayel Chowdhury/University of Toronto, James Vaughan/University of Toronto, An Wang/University of Toronto, Kianoush Mousavi/University of Toronto, Matthew Roorda/University of Toronto, Marianne Hatzopoulou/University of Toronto

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A PERSONAL CARBON-EMISSION TRADING SCHEME TO MANAGE CARBON EMISSION IN MULTI-MODAL TRANSPORTATION NETWORKS (TRBAM-25-03863) - B450
Chengxi Hu/Southwest Jiaotong University, Xiangyu He/Southwest Jiaotong University, Hongliang Ding/Southwest Jiaotong University, huimin tang/Southwest Jiaotong University, Zhanbo Sun/Southwest Jiaotong University
State-Level Emission Changes from Electric Vehicle Adoption in the US (TRBAM-25-04162) - B444
Saquib Mohammed Haroon/University of Arizona, Mushaer Ahmed/University of Arizona, Priom Mahmud/University of Arizona, Alyssa Ryan/University of Arizona, Hongyue Jin/University of Arizona, Larry Head/University of Arizona
Reducing Emissions in Road Transport: A Multi-Class Traffic Assignment and Speed Control Study (TRBAM-25-04230) - B443
Negin Alisoltani/University Gustave Eiffel, Sarah Gasmi/University Gustave Eiffel, Xiao Lin/University Gustave Eiffel, Lorant Tavasszy/University Gustave Eiffel, Mostafa Ameli/University Gustave Eiffel
Impact of 2024 GHG Standards and 2023 IRA Incentives on New and Used Light-duty Vehicle Markets and Emissions (TRBAM-25-04332) - B442
Ruixiao Sun/Oak Ridge National Laboratory, David Greene/Oak Ridge National Laboratory, Benjamin Leard/Oak Ridge National Laboratory, Wan Li/Oak Ridge National Laboratory, Ranjan Bose/Oak Ridge National Laboratory
Development of Texas-specific Drive Cycles for MOVES using Connected Vehicle data (TRBAM-25-04368) - B504
Mihir Kulkarni/Texas A&M Transportation Institute, Rodolfo Souza/Texas A&M Transportation Institute, Apoorba Bibeka/Texas A&M Transportation Institute, Bumsik Kim/Texas A&M Transportation Institute, Chaoyi Gu/Texas A&M Transportation Institute, Madhusudhan Venugopal/Texas A&M Transportation Institute
Evaluating Emission Reduction Benefits of Transportation and Land Use Strategies (TRBAM-25-04400) - B441
Benjamin Eskin/Cambridge Systematics, Inc., Chris Porter/Cambridge Systematics, Inc.
ADVANCED POST-PROCESSING SYSTEMS: ENHANCING EMISSION INVENTORY AND SCENARIO ANALYSIS FOR TRANSPORTATION CONFORMITY (TRBAM-25-04415) - B525
Alireza Yazdiani/Cornell University, Mohammad Tayarani/Cornell University, Razieh Nadaf/Cornell University, H. Oliver Gao/Cornell University
Electric Vs. Diesel School Buses: Lifetime Greenhouse Gas Emission Comparison (TRBAM-25-04433) - B505
Bumsik Kim/No Organization, Minjie Xu/No Organization, Christian Moreno/No Organization, Elizabeth Rhinehart/No Organization, Madhusudhan Venugopal/No Organization, Tara Ramani/No Organization
Exploring the impacts of public transit service levels on GHG and air pollutant emissions (TRBAM-25-04790) - B515
Emily Farrar/University of Toronto, Jiaoyang Li/University of Toronto, Sara Torbatian/University of Toronto, Henry Waterhouse/University of Toronto, James Vaughan/University of Toronto, Shoshanna Saxe/University of Toronto, Eric Miller/University of Toronto, Marianne Hatzopoulou/University of Toronto
Estimating City-wide Operating Mode Distribution of Light-Duty Vehicles: A Neural Network-based Approach (TRBAM-25-04874) - B440
Muhammad Usama/Northeastern University, Haris Koutsopoulos/Northeastern University, Zhengbing He/Northeastern University, Lijiao Wang/Northeastern University
Predicting Greenhouse Gas Emissions from Electric Vehicle Charging:A Meta Prophet Model Based on NREL Cambium for the United States (TRBAM-25-04923) - B434
Sai Nikhila Kanigiri/Lawrence Berkeley National Laboratory, S M Tanvir Faysal Alam Chowdhoury/Lawrence Berkeley National Laboratory, Chrisley Licona-Hernandez/Lawrence Berkeley National Laboratory, Mahyar Amirgholy/Lawrence Berkeley National Laboratory
Improving Commercial Truck Fleet Composition in Emission Modeling using 2021 US VIUS Data (TRBAM-25-05038) - B540
Xiaodan Xu/Lawrence Berkeley National Laboratory, Hung-Chia Yang/Lawrence Berkeley National Laboratory, Haitam Laarabi/Lawrence Berkeley National Laboratory, Cristian Poliziani/Lawrence Berkeley National Laboratory, Alicia Birky/Lawrence Berkeley National Laboratory, Kyungsoo Jeong/Lawrence Berkeley National Laboratory, Hongyu Lu/Lawrence Berkeley National Laboratory, Randall Guensler/Lawrence Berkeley National Laboratory, C. Anna Spurlock/Lawrence Berkeley National Laboratory
MOVES-Matrix 4.0 for High-Performance On-road Energy Use and Emission Rate Modeling Applications (TRBAM-25-05039) - B543
Hongyu Lu/Georgia Institute of Technology, Huiying Fan/Georgia Institute of Technology, Haobing Liu/Georgia Institute of Technology, Ziming Liu/Georgia Institute of Technology, Michael Rodgers/Georgia Institute of Technology, Randall Guensler/Georgia Institute of Technology
Analyzing the Interplay Between Gear-Specific Driving Dynamics and Emissions: Insights for Improved Emission Control Strategies (TRBAM-25-05058) - B517
Qiujia Liu/McGill University, Luis Miranda-Moreno/McGill University, Lijun Sun/McGill University

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Energy-Aware Route Planning with RouteE Compass (TRBAM-25-05111) - B433
Nicholas Reinicke/National Renewable Energy Laboratory (NREL), Robert Fitzgerald/National Renewable Energy Laboratory (NREL), Jacob Holden/National Renewable Energy Laboratory (NREL), Tim Jonas/National Renewable Energy Laboratory (NREL)
NOx Emission Model for Heavy-duty Diesel Sanitation Vehicles Based on Modal Approach (TRBAM-25-05192) - B547
Xinran Ju/Southeast University, Tiezhu Li/Southeast University, Ran Tu/Southeast University
Research on CO2 and NOx Emissions of China Container Trucks Based on Portable Emissions Measurement Systems (TRBAM-25-05196) - B511
Hongmei Zhao/Shanghai Maritime University, HONG-DI HE/Shanghai Maritime University, Bowen Li/Shanghai Maritime University, Haichao Huang/Shanghai Maritime University, Ruimin Hao/Shanghai Maritime University, Jiqiang Zhao/Shanghai Maritime University, Zhong-Ren Peng/Shanghai Maritime University
Multi-period Equity-based Electric Vehicle Charging Station Planning in Transportation Network (TRBAM-25-05366) - B432
Yiming Zhang/University at Buffalo, SUNY, Ziqi Song/University at Buffalo, SUNY, Zhi Zhou/University at Buffalo, SUNY
Tailpipe-out NOx Emissions Characteristics of SCR-equipped Heavy-duty Diesel Trucks under Real-world Dynamic Load Conditions (TRBAM-25-05397) - B536
Pengfei Fan/Beijing Jiaotong University, Kanok Boriboonsomsin/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Zhiqiang Zhai/Beijing Jiaotong University
Experimental Validation of Connected Eco-Driving for Level 3 Autonomous Vehicles: Road testing through software- and Hardware-in-the-Loop simulations (TRBAM-25-05408) - B431
Zhaohui Liang/University of Wisconsin,Madison, Jihun Han/University of Wisconsin,Madison, Peng Zhang/University of Wisconsin,Madison, Chengyuan Ma/University of Wisconsin,Madison, Xiaopeng Li/University of Wisconsin,Madison, Dominik Karbowski/University of Wisconsin,Madison
Real-Time Identification Model of High NOx Emitters for On-Road Heavy-Duty Vehicles (TRBAM-25-05409) - B537
Yiran Huang/Beijing Jiaotong University, Pengfei Fan/Beijing Jiaotong University, Zijun Zhu/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Zhiqiang Zhai/Beijing Jiaotong University, Yizheng Wu/Beijing Jiaotong University
Intercomparison of Modeled Urban-Scale Vehicle Emissions – Implications for Exposure and Equity Assessment (TRBAM-25-05411) - B430
Victoria Lang/Northwestern University, Sara Camilleri/Northwestern University, Suzan van der Lee/Northwestern University, Gregory Rowangould/Northwestern University, Brittany Antonczak/Northwestern University, Tammy Thompson/Northwestern University, Maria Harris/Northwestern University, Colin Harkins/Northwestern University, Daniel Tong/Northwestern University, Mark Janssen/Northwestern University, Zachariah Adelman/Northwestern University, Daniel Horton/Northwestern University
PIRS-LSTM-Based Car-Following Model for Emission Control in Mixed Traffic with Autonomous Vehicles (TRBAM-25-05428) - B424
Tanmay Das/North Carolina State University, Shams Tanvir/North Carolina State University
Evaluating Intersection-Level Energy Consumption for Corridor-Level Signal Control System: A Hybrid Neural Network using PDF-Shaping-based Loss Function (TRBAM-25-05733) - B423
Yiwei Wang/Oak Ridge National Laboratory, Jinghui Yuan/Oak Ridge National Laboratory, Hong Wang/Oak Ridge National Laboratory, Chieh Ross Wang/Oak Ridge National Laboratory, Arun Subramaniyan/Oak Ridge National Laboratory, Guohui Zhang/Oak Ridge National Laboratory
A Novel Mobility Typology of 355 U.S. Metropolitan Areas and its Impacts on Greenhouse Gas Emissions (TRBAM-25-05740) - B422
Peiyao Zhao/University of Massachusetts, Amherst, Jimi Oke/University of Massachusetts, Amherst
Seasonal Changes and Congestion-Levels Effect on Environmental Performance of Alternative Fuel Buses (TRBAM-25-05766) - B520
MD Rezwan Hossain/University of Central Florida, Md Hasibul Hasan/University of Central Florida, Haofei Yu/University of Central Florida, Hatem Abou-Senna/University of Central Florida, Tony Brandin/University of Central Florida, Kristin Gladwin/University of Central Florida
The Applicability of Eco-Driving Evaluation Method Across Different Cities (TRBAM-25-05785) - B538
Leqi Zhang/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Zeyu Zhang/Beijing Jiaotong University, Zhiqiang Zhai/Beijing Jiaotong University, Junshi Xu/Beijing Jiaotong University, Lei Yu/Beijing Jiaotong University

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Comparative Analysis of Pollutants Costs of Alternative Fuel Buses Across Various Route Types Using Macroscopic and Microscopic Tools (TRBAM-25-05814) - B521
MD Rezwan Hossain/University of Central Florida, Md Hasibul Hasan/University of Central Florida, Haofei Yu/University of Central Florida, Hatem Abou-Senna/University of Central Florida, Tony Brandin/University of Central Florida, Kristin Gladwin/University of Central Florida
Computing Use-Stage Emissions from Calibrated HDM-4 Fuel Consumption Models (TRBAM-25-05916) - B421
Jeremy Lea/University of California, Davis, Ali Butt/University of California, Davis
Shift or Improve Strategies: Findings from simulating the impacts of low-carbon urban transport measures on emission reduction (TRBAM-25-05932) - B420
Ngoc An/Kochi University of Technology, Shiomi Yasuhiro/Kochi University of Technology, Nguyen Doanh/Kochi University of Technology, Le Huyen/Kochi University of Technology, Nguyen Tu/Kochi University of Technology, Vu Tuan/Kochi University of Technology, Huynh Nghi/Kochi University of Technology
Understanding Regional Freight-Related Air Pollution Using Agent-Based Models: A Case Study Across Nine Counties of the San Francisco Bay Area (TRBAM-25-05966) - B541
Haitam Laarabi/Lawrence Berkeley National Laboratory, Xiaodan Xu/Lawrence Berkeley National Laboratory, Cristian Poliziani/Lawrence Berkeley National Laboratory, Kyungsoo Jeong/Lawrence Berkeley National Laboratory, Alicia Birky/Lawrence Berkeley National Laboratory, Zachary Needell/Lawrence Berkeley National Laboratory, C. Anna Spurlock/Lawrence Berkeley National Laboratory
Fuel Consumption Estimation in Heavy Duty Diesel Trucks: Evaluating the Impact of Engine, Driving Behavior, and Vehicle Weight Characteristics (TRBAM-25-05986) - B539
Anran Liu/Beijing Jiaotong University, Guohua Song/Beijing Jiaotong University, Pengfei Fan/Beijing Jiaotong University, Ye Zhang/Beijing Jiaotong University, Xiaoyu He/Beijing Jiaotong University
Prediction and Impact Analysis of Carbon Reduction from Ride-hailing and Bike-sharing Services (TRBAM-25-05999) - B501
Zihao Li/Chang'an University, Daniel Jian Sun/Chang'an University, Guo Qiu/Chang'an University
Road Transport greenhouse gas emission forecasting based on the time series emission prediction (TSEP) model (TRBAM-25-06005) - B502
Shaojie Wu/Chang'an University, Daniel Jian Sun/Chang'an University, Guo Qiu/Chang'an University
Maximizing CO2 Emissions Reduction through E-Bike Incentives: Analyzing Adoption Patterns and Travel Substitution Potential. (TRBAM-25-06022) - B414
Sameer Aryal/University of Tennessee, Knoxville, Christopher Cherry/University of Tennessee, Knoxville, Luke Jones/University of Tennessee, Knoxville, John MacArthur/University of Tennessee, Knoxville, Cameron Bennett/University of Tennessee, Knoxville
Analyzing Hazardous Material Transportation Trucks' Travel and Emission Characteristics Based on Trajectory Data (TRBAM-25-06136) - B413
Qirui Hu/Tongji University, Wanbing Han/Tongji University, Yubin Chen/Tongji University, Siyang Zhang/Tongji University, Yajie Zou/Tongji University
Estimating the Carbon Reduction Potential of Urban Rail Transport from Individual Travel Perspective (TRBAM-25-06146) - B535
Jiarui Xu/Tongji University, Ran Tu/Tongji University, Yingjie Guo/Tongji University, Haobing Liu/Tongji University
Spatiotemporal Analysis of Carbon Footprints for Urban Highway Vehicles Based on Toll Station OD Data (TRBAM-25-06196) - B503
Daniel Jian Sun/Chang'an University, Guo Qiu/Chang'an University
Comprehensive Framework for Community Exposure Assessment by Fusing Activity-based Freight Model with Weather Forecasting Model (TRBAM-25-06224) - B546
Yejia Liao/University of California, Riverside, Lynne Xu/University of California, Riverside, Peng Hao/University of California, Riverside, Matthew Barth/University of California, Riverside, Kanok Boriboonsomsin/University of California, Riverside
What If We Use Integer Speed for Emission Modeling: Impacts of VSP Binning Methods on Sensitivity to Speed Precision (TRBAM-25-06319) - B544
Yun Jiang/Georgia Institute of Technology, Hongyu Lu/Georgia Institute of Technology, Dongli Meng/Georgia Institute of Technology, Chenxu Li/Georgia Institute of Technology, Zhiqiang Zhai/Georgia Institute of Technology, Guohua Song/Georgia Institute of Technology
Could Improving Public Transport Accessibility Reduce Road Traffic Carbon Dioxide Emissions? A Simulation-based Counterfactual Analysis (TRBAM-25-06418) - B412
Dongyu Wu/Southeast University, Jiulonghu, Yingheng Zhang/Southeast University, Jiulonghu, Qiaojun Xiang/Southeast University, Jiulonghu

Thursday, January 09 (Sessions 5001)

5001 **CM** (3.00)

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 146B

Global Pathways to Net Zero: Behavioral, Social, and Technological Research and Innovation Strategies for Transportation Decarbonization

Chris Hendrickson, Carnegie Mellon University, presiding

Sponsored By International Coordinating Council

As a significant contributor to greenhouse gas emissions and air pollution, the transportation sector requires concerted global efforts to reduce its carbon and pollutant emissions. In June 2024 the European Commission, the U.S. Department of Transportation, and TRB held the 7th EU-U.S. Transportation Research Symposium to explore collaborative approaches between the United States and the European Union aimed at synergizing efforts toward a sustainable future. The goal is to foster a transatlantic dialogue that facilitates the sharing of knowledge, enhances collaboration in research and innovation, and accelerates the adoption of effective strategies for the development and deployment of climate- and environment-friendly vehicles and services across all modes in the transportation and mobility domain. In this workshop the final report of the symposium will be presented and attendees will discuss research needs.

United States Co-Chair (P25-20996)
Chris Hendrickson/Carnegie Mellon University
European Co-Chair (P25-20997)
Gereon Meyer/VDI/VDE Innovation + Technik GmbH
Accelerating the Transition to Electrification and Alternative Fuels – Key Findings (P25-20998)
Gereon Meyer/VDI/VDE Innovation + Technik GmbH
Ensuring a Just Transition to Net-Zero Transport – Key Findings (P25-20999)
Karen Vancluysen/POLIS
Leveraging Digitalization, Artificial Intelligence, and Other Integrated System-of-Systems Technologies to Decarbonize Transport – Key Findings (P25-21000)
Heng Wei/University of Cincinnati
Programming and Policy Collaboration Pathways – Key Findings (P25-21001)
Gretchen Goldman/OST-R/Office of Research, Development & Technology
U.S. Department of Transportation's Decarbonization Strategies Playbook (P25-21002)
Gretchen Goldman/OST-R/Office of Research, Development & Technology

5002

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, Salon C

Advancing the Collaborative National Roadway Digital Infrastructure Strategy

John Corbin, Federal Highway Administration (FHWA), presiding
Valerie Shuman, Shuman Consulting Group, LLC, presiding

Sponsored By Standing Committee on Intelligent Transportation Systems, Standing Committee on Regional Transportation Systems Management and Operations, Standing Committee on Freeway Operations, Standing Committee on Vehicle-Highway Automation, Standing Committee on Information Systems and Technology

TRB workshops on the National Strategy for Roadway Digital Infrastructure (RDI) have convened participants from across the transportation ecosystem to launch the development and initial execution of the strategy. Community input gathered via the workshops directly informed plans and actions, helping focus the strategy on key challenges that are now serving as catalysts for national progress. Workshop outcomes: Showcase progress around RDI by various partners Highlight transcontinental corridors (TCC) as a mechanism for interoperability and consistency of digital infrastructure Demonstrate the potential of National Operations Data Environments (NODE) to meet the RDI vision Identifying and accelerating the deployment pathways for TCC and NODE

Opening Remarks - USDOT (P25-20406)
Alasdair Cain/Office of the Assistant Secretary for Research and Technology (OST-R)
Opening Remarks - USDOT ITS Joint Program Office (P25-20405)
Brian Cronin/Federal Highway Administration (FHWA)

(continued)

Opening Remarks - Moderator (P25-20407)
Deepak Gopalakrishna/ICF
Moderator - Transcontinental Corridors as a Mechanism for Interoperability and Consistency of Digital Infrastructure (P25-20408)
Ted Bailey/STV, Inc.
Moderator - National Operations Data Environments to Meet the RDI Vision (P25-20409)
Valerie Shuman/Shuman Consulting Group, LLC
Moderator Conversation Circle: Accelerating Deployment Pathways for TCC and NODE Through a Collaborative Effort (P25-20416)
Michelle Maggiore/2M Transformation Services LLC
Close-out and Wrap-Up Remarks (P25-20412)
John Corbin/Federal Highway Administration (FHWA)

5003 **CM** (3.00)

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 146A
Future Uncertain: Research and Tools for Transportation Planning Under Deep Uncertainty
Martin Milkovits, Boston Region Metropolitan Planning Organization, presiding
Flavia Tsang, Metropolitan Transportation Commission (MTC), presiding
Sponsored By Standing Committee on Transportation Demand Forecasting, Standing Committee on Urban Transportation Data and Information Systems, Standing Committee on Statistical and Econometric Methods, Standing Committee on Transportation Planning Analysis and Application, Standing Committee on Traveler Behavior and Values, Standing Committee on Transportation Network Modeling, Standing Committee on Transportation-Related Noise and Vibration

Future Uncertain introduces Decision Making Under Deep Uncertainty (DMDU) and contrasts it with traditional Predict-Then-Act approaches in transportation planning. Participants will experience considering and mitigating uncertainty through a collaborative planning game with evolving future conditions. An expert panel will then use game results to challenge current practices and discuss strategies to better incorporate deep uncertainty in planning tools and practices. The workshop will conclude with a group discussion to synthesize key takeaways and initiate further research and practice developments.

Panelists (P25-20292)
Prateek Bansal/National University of Singapore, Chandra Bhat/University of Texas, Austin, Rachel Copperman/Cambridge Systematics, Inc., Naomi Stein/EBP, Tara Weidner/Oregon Department of Transportation

5004 **CM** (3.00)

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 101
Rev It Up: Equipping Transportation Managers for Pollinator Conservation Agreements
Caroline Hernandez, University of Illinois, Chicago, presiding
Dan Salas, University of Illinois, Chicago, presiding
Kris Gade, Pima County Department of Conservation Lands and Resources, presiding
Meridith Krebs, Kimley-Horn and Associates, Inc., presiding
Sponsored By Standing Committee on Environmental Analysis and Ecology, Standing Committee on Landscape and Environmental Design, Standing Committee on Roadside Maintenance Operations

This session will invite transportation managers and environmental specialists to explore enrollment in the Monarch Candidate Conservation Agreement with Assurances or new At-Risk Bumble Bee Agreement. Attendees will learn about the benefits of these agreements and participation requirements. The workshop will dig into the topic by individually prototyping through examples of enrollment and implementation. Participants may bring their own transportation system information to the session to inform their own prototyping. At the end of the workshop, participants will have an understanding of how the agreements can benefit their road or railway operations, enrollment requirements, any information gaps, and enrollment strategies for their teams.

Introduction (P25-20927)
Caroline Hernandez/University of Illinois, Chicago, Dan Salas/University of Illinois, Chicago

(continued)

Rev It Up: Equipping Transportation Managers for Pollinator Conservation Agreements (P25-20926)
Dan Salas/University of Illinois, Chicago, Caroline Hernandez/University of Illinois, Chicago

5005 **CM** (3.00)

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 102B
Restoring and Preserving Genius Loci on Public Lands
Adam Alexander, Gannett Fleming, Inc., presiding
Natalie Villwock-Witte, Western Transportation Institute (WTI), presiding
Sponsored By Standing Committee on Transportation-Related Noise and Vibration, Standing Committee on Transportation Needs of National Parks and Public Lands, Standing Committee on Alternative Fuels and Technologies

Noise and natural quiet are essential elements of high-quality public land experiences. Specifically, a significant appeal of visiting parks and protected public lands is to enjoy the physical environment, solitude, and serenity these places offer. While electric and autonomous vehicles provide opportunities for reduced air pollution and visitor density in and close to these places, they change the soundscape. Noise pollution threatens these experiences and challenges public, rural, and gateway planners and managers alike. Through this workshop, we will explore approaches to encourage the use of autonomous and electric vehicles to restore and preserve the beauty and experience of these special places.

Framing the Problem: Transportation Noise and Public Lands (P25-20928)
Karel Cubick/ms consultants, inc., Jesse Barber/Boise State University
Finding Solutions: Reducing Transportation Noise Using EV/CAV Technologies (P25-20929)
Reza Langari/Texas A&M University, Frank Douma/University of Minnesota, Sonya Sachdeva/U.S. Forest Service

5006

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 145B
Measuring Access to Destinations: Exploring Applications of Accessibility Measures to Support Performance-Based Decision Making
Deanna Belden, Texas A&M Transportation Institute, presiding
Peter Rafferty, Cambridge Systematics, Inc., presiding
Michael Grant, ICF, presiding
Sponsored By Standing Committee on Performance Management, Standing Committee on Strategic Management, International Coordinating Council

While traditional mobility performance measures focus on traffic congestion and reliability, a more community-centered approach focuses on enhancing access to destinations. Through this workshop, learn state-of-the-art approaches related to measuring multimodal access to destinations and leveraging access measures in transportation decision making to drive equitable outcomes, economic vitality, and enhance communities. This interactive workshop will explore real-world options for measuring access.

Why (and how) Agencies Should Be Measuring Destination Access for Performance and Planning (P25-20536)
Eric Lind/University of Minnesota
Update on the Transportation Access Pilot Program (P25-20538)
Brian Gardner/Federal Highway Administration (FHWA)
Planning for Destination Accessibility: Resources and Ideas (P25-20539)
Liz Williams/Massachusetts Department of Transportation
Accessibility Metrics for Project Development and Prioritization (P25-20540)
Eric Sundquist/California Department of Transportation
Virginia's Use of Accessibility in SMART SCALE (P25-20541)
Peter Ohlms/Virginia Department of Transportation
Multimodal Accessibility and Travel Behavior (P25-20542)
Chris McCahill/University of Wisconsin, Madison
"It's about what you gain, not what you lose" The destination accessibility conversation in conservative Utah (P25-20543)
Ted Knowlton/Wasatch Front Regional Council

(continued)

Structuring a Needs Assessment: Accessibility and Performance Measurement for the Congestion Management Process (P25-20544)
Eugene McGuinness/North Jersey Transportation Planning Authority

5007

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 145A
Transportation Asset Risk and Resilience Strategies and Tools
Aimee Flannery, Jacobs, presiding
Tom Wall, Argonne National Laboratory, presiding
Adair Garrett, Georgia Institute of Technology, presiding
Sponsored By Standing Committee on Transportation Asset Management, Section - Executive Management Issues, Standing Committee on Performance Management, Standing Committee on Extreme Weather and Climate Change Adaptation

The objective of this workshop is to share emerging tools and adaptation strategies to develop climate resilience in transportation asset management. Presentations will highlight the MHEVRA Tool to assess Georgia's transportation system vulnerability and risk (GDOT RP20-12) and also the ongoing NCHRP 23-32: Transportation Asset Risk and Resilience to develop a standard method for risk and resilience assessments. Participants will leave with science-based technical resources to assess risk and resilience in transportation planning, design, construction, operation, and maintenance decisions.

Deep Uncertainty and the Development of the Multi Hazards Exposure, Vulnerability and Risk Assessment Tool (P25-20902)
Zhongyu Yang/Georgia Institute of Technology, Adair Garrett/Georgia Institute of Technology, Manuel Cuadra/Georgia Institute of Technology
State of Practice of Quantitative Risk and Resilience Assessment Methods (P25-20903)
Aimee Flannery/Jacobs

5008

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 201
Modeling and Simulation for the Design and Evaluation of Roadside Safety Hardware
Chuck Plaxico, Roadsafe LLC, presiding
Sponsored By Standing Committee on Roadside Safety Design

The objective of this workshop is to foster a collaborative exchange of knowledge on finite element analysis (FEA) and crash simulation modeling among analysts and researchers involved in roadside safety hardware design. With more and more states employing the use of FEA results in their approval and qualification of roadside safety hardware, it is vitally important to ensure that the analysts are employing best practice procedures in the development, application, and processing of the FEA models in order to ensure modeling processes and results that are consistent, repeatable, and relevant to both industry and agency end users. The workshop comprises various presentations covering a wide range of topics related to FEA modeling of roadside safety problems. These include verification and validation procedures, techniques, best practices for modeling various components (e.g., fasteners, welds, joints, accelerometers), and material modeling for various materials (e.g., high-strength steel, aluminum, concrete, soil, wood). Topics will encompass updates on the latest vehicle models and user improvements to existing models. Additionally, an interactive collaborative exercise will be provided following the presentations focusing on one or two specific emerging and relevant issues. This collaborative exercise will seek to engage audience members and presenters in identifying key aspects of those modeling issues, with the purpose of developing research approaches to address them.

5009

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 202B

Navigating the Modernized National Spatial Reference System: A Geospatial Odyssey

Boris Kanazir, National Geodetic Survey (NOAA/NOS), presiding

Joe Bima, Spatial Coherence, presiding

Sponsored By Standing Committee on Geospatial Data Acquisition Technologies

The National Spatial Reference System (NSRS), a fundamental framework for geospatial positioning in the United States, is undergoing significant modernization. It is crucial to understand these changesand adapt data acquisition methods accordingly. The workshop will cover why the NSRS is being updated; the key goals of the modernization effort; timeline, standards, and technology considerations; and the Geospatial Data Act of 2018 and its impact. There will be discussion about the replacement of the North American Datum of 1983 and vertical datums, and implications for existing workflows. Therewill also be discussion about use cases and practical scenarios, how to transition, and how to leverage new technology and tools.

5010

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 204AB

Exploring Different Data Needs for Geotechnical Design, Constructability, Performance, and Life-Cycle Asset Management Models

Derrick Dasenbrock, Federal Highway Administration (FHWA), presiding

Ahmad Alhasan, HNTB, presiding

Benjamin Rivers, Federal Highway Administration (FHWA), presiding

Sponsored By Standing Committee on Geotechnical Instrumentation and Modeling, Subcommittee on Geotechnical Asset Management, Standing Committee on Engineering Geology, Standing Committee on Foundations of Bridges and Other Structures

Transportation projects vary in size, scope, criticality, and risk. Different data types are needed to determine properties for appropriate design, constructability, performance, and life-cycle asset management models. We explore, through presentations and activities, the role of data through the geotechnical life-cycle workflow with attention to data interpretation, decision making, and digitalization. The workshop will cover established and emerging topics such as data management and governance, geotechnical asset management, models for resilience, and artificial intelligence applications. Facilitators and participants will explore current successes, gaps, research and development needs, and opportunities for partnering and collaboration.

Session Introduction (P25-20027)

Derrick Dasenbrock/Federal Highway Administration (FHWA)

The role of data in geotechnical practices: from site exploration to geotechnical asset management (P25-20025)

Ahmad Alhasan/HNTB

Slope stability instrumentation approaches based on levels of risk and risk tolerance (P25-20026)

Darren Beckstrand/Landslide Technology

Data driven systems for real time visualization of project status, field work, and quality control (P25-20028)

Allen Cadden/Schnabel Engineering

Introductory Presentation #4 (P25-20031)

Derrick Dasenbrock/Federal Highway Administration (FHWA)

Workshop Facilitated Activity (P25-20029)

Ahmad Alhasan/HNTB

Panel Discussion Questions and Support (P25-20030)

Derrick Dasenbrock/Federal Highway Administration (FHWA)

5011

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 202A

Pavement Analysis Workshop

Jenny Li, Texas Department of Transportation, presiding
Zahra Afsharikia, WSP, presiding
Nima Kargah-Ostadi, Callentis Consulting Group, presiding

Sponsored By Standing Committee on Pavement Structural Testing and Evaluation, Section - Pavements, Standing Committee on Pavement Condition Evaluation, Standing Committee on Design and Rehabilitation of Concrete Pavements, Standing Committee on Design and Rehabilitation of Asphalt Pavements, Standing Committee on Pavement Surface Properties and Vehicle Interaction

The PAWS presentations generally cover latest methods of extracting, processing, and analyzing pavement performance data and preliminary findings. Topics relevant to Artificial Intelligence (AI) in infrastructure research are particularly pertinent. Presentations are not subjected to prior technical review and are neither distributed nor published. Comments and discussion following each presentation are not recorded. All policies are intended to encourage presentations of recent up-to-the-minute work and free-wheeling discussions among presenters and attendees. Comments by workshop attendees are not recorded.

Data Management, Integration and Analysis in Pavements and Materials (P25-21487)
Lisa McDaniel/Federal Highway Administration (FHWA)
C-FLEX: Flexible Pavement Analysis Software for the Department of Defense (P25-21488)
Erol Tutumluer/University of Illinois, Urbana-Champaign
Comparison of Random Forest and Neural Network in Predicting Macrotexture of Pavement (P25-21490)
Behrokh Bazmara/Virginia Polytechnic Institute and State University
Prediction of Moisture Susceptibility of Asphalt Mixtures Containing RAP Materials Using Machine Learning Algorithms (P25-21491)
Ali Behnood/University of Mississippi
Prediction of Critical Strains of Flexible Pavement from Traffic Speed Deflectometer Measurements (P25-21492)
Kairen Shen/Rutgers University
Leveraging Connected Vehicle Data for Enhanced Infrastructure Maintenance and Surface Assessment (P25-21503)
Björn Zachrisson/NIRA Dynamics AB
LTIP Student Contest Winner- Quantification of Post-Rainfall Moisture Content in Unbound Layers Using LTPP Data (P25-21493)
Ruohan Li/University of Texas, Austin, Jorge Prozzi/University of Texas, Austin, FENG HONG/Texas State University
LTIP Student Contest Winner Verifying Existing HMA Characterization in Mechanistic-Empirical Pavement Design (PMED) Using the LTPP Data (P25-21494)
Faizan Lali/Michigan State University, Syed Haider/Michigan State University

5012

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 103A

Everyday Uses of the AASHTO Guide for Bridge Preservation Actions and the AASHTO Guide to Preservation of Highway Bridge Decks

Richard Dunne, Greenman-Pedersen, Inc., presiding

Sponsored By Standing Committee on Structures Maintenance, Standing Committee on Bridge and Structures Management, Standing Committee on Bridge Preservation

Workshop participants will learn what is in the AASHTO Guide for Bridge Preservation Actions and the Guide to Preservation of Highway Bridge Decks and how they can be used to develop single bridge preservation plans and a program of preservation projects. The workshop will begin with exploring by comparing various definitions of bridge preservation. These definitions will then be compared to known definitions in the Guides, as well as definitions by the Federal Highway Administration and state departments of transportation (DOTs). Next, participants will consider what specific actions are bridge preservation actions. Several state DOT bridge preservation programs will be compared to the bridge preservation Guides. Lastly, participants will be asked to develop bridge specific preservation plans and a program of bridge preservation projects based on information from the Guides.

Exploring by comparing various definitions of bridge preservation (P25-21210)

Richard Dunne/Greenman-Pedersen, Inc.

Comparing Various Definitions of Bridge Preservation (P25-21463)

Zachary Haber/Federal Highway Administration (FHWA), Richard Dunne/Greenman-Pedersen, Inc.

Bridge Preservation Actions, and the Cost and Intervals for Actions (P25-21464)

Richard Dunne/Greenman-Pedersen, Inc.

5013

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 140

Innovation, Equity, and Accessibility in Air Travel: Oh, the Places We Will Go!

Judy Shanley, Easterseals, presiding

Todd Hansen, KFH Group, Inc., presiding

Sponsored By Standing Committee on Accessible Transportation and Mobility, Standing Committee on Aviation Administration and Policy, Standing Committee on Environmental Issues in Aviation, Standing Committee on New Users of Shared Airspace, Standing Committee on Innovative Public Transportation Services and Technologies

The aviation industry has shown increased focus on the needs of passengers with disabilities who use commercial air travel. Continued research related to the safety implications of accessible air travel has furthered policy and practice. Concurrently, the aviation industry continues to develop vehicles and infrastructure for advanced air mobility through policy discussions and research projects. Now is the time to consider accessible air travel in a holistic and integrated way, both from the perspective of the passenger journey and infrastructure development and planning. This workshop focuses on strategies for the industry (including aviation administrators and manufacturers) and on creating inclusive passenger experiences across disability types.

Policy Overview: Current Legislation, Policy, and Rules (P25-21114)

Livaughn Chapman/Office of the Secretary of Transportation (OST), Heather Ansley/Paralyzed Veterans of America

Innovation, the Future, and Next Steps (P25-21116)

Adam Cohen/University of California, Berkeley

Overview of Current Practice (P25-21117)

Kelly Buckland/Office of the Assistant Secretary for Research and Technology (OST-R), Amber Woodburn McNair/AV McNair LLC, Mia Held/C&S Companies, Alexandra Bruce/All Wheels Up

5014

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 146C

Resilience and Disaster Recovery Tool Suite

Shawn Johnson, OST-R/Office of Research, Development & Technology, presiding

Sponsored By Standing Committee on Extreme Weather and Climate Change Adaptation, Standing Committee on Critical Transportation Infrastructure Protection, International Coordinating Council

Are you trying to prioritize resilience-related infrastructure investments? The Resilience and Disaster Recovery (RDR) Tool Suite was developed to help transportation agencies estimate the return on investment (ROI) of resilient infrastructure across a range of uncertain future hazards (e.g., flooding, earthquake) for long-range transportation planning. The RDR Tool Suite is open source and publicly available for any transportation analyst. It includes tools to help with transportation network hazard exposure analysis, ROI analysis, and equity and benefits analysis. Attend this workshop for hands-on training to help you get started using the RDR Tool Suite. To maximize utility of the training, arrive early to the workshop to download and install the tool and associated resources on your device. You can also download the tool and resources in advance by going here: RDR Tool Suite Download

RDR Tool Suite: Presentation One (P25-21014)
Kristin Lewis/OST-R/Volpe Center
RDR Tool Suite: Presentation Two (P25-21015)
Kevin Zhang/OST-R/Volpe Center
RDR Tool Suite: Presentation Three (P25-21016)
Andrew Breck/OST-R/Volpe Center
RDR Tool Suite: Presentation Four (P25-21017)
Scott Smith/Office of the Assistant Secretary for Research and Technology (OST-R)

5015 **CM** (3.00)

Thursday, 09:00 a.m. - 12:00 p.m., Convention Center, 143AB

Aviation Forecasting

Roger Schaufele, Federal Aviation Administration (FAA), presiding

Sponsored By Standing Committee on Aviation Economics and Forecasting

This workshop will delve into the latest methodologies, technologies, and best practices in aviation forecasting. Representatives from the Original Equipment Manufacturers, international organizations, and industry experts will discuss how they incorporate data analytics, collaborative approaches, and machine learning into their forecasting process. These experts will also share potential benefits from adopting these new techniques and practices. This workshop is designed to equip aviation professionals with cutting-edge tools and techniques for improving forecasting accuracy.

Standard Airport Forecast Methodology (P25-20086)
Sharon Sarmiento/Unison Consulting, Inc.
ACI World Airport Forecast Methodology (P25-20087)
Hyuntae Jung/ACI World
Forecasting Air Passenger Demand Using Generalized Additive and Spatial Generalized Additive Models (TRBAM-25-05275)
Marimuthu Venkadavarahan/Vellore Institute of Technology, Ganesh Raghavendran/Vellore Institute of Technology, Murugan Rohith/Vellore Institute of Technology, Gunasekaran Karuppanan/Vellore Institute of Technology
Boeing Commercial Market Outlook Global Fleet Forecast Methodology (P25-20088)
Kathryn Peters/Boeing Company
Incorporation of Shock Events into Forecasts (P25-20090)
Ian Kincaid/InterVISTAS Consulting Group
Use of AI in Aviation Forecasting (P25-20089)
Tony Diana/Federal Aviation Administration (FAA)