



OFFICE OF THE ASSISTANT SECRETARY  
FOR RESEARCH AND TECHNOLOGY

# RESEARCH ROUNDUP

## ISO TECHNICAL COMMITTEE 204 PLENARY SESSION

On October 24, the U.S. DOT Volpe Center in Cambridge, MA, hosted ISO Technical Committee 204 on Intelligent Transportation Systems (ITS). Dr. Robert Hampshire delivered welcoming remarks, highlighting ITS and the Department's V2X vision. U.S. DOT Volpe Center Director Gregg Fleming and the Office of Technology Policy & Outreach also presented, fostering collaboration on global ITS standards.



## U.S. SECRETARY OF TRANSPORTATION PETE BUTTIGIEG VISITS U.S. DOT VOLPE CENTER



Credit: Volpe Center

U.S. Secretary of Transportation Pete Buttigieg and Principal DAS for Research and Technology Dr. Hampshire recently visited the U.S. DOT Volpe Center for an interactive Town Hall with U.S. DOT Volpe Center and U.S. DOT Region 1 staff. During his visit, Secretary Buttigieg toured the state-of-the-art facility, met with staff, and emphasized the importance of cutting-edge research in addressing today's transportation challenges.

[Read more here.](#)

## NEW TAP AND RIDE PROGRAM BRINGS CONTACTLESS PAYMENTS TO CT-TRANSIT



Credit: USDOT

On October 8, Deputy Assistant Secretary Ben Levine announced a \$2 million OST-R SMART Grant at the Meriden Transit Center to upgrade payment systems on River Valley Transit and CTtransit Meriden buses. Part of Connecticut DOT's 'Tap and Ride' program, the pilot introduces 43 contactless payment readers, enabling riders to pay with cards or mobile devices, offering capped fares with no sign-ups or cash. Meriden Mayor Kevin Scarpati emphasized its potential for statewide expansion, advancing Connecticut's transportation modernization efforts.

## NATIONAL BUREAU OF ECONOMIC RESEARCH

Principal Deputy Assistant Secretary (DAS) and Chief Science Officer, Dr. Robert C. Hampshire, recently delivered the opening keynote at the Economics of Transportation in the 21st Century conference, hosted by the National Bureau of Economic Research (NBER). His remarks highlighted the significant progress made in transportation research over the last few years and underscored the importance of ongoing collaboration with NBER to address future challenges.



## IEEE'S 100TH ANNUAL VEHICLE TECHNOLOGY CONFERENCE



Principal DAS and Chief Science Officer Dr. Robert C. Hampshire joined Egan Smith, Managing Director of the Intelligent Transportation Systems (ITS) Joint Program Office, for a panel at the IEEE 100th Vehicle Technology Conference in Washington, DC. They highlighted the U.S. DOT's commitment to the National Roadway Safety Strategy and discussed the transformative impact of V2X technology on road safety.

## U.S. DOT AND TEXAS A&M HIGHLIGHT ENVIRONMENTAL AND HEALTH IMPACTS ON TRANSPORTATION RESEARCH

On October 9, Texas A&M University hosted the USDOT Deputy Chief Science Officer and Director of the Office of RD&T Dr. Firas Ibrahim, and University Transportation Center Director Caesar Singh to spotlight research initiatives under the Bipartisan Infrastructure Law's University Transportation Center (UTC) program. The event was attended by Dr. Joe Elabd - the Vice Chancellor for Research at the Texas A&M University System, and by former Assistant Secretary for Research and Technology, and the Director of the Texas Transportation Institute – the Honorable Greg Winfree. The event was led by UTC Director Dr. Josias Zietsman, included lab tours and discussions about the work of the Center for Advancing Research in Transportation Emissions, Energy, and Health (CARTEEH), a Tier 1 UTC with a focus area of 'Preserving the Environment.'

This collaboration of public health and transportation experts explores the transportation sector's impact on health. Highlights included Texas A&M's test on truck emissions at their Clean Transportation Research Complex, Georgia Tech's integration of air quality models to assess 'wheel to lung' impacts, and The John Hopkins School of Public Health research on electric school buses in Baltimore City, impacting 29,000 public school students. Additionally, Morehouse School of Medicine engaged with Atlanta's community leaders on transportation health impacts, while North Dakota State University explored clean transit solutions for rural and tribal communities.

The University of Texas El Paso presented their use of utilization of low-cost sensors to improve air quality assessments in disadvantaged border communities. OST-R also reviewed the University of California Riverside's efforts using a mobile lab to study freight emissions in Southern California's Environmental Justice Communities. This broad range of research aims to reduce transportation emissions to enhance public health.



**DR. IBRAHIM TESTS HIS SKILLS IN A DRIVING SAFETY SIMULATOR.**

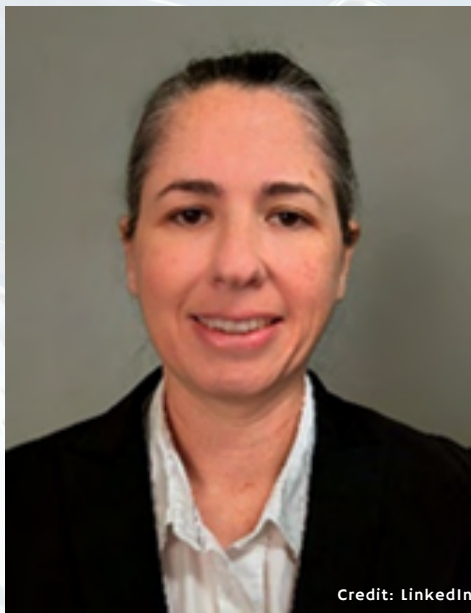


**OST-R VISITS CARTEEH: DR. FIRAS IBRAHIM WITH GREG WINFREE AND DR. JOE ZIETSMAN, ETAL., AT TEXAS A&M.**



# OST-R NEW APPOINTEES

## >>> ANNOUNCING NEW DIRECTOR OF BTS OFFICE OF SAFETY DATA ANALYSIS



Credit: LinkedIn

The Bureau of Transportation Statistics (BTS) is pleased to name Allison Fischman as the new Director of BTS's Office of Safety Data Analysis (OSDA). A seasoned statistician with OSDA, Allison has supported key data initiatives, including the Precursor Safety Data and Freight Logistics Optimization Works (FLOW) programs. With a strong background from her time at the Department of Interior, she brings extensive expertise to her role. Additionally, the BTS team would like to thank Demetra Collia for her leadership in expanding Confidential Information Protection and Statistical Efficiency Act (CIPSEA)-protected data initiatives as she transitions to lead the Statistical Policy Team.

## WELCOME MOUSSA DIA TO OST-R FAMILY <<<

Mr. Moussa Dia has joined the BTS Office of Spatial Analysis and Visualization as a geographer, working on the National Transportation Atlas Database (NTAD). His initial focus includes enhancing NTAD operations, improving geospatial data accessibility, and automating data uploads. Moussa previously supported BTS as a contractor and has worked on federal projects with DHS and the Federal Geographic Data Committee. A 2018 William & Mary geology graduate, Moussa lives in Alexandria, VA, and enjoys ultimate frisbee, biking, and traveling.



## IN THE MEDIA

- News8
  - [Connecticut Bus Lines to Implement 'Tap and Ride' Pilot Program](#)
- Mineta Transportation Institute
  - [Using AI to Detect Near-Miss Collisions](#)
- StateScoop
  - [Maryland to Test Drones for Medical Deliveries, Emergency Response](#)

## FOLLOW US



Credit: LinkedIn

Get the inside scoop on all things OST-R! Simply scan the QR code to join our mailing list and receive exciting monthly updates directly to your inbox. Don't miss out—connect with us [online](#) for more insights!



# UPCOMING

Explore upcoming webinars, conferences, and opportunities from OST-R program offices.

- **Transportation Research Board (TRB) Annual Meeting: January 5 – 9, 2025**

- OST-R will be well-represented at the 104th TRB Annual Meeting in Washington, DC! You can find out about all of our activities [here, within the next week](#), and be sure to stop by and see us in the Exhibit Hall (**booths 751-755/851-855**).
- Also, please plan to join PDAS Dr. Robert Hampshire and research leaders from across the Department at Session 3036, “U.S. DOT Research, Development and Technology Results” on **Tuesday, January 7, 8:00 – 9:45 am in the Convention Center Ballroom**.

# NOTEWORTHY

- **TR News Focuses on Transportation Innovation**

- The latest TR News (October—December 2024) explores turning research into real-world solutions. Featured on page 22 is “From Research to Reality: University Transportation Centers as Technology for Transfer Hubs,” co-authored by Sata Schremmer and Susan Handy (UC-Davis/National Center for Sustainable Transportation), Marlon Boarnet (USC/METRANS Transportation Consortium), and Atorod Azizinamini (FIU/Accelerated Bridge Construction UTC). This issue highlights public-private collaboration, pooled funds for innovation, and technology transfer programs. Read more from Read more from TR News [here](#).

- **U.S. DOT Celebrates Excellence at the 2024 S3 Awards Ceremony**

- The Office of the Under Secretary for Policy (S-3), led by Acting Under Secretary Christopher Coes, recently hosted the inaugural S-3 Awards Ceremony. The event celebrated outstanding achievements across the S3 offices, honoring teams such as the Transportation Safety Institute's Aviation Safety and Highway Safety Divisions, the National Transit Map and Bicycle initiatives, SMART Grants, anti-Human Trafficking Initiatives, Improved BTS Data Timeliness, OST-R Outreach and Communications, ROUTES, and the Grant Geolocation Verification Team. A lively reception followed, allowing colleagues and leaders to recognize the awardees' dedicated work and impact. Congratulations to all the awardees and nominees!

Photo Credit: U.S. DOT





# NOTEWORTHY

## • ConnectX

- On October 29-30, HASS hosted the third ConnectX lab-to-lab technical exchange at the FAA William J. Hughes Technical Center in Atlantic City, NJ. Experts from NHTSA, FHWA, FAA, and other DOT offices collaborated on research, testing, and validating safety for highly automated transportation systems. The workshop highlighted WJHTC's testing capabilities and addressed key focus areas like spectrum utilization, distributed testing, AI, and sensor systems.

## • Distributed Testing Webinars and Workshops

- On October 28, 2024, HASS hosted the webinar "Facing Distributed Testing (DT) Roadblocks and Challenges," focusing on overcoming IT obstacles in implementing DT programs. Participants joined a vibrant discussion on assessing DT suitability for projects, considering factors like stakeholder engagement, resources, timelines, technology, and policy support. Connect with HASS COE and DOT colleagues to share insights and advance DT practices! Contact [Joshua.Every@dot.gov](mailto:Joshua.Every@dot.gov) for more information.

## • U.S. DOT Small Business Webinar: Best Practices and Lessons Learned

- On October 30, Neil Chaudhry, Senior Advisor of HASS COE, presented "From Innovation to Execution: Best Practices and Lessons Learned in AI" during the U.S. DOT's small business webinar, hosted in collaboration with the Office of Small and Disadvantaged Business Utilization. Deputy Assistant Secretary Ben Levine provided opening remarks, highlighting opportunities for small businesses in AI and automated transportation systems.

## • Bridging Challenges and Opportunities in Rail at the 2024 TTC Tour Day

- On October 23, USDOT Deputy Chief Science Officer, and Director of the Office of RD&T Dr. Firas Ibrahim, along with Federal Railroad Administration (FRA) Administrator Amit Bose, provided key notes to an audience of 250 railroad and transit specialists during the 2nd annual Transportation Technology Center (TTC) Tour Day in Pueblo, Colorado. Dr. Ibrahim discussed the challenges we face in the rail industry, and the opportunities that should be seized for a safe, efficient, and sustainable transportation system. The event was organized by the FRA and is a one-of-a-kind event hosting railroad specialists from government, industry, and academia to collaborate on challenges facing rail transportation and showcase solutions, innovations, and testing capabilities available at the center. The TTC, covering 52 square miles of property, is a unique research and testing center that offers the opportunity for a multimodal testing and demonstration enabling the vision towards an integrated transportation system of systems beyond the tracks.

## • Small and Disadvantaged Businesses to Enter Emerging Transportation Markets

- The U.S. DOT has launched a new initiative to support small and disadvantaged businesses entering emerging technology fields. This effort provides vital resources and opportunities to help diverse entrepreneurs access the growing transportation technology market. Through dedicated programs, the U.S. DOT aims to foster innovation and equity, ensuring that small businesses play a significant role in the future of transportation. For more details, view the full announcement [here](#).

## • The Learning Agenda

- The U.S. Department of Transportation is proud to release the *Learning Agenda: FY 2024-2026*. It identifies priority evidence-building needs relevant to DOT programs, policies, and regulations; and then creates an action plan to tackle them. The *Learning Agenda* covers 22 topic areas that include distracted driving, railroad grade crossing safety, aviation surface safety, supply chain disruption, transportation cost burden, and EV adoption. Members of the public, transportation experts from across the country, and nine of DOT's Operating Administrations contributed to the *Learning Agenda*'s development. Learn more [here](#).

- **#DYK?** The Rural Opportunities to Use Transportation for Economic Success (ROUTES) Initiative aims to address disparities in rural transportation infrastructure by developing user-friendly tools and information, aggregating USDOT resources into a single web resource, and providing technical assistance. If you want to learn more about ROUTES, or how it can help your community, visit the [ROUTES Initiative](#) website or reach out to the ROUTES team at [rural@dot.gov](mailto:rural@dot.gov).



# UTC CORNER

- ***INSPIRE UTC Wins Prestigious ASCE Charles Pankow Award***
  - The Bridge Inspection Robot Deployment Systems (BIRDS), developed by the INSPIRE University Transportation Center (UTC) with sponsorship from U.S. DOT, has been selected for the 2025 ASCE Charles Pankow Award for Innovation—one of the most prestigious honors in engineering innovation. This groundbreaking technology has revolutionized bridge inspection over the past eight years, made possible by the U.S. DOT's UTC program. INSPIRE's UTC patent on BIRDS is also nearing final review, marking another exciting milestone.
- ***UTRGV Wins FRA CRISI Grant to Advance Rail Safety and Technology Training***
  - The University of Texas Rio Grande Valley (UTRGV) has received an FRA CRISI grant to collaborate with Brotherhood of Railroad Signalmen, HUM Industrial Technology, and ENSCO on testing sensor technologies at UTRGV and ENSCO's Transportation Technology Center. The project includes workforce training on advanced onboard sensor systems and integrating the technology with Positive Train Control for improved rail safety. Since joining the UTC Program in 2013, UTRGV has become a leader in rail research, advancing toward R1 research status and establishing doctoral programs. Read more [here](#).
- ***University of Cincinnati Secures \$5.1M Grant to Revolutionize Transit Infrastructure***
  - The University of Cincinnati, alongside the Southwest Ohio Regional Transit Authority and Butler County Transit Authority, has been awarded \$5.1 million in federal funding to enhance transit infrastructure safety and efficiency. Supported by the Federal Transit Administration's Accelerating Advanced Digital Construction Management Systems Program, this project will explore the integration of AI, real-time data processing, and advanced modeling into transit construction. The initiative aims to reduce construction delays and costs, empowering workers with technology for smarter, safer, and faster project delivery.
- ***Morgan State Students Develop AI-Powered Autonomous Wheelchair***
  - Morgan State University students are pioneering an autonomous wheelchair capabilities. This innovative project uses artificial intelligence to navigate and respond to surroundings, enhancing accessibility and independence. The wheelchair prototype represents a significant step in assistive technology, showing potential for real-world applications. Read more [here](#).
- ***UTC Spotlight: UTCRS Examines Bearing Inactivity in Rail Safety Study***
  - In response to potential lubricant degradation in railcar wheel bearings and during long periods of inactivity, the University Transportation Center for Rail Safety (UTCRS) at UTRGV has partnered with the National Transportation Safety Board (NTSB), MxV Rail, and CSX Transportation to study the impact of idling on bearing performance. Following the East Palestine, Ohio derailment, this multi-year study, which began in 2023, examines bearings that have remained stationary for 6–36 months. Early findings highlight both types of bearing damage and the detection methods required to identify them effectively. Learn more [here](#).
- ***Driving Innovation: Highlights from the Carmen+ UTC Symposium on CPNT and Cybersecurity***
  - The Carmen+ UTC Symposium showcased innovations in Complementary Positioning, Navigation, and Timing (CPNT) technologies to combat cybersecurity threats like spoofing and jamming. DOT leaders Karen Van Dyke, Harold "Stormy" Martin III, and Chris Atkinson shared key updates, highlighting research such as GPS-free navigation for aircraft and intersection safety advancements. Attendees participated in panels, tours, and student presentations, stressing the need for CPNT solutions to enhance GNSS resilience. Read more [here](#).
- ***Notable UTC Webinar Topics:***
  - [CUE Professional Seminar Series](#): Dec. 3rd | 11:30AM EST
  - [Granular Characterization of Mobility-Related Air Pollution Exposure Disparity](#): Dec. 12th | 2PM EST
  - Visit the [UTC page for all upcoming webinars](#) and the [YouTube channel](#) for all past webinars.



# U.S. DOT VOLPE CENTER UPDATES

- A new report to Congress highlights U.S. DOT's National Environmental Policy Act (NEPA) process successes and opportunities. The U.S. DOT Volpe Center supported the Infrastructure Permitting Improvement Center in compiling this report, which highlights U.S. DOT's strategies to reduce permitting constraints and delays on critical infrastructure projects. [Learn more.](#)
- The U.S. DOT Volpe Center worked with FRA to develop a new resilience planning framework to help strengthen transit systems nationwide. This framework helps transit agencies proactively identify vulnerabilities, enhance system resilience, and prepare for future challenges. By integrating resilience into transit planning, this framework supports more reliable and sustainable transportation networks. [Learn more.](#)
- The U.S. DOT Volpe Center worked with FRA to develop the Locomotive Emissions Comparison Tool to assist rail grant applicants in evaluating potential emissions impacts. This user-friendly tool supports data-driven decisions by comparing emissions from various locomotive technologies. It empowers applicants to pursue rail projects that align with environmental and sustainability goals. [Read more here.](#)
- Stay up-to-date with the latest news and updates from the U.S. DOT Volpe Center. You can find a compilation of what's new at the U.S. DOT Volpe Center here: [What's New at the U.S. DOT Volpe Center - November 2024.](#)

## SMART MOVES

*Innovations & Highlights from the SMART Grants Program*

### **Los Angeles CoMotion and Open Mobility Foundation Summit**

- SMART Policy Advisor Madeline Zhu moderated two panels of SMART grant recipients at the Los Angeles CoMotion and Open Mobility Foundation Summit in Los Angeles, CA, November 12-14. The discussions focused on SMART grantee's approach to collaboration, data standardization, and curb management.

### **AUVSI North Carolina**

- SMART Grants Program Director Caldwell spoke at the Second Annual North Carolina Advanced Mobility Symposium at Wake Tech Community College in Raleigh, NC, November 13-14.



Photo Credit: U.S. DOT



Photo Credit: U.S. DOT