



# RESEARCH ROUNDUP



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## CELEBRATING ANNE AYLWARD'S RETIREMENT FROM THE JOHN A. VOLPE NATIONAL TRANSPORTATION SYSTEM CENTER

After a distinguished career dedicated to advancing transportation innovation, including eight years at the helm of the U.S. DOT Volpe Center, Director Anne Aylward retired effective 9/30/24. Her leadership and commitment have left a lasting impact at Volpe and across the entire transportation community. Join us in celebrating Anne's remarkable achievements and watch her retirement message [here](#).

## USDOT SMART GRANT PRESS CONFERENCE AT ALABAMA INSTITUTE FOR THE DEAF AND BLIND

On **September 24**, the City of Talladega, Alabama hosted a USDOT SMART Grant Kickoff at the Alabama Institute for the Deaf and Blind (AIDB). Principal DAS Hampshire joined local leaders to announce the launch of the "Enhancing Safety & Equitable Accessibility in Talladega By Employing Latest Technologies" (E-SEATBELT) initiative. This project prioritizes safety and equitable accessibility by using cutting-edge technologies to improve transportation infrastructure. Principal DAS Hampshire also participated in interviews with [CBS 42](#) and the ABC 33/40 to discuss the significance of the initiative.



PHOTO CREDIT USDOT

## OST-R VISITS UNIVERSITY OF NEBRASKA AND THE MID-AMERICA TRANSPORTATION CENTER FOR TRANSPORTATION SAFETY AND EQUITY

On September 27, the University of Nebraska hosted Dr. Firas Ibrahim and Caesar Singh from OST-R to highlight research under the Bipartisan Infrastructure Law's UTC program. Led by UTC Director Dr. Aemal Khattak, the event featured presentations, laboratory tours, and discussions on the Mid-America Transportation Center's research, which focuses on promoting safety, sustainability, and equity. Participants discussed transformative UTC projects, such as the University of Iowa seeking to increase biodiesel energy density and fuel economy to reduce emissions and enhance the performance of next generation heavy vehicles to promote sustainability, the University of Missouri Saint Louis's development of a framework for last-mile delivery with aerial autonomous vehicles, or drones, to improve healthcare access in rural areas, and the University of Nebraska's analysis of the gender-equity gap in safety hardware guidance, as belt-restrained female drivers sustain severe injuries at a rate 47% higher than a belt-restrained male driver, due to lighter bodyweight and sitting closer to the steering wheel. Participants observed a live crash test and explored the University's laboratory aimed at advancing cooperative driving automation.



PHOTO CREDIT USDOT

Dr. Rodney Bennett, Chancellor, University of Nebraska-Lincoln and UNL professors and researchers welcome OST-R.

## INTELLIGENT TRANSPORTATION SYSTEMS (ITS) OF AMERICA POLICY SUMMIT



PHOTO CREDIT ITSa INSTAGRAM

On **September 11**, a keynote address from Principal DAS Hampshire was delivered at the Intelligent Transportation Systems of America (ITSA) Policy Summit in Washington, DC, focusing on the U.S. DOT's approach to Artificial Intelligence. The speech highlighted the opportunities and challenges AI presents for the transportation system. Following the keynote, a panel discussion on "Responsibly Leveraging AI for a Better Outcome" included representatives from both the public and private sectors.

Further, on **September 16**, U.S. DOT's Shailen Bhatt, Administrator of the Federal Highway Administration (FHWA) was recognized as the World Congress Lifetime Achievement Award in the Americas region. Read more [here](#).

## HISTORICALLY BLACK COLLEGES & UNIVERSITIES (HBCU) AI RESEARCH SUMMIT



### HBCU Research AI Summit

September 9 - 11, 2024  
Hyatt Regency Baltimore Inner Harbor / Baltimore, MD

On **September 10**, Principal Deputy Assistant Secretary and Chief Science Officer (DAS) Dr. Robert Hampshire spoke at the Historically Black Colleges and Universities (HBCU) AI Research Summit in Baltimore, emphasizing DOT's commitment to advancing research and innovation within HBCUs. The summit brought together HBCU presidents, the Federal Election Commission (FEC) Chairman, and other key leaders to collaborate on shaping the future of AI research in alignment with U.S. DOT's mission and goals.

## 2024 ANNUAL NATIONAL HBCU WEEK CONFERENCE

At the 2024 Annual National Historically Black Colleges and Universities (HBCU) Week Conference in September, Principal DAS Hampshire delivered remarks highlighting the U.S. DOT's commitment to fostering research, innovation, and opportunities within HBCUs. His speech focused on the critical role HBCUs play in developing the next generation of transportation leaders and advancing technological innovations. The event brought together leaders from academia, government, and industry to discuss strategies for empowering HBCU students and faculty through collaboration and investment in research initiatives.



PHOTO CREDIT HBCU WEEK CONFERENCE

# NEW HIRES

## *Volpe Center Welcomes New Director of Operations: Dabney (Dab) Kern*

The U.S. DOT Volpe Center is pleased to announce Dabney Kern as the new Director of Operations, joining in August 2024. Kern brings extensive experience from the private sector, where he led national security portfolios and developed innovative solutions in secure communications. Learn more.



# SMART MOVES

## *Innovations and Highlights from the SMART Grants Program*

### **SMART Noteworthy Mentions**

- **SMART Policy Advisor Madeline Zhu Highlights Grantee Success at MOVE America Summit**
  - In September, SMART Policy Advisor Madeline Zhu attended the MOVE America Summit, where she presented case studies from the FY22 SMART grantees, showcasing innovative transportation solutions and successes.
- **Smarter Curbs Pave the Way for Smarter Cities**
  - [Government Technology](#) reports that cities like San José, Portland, and Minneapolis are using U.S. DOT SMART grants to modernize curb management. Projects include zero-emission delivery zones, digital curb inventories, and improved collaboration between city departments and businesses. These efforts, part of the Open Mobility Foundation's SMART Curb Collaborative, aim to create lasting data-driven solutions for urban planning and mobility. [Read more.](#)
- **Mandan, Hidatsa and Arikara Nation (MHA) Launches Drone Delivery for Medication**
  - The MHA Nation has launched a groundbreaking drone delivery service to transport medication between New Town and Twin Buttes, North Dakota. This innovative program aims to improve healthcare access for rural communities. [Watch the coverage.](#)

Photo Credit: U.S. DOT

Photo Credit: U.S. DOT

**VOLPE NEWS!** Check out how the Volpe Center is addressing future transportation challenges today! Discover their innovative approaches and groundbreaking solutions in the latest article on the website. Read more [here](#).

## OST-R RESEARCH ROUNDUP

# UPCOMING

- **Institute of Electrical and Electronics Engineers (IEEE) Vehicular Technology Conference**
  - Principal DAS Hampshire and ITS JPO Managing Director Egan Smith will participate in a fireside chat at the IEEE Vehicular Technology Conference on October 9 in Washington, DC. [Learn more.](#)
- **Upcoming Webinar: Advancing Low Carbon Materials in Transportation**
  - Join the U.S. DOT Climate Change Webinar on October 9 to explore advancements in low carbon materials for transportation infrastructure. Learn how these innovations are helping to combat climate change, with opening comments by Principal DAS Hampshire. [Register here.](#)
- **National Bureau of Economic Research's Fall 2024 Economics of Transportation Conference**
  - On **October 22**, Principal DAS Hampshire will speak at the Institute of Electrical and Electronics Engineers (IEEE) International Automated Vehicle Validation Conference. The event will focus on the latest advancements in validating automated vehicle technologies. [Learn more.](#)
- **International Organization for Standardization (ISO) Technical Committee (TC) 204 – Intelligent Transport Systems**
  - On **October 24**, Principal DAS Hampshire will open the Plenary session at the ISO TC 204 meeting, hosted at the Volpe Center. This major international collaboration will convene multiple technical working groups to advance standardization of information, communication and control systems urban and rural surface transportation, enabling ITS emergency services and commercial services. [Learn more.](#)



- **Fourth Annual Massachusetts Institute of Technology (MIT) Mobility Initiative Vision Day**
  - Principal DAS Hampshire will deliver remarks at the 4th annual MIT Mobility Initiative (MMI) Vision Day on **October 25**, at the Volpe Center in Cambridge, MA. This exclusive, full-day event brings together leaders from business, government, and academia to discuss strategic shifts in mobility.

# NOTEWORTHY

- **BTS Director Patricia (Pat) S. Hu Announces Retirement**
  - After over a decade of remarkable leadership, Patricia (Pat) S. Hu, Director of the Bureau of Transportation Statistics (BTS), has announced her retirement. Throughout her tenure, Pat has been instrumental in advancing BTS as the Nation's premier source of transportation data and statistics, helping to shape policy decisions and enhance the understanding of the transportation system across the country.

BTS is seeking a dynamic and visionary leader to continue this important work. The position is open to all qualified candidates and interested [individuals can find more information about the role here.](#) This is a unique opportunity to shape the future of transportation data and ensure BTS continues to deliver high-quality, impactful statistics.

- **Chandra R. Bhat Receives 2024 W.N. Carey, Jr. Distinguished Service Award from the Transportation Research Board (TRB)**
  - Chandra R. Bhat, the Joe J. King Endowed Chair Professor at The University of Texas at Austin and UTC Director at the University of Texas, Austin has been awarded the 2024 W.N. Carey, Jr. Distinguished Service Award. Chandra is honored for over 30 years of dedicated service to the Transportation Research Board (TRB) and his contributions to transportation research management.



*Pictured: Dr. Chandra R. Bhat. Photo credit Geosynthetics Magazine*

- **Dr. Rolf R. Schmitt, Receives 2024 Robert E. Skinner, Jr. Award from the Transportation Research Board (TRB)**
  - Dr. Rolf Schmitt, Deputy Director of BTS, has been named the recipient of the prestigious Robert E. Skinner, Jr. Award for 2024. With a career spanning four decades, Dr. Schmitt has played a vital role in shaping transportation statistical programs and establishing the National Transportation Library. His contributions have significantly advanced the transportation research community and the accessibility of quality data. The award will be presented at the 2025 TRB Annual Meeting on January 8, 2025, in Washington, D.C. You can read the [full award here.](#)

# NOTEWORTHY CONTINUED

- **U.S. DOT Deputy Secretary Polly Trottenberg Visits U.S. DOT Volpe Center**
  - Deputy Secretary Polly Trottenberg recently joined U.S. DOT Region 1 staff for a Town Hall at the Kendall Square campus. Over 300 staff participated in this hybrid event, where the Deputy Secretary answered questions and toured the facility. Her visit included meetings with senior staff and demonstrations of the Human Factors, QUIET, and NextGen labs. The Deputy Secretary was at the Volpe Center for the All Wheels Up Global Forum, which focused on accessibility in transportation, particularly in air travel.
- **HASS COE: Understanding AI Risks in Transportation | AI Assurance Whitepaper**
  - We're excited to announce the release of the Understanding AI Risks in Transportation whitepaper, developed under the U.S. DOT AI Assurance Program with NASA's System-Wide Safety Project. This second paper in the AI Assurance series explores AI risks and safety assurance in highly automated systems. [Read the whitepaper](#) and find additional publications online.
- **U.S. DOT Awards \$5 Million for Novel Cement Research**
  - The U.S. Department of Transportation has awarded \$5 million for a research initiative focused on developing novel cement technologies. This project aims to advance sustainable infrastructure and reduce carbon emissions in construction. [Learn more.](#)
- **U.S. DOT Announces New Award to Florida A&M University**
  - U.S. DOT awarded Florida A&M University \$2.97 million in funding to establish the Mobility Equity Research Center. The new Center will advance research and technologies to improve transportation and infrastructure for historically underserved communities through a three-pronged core research approach of policy, technology, and operation. [Learn more.](#)
- **Wyoming Leads the way in Highway Safety Tech**
  - Wyoming's innovative approach to real-time highway safety technology is setting a national example, as highlighted in a recent Cowboy State Daily article. Kate Hartman, Intelligent Transportation Systems Joint Program Office team lead at the U.S. DOT, received praise for her leadership in advancing these efforts. Her work is driving the adoption of cutting-edge safety measures across the U.S., helping to improve traffic flow and prevent accidents. [Read more.](#)
- **HASS Distributed Testing Webinars and Workshops**
  - Join this emerging community of practice with HASS COE and U.S. DOT colleagues as we exchange information on how to determine if distributed testing (DT) is appropriate for your project. Together, we will collaboratively discuss factors that can impact the suitability of using DT, such as stakeholder engagement, resources and timelines, technology factors, and policy support. Contact [joshua.every@dot.gov](mailto:joshua.every@dot.gov) for more information.

- **Volpe releases "Collection of News and Resources Showcasing Ways We're Working Toward a Safer Transportation Network for All"**
  - Discover more of the latest innovations in transportation safety through a series of stories compiled by the U.S. DOT Volpe Center. [Read more](#) about these impactful projects, such as the U.S. the Global Benchmarking Study, conducted with expertise from the U.S. DOT Volpe Center, which examines international innovations for improving pedestrian safety on urban arterials. [Learn more.](#)
- **National Transportation Library Archives Unveils Historic Transportation Collections**
  - The National Transportation Library (NTL) Archives, part of BTS, preserves the history of U.S. transportation with over 250 linear feet of materials like reports, artwork, and photos, including recent contributions from Blue Origin and FAA. Explore the [NTL Archives' digital collections online](#) for valuable historical resources.



*Pictured: U.S. DOT Archivist/Historian Eden Orelove, with 10 pallets of materials from FAA's Archive, ready to ship to DOT and offsite storage. Photo credit: U.S. DOT.*

- **Register for the U.S. DOT Project Delivery Center of Excellence Thought Leadership Series' Panel Session**
  - The U.S. DOT Project Delivery Center of Excellence's [Making Good on the Potential of the Bipartisan Infrastructure Law](#) thought leadership series continues on October 8, 2024, with a discussion of [Best Practices to Get Big Infrastructure Projects off the Ground.](#)
  - This second panel in the series will explore best practices for accelerated project delivery, including interstate cooperation and partnership, progressive design build, proactive community involvement, and more. Speakers include Stephen Sigmund, Chief of Public Outreach, Gateway Development Commission and Jessica Mefford-Miller, Chief Executive Officer, Valley Metro. Christopher Coes, Acting Under Secretary of Transportation Policy, will deliver opening remarks.
  - Click [here](#) for details and to register. To learn more about the U.S. DOT Project Delivery Center of Excellence, [visit here.](#)

# UTC CORNER

- **Purdue University and CCAT Showcase Cutting-Edge Transportation Innovation at IEEE ITS Conference in Canada**
  - Purdue University, in partnership with the Center for Connected and Automated Transportation (CCAT), will present their latest work at the IEEE ITS Conference in Canada on October 7. This collaboration highlights ongoing efforts between the Joint Program Office (JPO) and University Transportation Centers (UTCs) to advance transportation innovation.
    - *Inside GNSS Magazine (Pages 32-43): [Protecting the Skies: GNSS-Less Aircraft Navigation with Cellular Signals of Opportunity: Feature by Karen Van Dyke, Director of PNT and Spectrum Management at USDOT \(Pages 30-31\)](#).*
    - *IEEE Spectrum: [Test Flight Demonstrates Navigation by Cellphone Signals](#): This new technique offers protection against GPS spoofing.*
- **Self-Healing Concrete Railroad: Shape Memory Alloys**
  - The University of Illinois, a University Transportation Center (UTC), has released a video showcasing its groundbreaking research and innovative approaches to addressing transportation challenges. From cutting-edge technologies to sustainable solutions, this video highlights how the University is shaping the future of transportation. Watch the video [here](#).
- **Upcoming UTC Webinar Topics:**
  - [Unlocking the Future: How the IIA is Impacting U.S. Transportation Construction Market](#): **October 8 | 1:30 PM CDT**
  - [Safe Road Solutions Using Low-Cost Smart Phones and Artificial Intelligence](#): **October 10**

Visit the UTC [YouTube channel](#) for all upcoming and past webinars!

## IN THE MEDIA

- **[Purdue Research: ChatGPT Enhances Autonomous Vehicle Passenger Experience](#)**
  - Purdue University engineers have discovered that autonomous vehicles (AVs) could better understand and interact with their passengers using AI-powered chatbots like ChatGPT. This innovative approach leverages large language models to improve communication and passenger experience. [Read more](#).
- **[USDOT and Rutgers Partner to Develop Sustainable Infrastructure Materials](#)**
  - The U.S. DOT has partnered with Rutgers University's Center for Advanced Infrastructure and Transportation (CAIT) in a \$5 million research initiative to develop sustainable cement and concrete materials. This effort aims to reduce carbon emissions, promote sustainability, and strengthen infrastructure resilience, supporting national goals for net-zero greenhouse gas emissions. [Read more](#).
- **[SMART Grant Will Upgrade City of Talladega's Traffic Crossings](#)**
  - A \$1.1 million SMART grant will upgrade the city of Talladega's traffic crossings and benefit AIDB students, first responders, and the population of the city. Read more [here](#).

