



RESEARCH ROUNDUP

>>> WHITE HOUSE CONCRETE INNOVATION SUMMIT:

July 19

Dr. Robert C. Hampshire, DOT Chief Scientist and Principal Deputy Assistant Secretary for Research and Technology, recently moderated a panel on “Accelerating Emerging Innovation and Practices” at the White House Concrete Innovation Summit. This Summit focused on the expectation that 60% of emissions reductions in the concrete sector will come from technologies that are not yet ready for commercialization. The discussion centered on specific actions being taken to build a more robust innovation pipeline for novel low-carbon cement and concrete materials. Key insights were provided by John Harvey, Professor and Director of the UC Pavement Research Center (UC-Davis); Carolyn Snyder, Deputy Assistant Secretary for Buildings and Industry (DOE EERE); Nancy Daubenberger, Commissioner of the Minnesota Department of Transportation; and Leonidas Canellopoulos, Chief Sustainability and Innovation Officer at TITAN Group.



Photo Credit: U.S. DOT

Read more from the Press Release [here](#).

SMART GRANT PRESS CONFERENCE IN CHATTANOOGA <<<

July 25

Principal Deputy Assistant Secretary Dr. Robert C. Hampshire recently visited Chattanooga, TN accompanied by Stan Caldwell, Director of the SMART Grants Program. They addressed the community and local officials regarding the significant \$2 million federal grant awarded to the city. Chattanooga Mayor Tim Kelly was also in attendance, emphasizing the city's dedication to this initiative. This grant, aimed at enhancing pedestrian safety and operational efficiency, marks a pivotal step in advancing Chattanooga's Smart City initiatives. The project, “Advancing Interoperable Connectivity for Improving Safety and Operations in the City of Chattanooga,” underscores the city's commitment to leveraging cutting-edge technology to create a safer and more efficient urban environment. The visit highlighted the importance of this initiative and showcased the collaborative efforts to drive innovation and progress in Chattanooga. Read more from the [Chattanooga Times Free Press](#) and listen to “[A View From Washington On The SMART Grant In Chattanooga](#)” radio show, featuring Stan Caldwell.

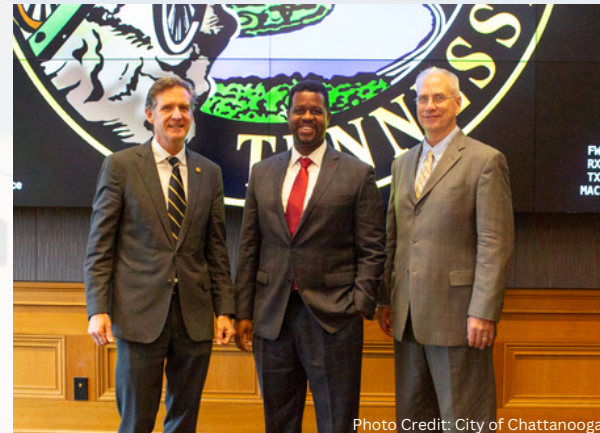


Photo Credit: City of Chattanooga

>>> U.S. DOT TRANSPORTATION AND CLIMATE SYMPOSIUM

July 12

U.S. DOT Headquarters hosted the Transportation and Climate Symposium, bringing together stakeholders to celebrate progress in decarbonizing transportation and to discuss future actions. Formal remarks were made by U.S. DOT Chief Scientist and Principal Deputy Assistant Secretary for Research and Technology Dr. Robert C. Hampshire, U.S. Department of Energy Principal Deputy Assistant Secretary Jeff Marootian, Assistant Director for Industrial Decarbonization at the White House Office of Science and Technology Policy Andrés F. Clarens, PhD, Streetlife Ventures Co-Founder and Managing Partner Laura Fox, and U.S. DOT Climate Change Research and Technology Director Gretchen Goldman. The event highlighted the importance of collaboration and investment in sustainable transportation initiatives.

For more details, visit the [USDOT press release](#). You can also access the recorded sessions [here](#).



Photo Credit: U.S. DOT

»»» OST-R RESEARCH ROUNDUP

»»» 10TH ANNIVERSARY OF U.S. DOT VOLPE CENTER'S GLOBAL MARITIME DOMAIN AWARENESS TRAINING WORKSHOP JULY & AUGUST



Photo Credit: Volpe Center

The U.S. DOT Volpe Center leads in developing cost-effective vessel tracking networks that enhance global maritime situational awareness. Known for advances in communications, traffic management, and marine navigation, Volpe provides essential technical leadership for maritime domain awareness (MDA) worldwide..

In July and August, Volpe is hosting 12 navy and coast guard officials from the Philippines, Malaysia, Sri Lanka, Thailand, and Bulgaria for its 10th annual workshop. This event has trained over 150 participants from 21 countries on Volpe's vessel tracking system to combat maritime crime. Sponsored by the U.S. Navy, the workshop trains operators to become trainers, teaching them to install MDA sensors, use tracking software, and maintain systems independently. Participants will also visit the U.S. Merchant Marine Academy for a seminar on radar theory and operations.

For more information, view the [infographic](#) on Volpe's maritime safety work or contact Mario Caputo, Acting Chief, at mario.caputo@dot.gov.

TRANSPORTATION SAFETY INSTITUTE TRAINING REFRESHER <<<

[The Transportation Safety Institute \(TSI\)](#) delivered 38 ten-day (80 hour) initial courses and four five-day (40 hour) safety refresher courses on safe hazardous materials handling in FY24 to domestic and international partners. These courses are required by the U.S. Department of Defense (DoD) to ensure that all personnel are properly trained to ship and handle hazardous materials on commercial and military aircraft. The training provided by TSI will enable all required U.S. military, foreign military and civilian personnel to obtain a working knowledge of hazardous materials requirements contained in the IATA (International Air Transport Association), 49 CFR (Code of Federal Regulations), IMDG Code (International Maritime of Dangerous Goods Regulation), and the AFMAN (Air Force Manual) 24-604 for use in the inspection and enforcement of the transportation of dangerous goods and regulatory compliance. TSI is the only non-DoD agency authorized in the Defense Transportation Regulations to conduct this training.



Photo Credit: Transportation Safety Institute

»»» MANDAN HIDATSA ARIKARA NATION DRONE PROJECT July 17

Stan Caldwell, Director of the SMART Grants Program, recently highlighted the innovative Mandan Hidatsa Arikara (MHA) Nation Drone Project, a key U.S. DOT SMART Grant project. This project is making significant strides in delivering essential medications via drones to the Three Affiliated Tribes in North Dakota.

Drawing from personal experiences in the region, Stan passionately described how this \$2 million federally funded initiative not only tackles healthcare delivery challenges but also enhances the quality of life in remote communities. The SMART Grants Program is committed to using advanced technology to create safer, smarter, and more connected communities. More information about this impactful project are available in a recent [newscast from KFYR-TV](#), an NBC affiliate in Minot, ND, and additional information can be found in this [report from KXNET](#).



Photo Credit: UND Aerospace



SMART MOVES

Innovations and Highlights from the SMART Grants Program

The SMART Grants Team is excited to announce that the SMART Stage 1 NOFO closed on July 12th with a strong turnout of 331 applications. The team is now reviewing these for eligibility. The Stage 2 NOFO opened on July 15 and will close on August 14. Applicants must have received a SMART Stage 1 grant to compete for a Stage 2 implementation grant.

Excellent feedback was also received from the SMART Summit at the Volpe National Transportation Systems Center, with attendees appreciating the chance to engage directly with DOT staff. A heartfelt thanks to the SMART Grants Team for your dedication and hard work!

SMART Noteworthy Mentions

- **Charleston Advances Safety with SMART Grant**
 - Charleston is making strides in traffic safety with the implementation of the SMART Grant, focusing on improving Calhoun Street intersections. For more insights, check out the coverage on [ABC News 4](#) and a detailed segment on [YouTube](#).
- **Advancing Rural Mobility Press Event Hosted by MI DOT**
 - Stan Caldwell, Director of the SMART Grants Program, participated in the Advancing Rural Mobility Press Event on June 28, hosted by Michigan DOT. This event showcased new innovations aimed at enhancing rural public transit systems, highlighting cutting-edge advancements that are transforming rural mobility. Check out the details [here](#).
- **Spotlight on Los Angeles' SMART Initiatives**
 - The LA Metro project is now live, integrating Metro and special event ticketing ahead of the 2028 Olympics. This includes a partnership with the LA Philharmonic and the Hollywood Bowl, featuring a joint marketing campaign to promote the new service.
- **SMART Grant To Help Expedite Emergency Response Times**
 - This SMART Grant is set to expedite emergency response times in Henry County, GA by implementing advanced traffic signal technology. This project aims to enhance the efficiency of emergency vehicles, reducing response times and improving public safety. ([The Henry Herald](#)).



Photo Credit: U.S. DOT



Photo Credit: U.S. DOT

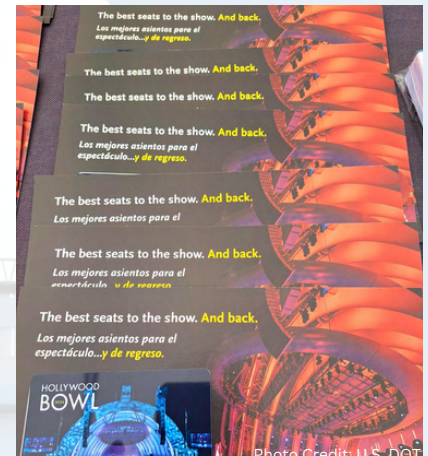


Photo Credit: U.S. DOT

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](#).



UPCOMING

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

- **HASS CONNECTS**
 - On **August 8**, HASS Connects invites DriveOhio, the North Carolina Department of Transportation, and PAVE to discuss how states and organizations approach consumer information/education on highly automated transportation. HASS COE Acting Assistant Director of Program Development & Strategy Ashley Nylen will moderate the event. Contact denise.bakar@dot.gov for assistance.
- **Distributed Testing Webinars and Workshops**
 - Join this emerging community of practice with HASS COE and U.S. DOT colleagues (novices and experts alike!) 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 and organizational support. Contact joshua.every@dot.gov for more information.
- **Future of Transportation Summit**
 - DAS Robert Hampshire will be speaking at the [Inaugural Future of Transportation \(FoT\) Summit](#), hosted by the U.S. DOT, from **August 13-15**, in Washington, DC. He will be joined by National Science Foundation Assistant Director for the Engineering Directorate, Dr. Susan Margulies. The summit, led by the Safety21 National UTC at Carnegie Mellon University, will showcase U.S. DOT University Transportation Center achievements. It will emphasize developing a future-focused transportation vision, enhancing multi-modal and inter-modal connectivity, and engaging a diverse community of stakeholders. Key events include keynote addresses, panels, and presentations aimed at improving mobility, promoting safety, reducing congestion, and mitigating cybersecurity risks.
- **HBCU Research AI Summit**
 - DAS Hampshire will be attending the [HBCU AI Research Summit](#) on **September 10**, showcasing his commitment to advancing research and innovation within historically black colleges and universities. This summit presents an excellent opportunity for collaboration and sharing insights that align with U.S. DOT's mission and goals.

NOTEWORTHY

- **Transportation Applications of Large Language Models Workshop**
 - Thanks to all who joined the U.S. DOT Transportation Applications of Large Language Models Workshop on July 9! Co-hosted by HASS COE and the U.S. DOT AI Working Group, the workshop featured briefings on cutting edge technology from specialists at Amazon Web Services (AWS) and immersive hands-on demonstrations. Don't hesitate to reach out to daniel.lemaster@dot.gov for more information.
- **Quantum Technologies in Transportation Workshop**
 - Missed the U.S. DOT Quantum Technologies in Transportation Workshop on July 10? Check out the [recording](#). Co-hosted by HASS COE and ARPA-I, the workshop featured experts from quantum and transportation domains to explore new opportunities. Attendees included U.S. DOT staff, White House quantum head, DARPA PM, industry leaders from IBM, MITRE, and IonQ, and national lab staff from NREL, ORNL, and NETL. Don't hesitate to contact daniel.lemaster@dot.gov and prachi.vakharia.ctr@dot.gov for more information. Check out the images below!



Photo Credit: U.S. DOT



Photo Credit: U.S. DOT

- **TRB ARTS24**
 - ICYMI! HASS COE presented at the TRB Automated Road Transportation Symposium (ARTS24) from July 29 - August 1. Acting Assistant Director Ashley Nylen and Senior Scientist Dr. Mubassira Khan led a session on U.S. DOT grant programs and automated transportation research. Ashley also presented on digital infrastructure planning. Senior Strategist Jason JonMichael led a session with first responders on automated vehicle research and incident management.
- **FAA Drone & AAM Symposium**
 - At the FAA Drone & AAM Symposium on **August 1**, HASS COE Senior Scientist Derek Morgan led a session on sustainable advancements in drone and advanced air mobility technologies. Industry leaders shared insights on using innovative technology to improve environmental sustainability and operational efficiency.



UTC CORNER

• CARMEN+ University Transportation Center (UTC)

- We are excited to announce that the CARMEN+ UTC's latest research on aircraft navigation without GPS has been featured on the cover of the [August issue of Inside GNSS Magazine and in IEEE Spectrum](#). The research team successfully demonstrated meter-level accurate aircraft navigation on U.S. Air Force aircraft over trajectories spanning hundreds of kilometers. This breakthrough research helps to address the pressing issue of GPS jamming and spoofing that has been affecting aviation globally.
 - *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.*
- These articles are based on recently accepted journal papers:
 - [Aircraft Navigation in GNSS-Denied Environments via Radio SLAM With Terrestrial Signals of Opportunity](#), *IEEE Transactions on Intelligent Transportation Systems*, June 2024.
 - [I Can Hear You Loud and Clear: GNSS-less Aircraft Navigation with Terrestrial Cellular Signals of Opportunity](#), *IEEE Transactions on Aerospace and Electronic Systems*, July 2024.

• Upcoming UTC Webinar Topics:

- [Cyber Resilient GNSS-Based Navigation for Autonomous Ground Vehicles Under Threat Uncertainties and Contested Urban Environments: August 2 | 2PM ET](#)
- [Automated Assessment of Transportation Infrastructure Condition Using User Sensor Technology and Image Processing: August 29 | 2PM ET](#)
- [A Conversation with Robert Hampshire, USDOT's Deputy Assistant Secretary for Research and Technology: September 4 | 12PM ET](#)
- Visit the UTC [YouTube channel](#) for all upcoming and past webinars!

IN THE MEDIA

- FORBES: [This One Delivery Switch Could Save UPS & Co. Billions — No, Really](#)
- THE VERGE: [The Biden Administration Wants to Find More Sustainable Construction Materials](#)
- MILITARY+AEROSPACE ELECTRONICS: [U.S. DOT Awards \\$7 Million for Complementary Positioning, Navigation and Timing \(PNT\) Technologies](#) | Read more from the [Press Release](#)
- KXNEXT NEWS: [UND staff teaches kids the benefits of drones with Smart Grant](#)
- FEDSCOOP: [Transportation Department Doubles Down on Securing GPS Tech](#)
- ELECTREK: [Portland's Plans for a Zero-Emission Delivery Zone Sound Like a Breath of Fresh Air](#)
- ARCADIS: [Navigating the Path to Safer Roads in the US and Beyond](#)
- INSIDE GNSS: [The ABCs of PNT](#)

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!

