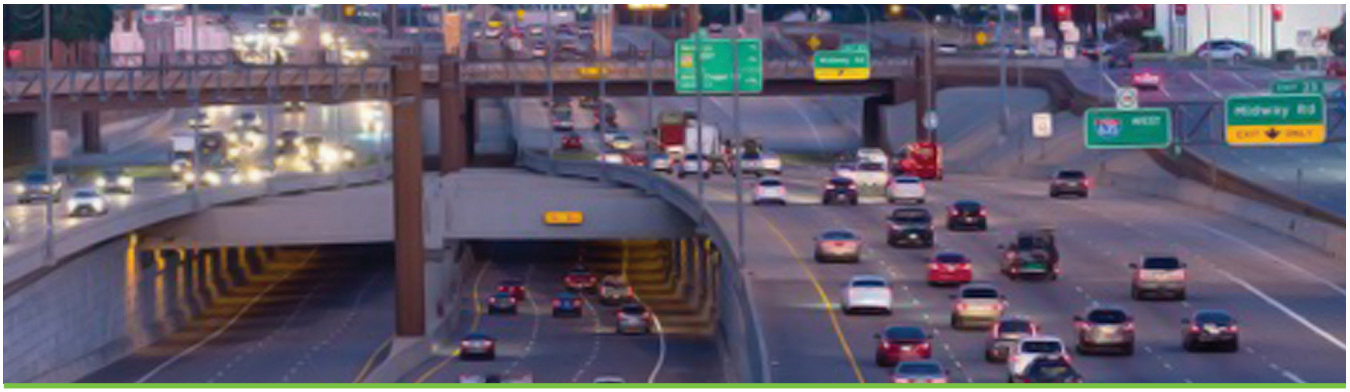
EXPLORATORY ADVANCED RESEARCH

Exploratory Advanced Research (EAR) Program

Highlights

Thank you for visiting the Federal Highway Administration's EAR Program booth at the 2024 Transportation Research Board Annual Meeting.

The EAR Program addresses the need for longer term, higher risk research that has the potential for transformative improvements to transportation systems. Here are references for the recent and current EAR Program projects that were highlighted at the booth to illustrate the kinds of improvements this program cultivates.



© Texas A&M Transportation Institute. Traffic modeling relies on data from highways such as the Lyndon B Johnson Freeway in Dallas, TX.

USING BEHAVIORAL ECONOMICS TO BETTER UNDERSTAND MANAGED LANE CHOICE

Safer, More Reliable Transportation with Behavioral Economics: Cellphone Use and Managed Lane Choice. https://www.fhwa.dot.gov/publications/research/ear/20013/20013.pdf.

NOVEL APPROACHES TO AGE-RESISTANT BINDERS

Researching Novel Approaches for Aging Resistant Binder Technologies. https://www.fhwa.dot.gov/publications/research/ear/20051/20051.pdf.

MIMIC: MULTIDISCIPLINARY INITIATIVE ON METHODS TO INTEGRATE AND CREATE ARTIFICIAL REALISTIC DATA

MIMIC—Multidisciplinary Initiative on Methods to Integrate and Create Artificial Realistic Data. https://highways.dot.gov/sites/fhwa.dot.gov/files/FHWA-HRT-23-015.pdf.

Multidisciplinary Initiative to Create and Integrate Realistic Artificial Datasets. https://highways.dot.gov/sites/fhwa.dot.gov/files/FHWA-HRT-23-058.pdf.

Realistic Artificial Datasets: Objective Evaluation of Data-Driven Safety Analysis Models. https://www.fhwa.dot.gov/publications/research/ear/20047/20047.pdf.

U.S. Department of Transportation
Federal Highway Administration

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SUPPLEMENTARY CEMENTITIOUS MATERIALS PROJECTS:

Nontraditional and Natural Pozzolan-Based SCMs or Inorganic Polymers for Transportation Infrastructure

PERFORMANCE-BASED CLASSIFICATION METHODS FOR RECLAIMED FLY ASH

Supplementary Cementitious Material Advancements: Helping to Make Longer Lasting Concrete Highways and Transportation Structures. https://www.fhwa.dot.gov/publications/research/ear/20048/20048.pdf.

AUTOMATED VIDEO PROCESSING ALGORITHMS TO DETECT AND CLASSIFY HIGH-LEVEL BEHAVIORS

The Role of Artificial Intelligence and Machine Learning in Federally Supported Surface Transportation 2022 Updates https://www.fhwa.dot.gov/publications/research/ear/22026/22026.pdf.

VIDEO ANALYTICS FOR AUTOMATIC ANNOTATION OF DRIVER BEHAVIOR AND DRIVING SITUATIONS IN NATURALISTIC DRIVING DATA

The Role of Artificial Intelligence and Machine Learning in Federally Supported Surface Transportation 2022 Updates https://www.fhwa.dot.gov/publications/research/ear/22026/22026.pdf.

USE OF WASTE PLASTICS IN ASPHALT

Improving the Compatibility of Waste https://www.fhwa.dot.gov/publications/research/ear/21084/21084.pdf.

To learn more about these projects, follow this quick response code or URL to the website.

https://highways.dot.gov/research/research-programs/exploratory-advanced-research/about-exploratory-advanced-research-program

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