ASU Ira A. Fulton Schools of Engineering
Arizona State University

TBD TRAVEL BEHAVIOR AND DEMAND NATIONAL CENTER

TBD WEBINAR+ SERIES

MARCH 19

Innovative Solutions for Curve Safety Assessment and Improvement Using AI and Smartphone Technologies

Thursday, March 19, 2026, at 12:00 PM (U.S. Arizona Time)

HYBRID OPTIONS

In-person Attendance
Paul C. Helmick Center
Room 533

Register for Virtual Attendance
https://tinyurl.com/3tzw73fp

ABOUT THE TALK

Horizontal road curves account for approximately 25% of fatal crashes in the U.S. while comprising only about 5% of roadway mileage. MUTCD-compliant curve warning signs with advisory speeds can reduce crashes by more than 40%, offering a cost-effective safety solution. This talk presents innovative solutions that leverage AI, low-cost smartphone and practical engineering designs to address curve safety challenges, supported by the National Science Foundation (NSF), the NCHRP Innovation Deserving Exploratory Analysis (IDEA) program, and state Departments of Transportation. In addition, recent work leveraging large-scale telematics crowdsourcing data from logistics trucking fleets across North America, combined with our innovative technology, to enable scalable roadway safety assessment and inform systemwide safety improvements will be presented.

YICHANG (JAMES) TSAI, PHD
PROFESSOR, GEORGIA INSTITUTE OF TECHNOLOGY

Dr. Yichang (James) Tsai is a Professor of Civil and Environmental Engineering and an Adjunct Professor of Electrical and Computer Engineering at Georgia Tech. His research applies advanced sensing, AI, computer vision, and GIS to automated pavement evaluation, transportation safety, aging population mobility, and energy and emission reduction. He led Georgia's risk-based Pavement Management System (GPAMS), used by GDOT for over 15 years, and received the 2017 AASHTO High Value Research Award. A recognized global expert in AI- and sensor-based infrastructure health and safety assessment and asset management, he has served as an Associate Editor of the ASCE Journal of Computing in Civil Engineering since 2010.

TOMNET Transportation Center
Teaching Old Models New Tricks

For any assistance, please contact Dr. Irfan Batur at ibatur@asu.edu