

The National Academies of  
SCIENCES • ENGINEERING • MEDICINE



TRANSPORTATION RESEARCH BOARD

**Call For Abstracts**

**First International Roadside Safety Conference (IRSC)  
San Francisco, California - June 12-15, 2017**

**Holiday Inn Golden Gateway Hotel  
1500 Van Ness Avenue  
San Francisco, California 94109  
(415) 441-4000**

***“Safer Roads, Saving Lives, & Saving Money”***

**Overview:**

Every year, over 17,000 people are killed in roadway departure crashes in the United States (U.S.), and even many more in other countries. The World Health Organization (WHO) has reported that global road traffic deaths have reached 1.25 million per year. As such, the Transportation Research Board's (TRB's) Roadside Safety Design (AFB20) standing committee will promote changes that will reduce the frequency and severity of roadside crashes. The ultimate measure of effectiveness is a reduction in the number of fatalities and injuries resulting from run-off-road crashes. To help meet this goal, TRB and roadside safety professionals around the world have deemed it highly necessary to develop and host an International Roadside Safety Conference (IRSC).

The primary objective of TRB's First International Roadside Safety Conference (IRSC) is to support and advance global efforts to reduce deaths and serious injuries associated with run-off-road crashes. The IRSC will contribute to this objective through: (1) peer exchange and improved dissemination of information within the international roadside safety community; (2) increased collaboration amongst international roadside safety experts, researchers, government agencies, and engineering consultants; and (3) a more rapid implementation of new technologies, best practices, and products from around the world.

The IRSC event will provide a forum to: explore current roadside safety problems and practices, both in the United States and around the world; provide a peer exchange to discuss and disseminate research related to a full range of roadside safety issues, including administration, planning, design, construction, operations, and maintenance; highlight technological advancements and innovations involving new research as well as proven practices; and provide table-top exhibition space for manufacturers and private industry to showcase new technologies.

Both presentations and technical papers will be accepted. All accepted technical papers will be peer-reviewed by at least two internationally-recognized experts and published in a TRB Transportation Research E-Circular in advance of the conference. The top rated papers from each of the subthemes (see below) will be considered for publication in a special edition of the Transportation Research Record, *Journal of the Transportation Research Board*. All presentations will also be archived and made available on the web to participants following the event.

The conference is currently co-sponsored by Transportation Pooled Fund Program Project No. TPF-5(329), including the State Departments of Transportation for Kentucky, Minnesota, Nebraska, Ohio, Washington, and West Virginia.

## Due Dates:

Interested practitioners, administrators, manufacturers, consultants, government officials, academia, and researchers are invited to use the [Abstract Submission Page](#) to submit an abstract of not more than 500 words to TRB by **June 30, 2016**.

Each submission should indicate if the abstract is to be considered for:

- (1) Presentation & Publication - prepare a paper for presentation at the Conference and publication in the E-Circular, or
- (2) Presentation Only - make a presentation at the Conference on the abstract topic without preparing a paper.

Authors of accepted abstracts will be advised in early **August 2016** and invited to prepare a paper and/or make a presentation at the conference. For papers, initial manuscripts will be required by **October 1, 2016** in order to begin the paper review process. The final manuscripts will be required by **March 1, 2017** in order to accommodate distribution of the published E-Circular at the conference. For paper abstracts that are accepted for presentation at the conference, authors are expected to submit revised papers for publication in the TRB E-Circular and make a formal presentation at the conference.

\*\*For papers not selected for dual publication in the *Journal of the Transportation Research Board*, authors can later seek publication of their specific papers in other journals. However, authors must acknowledge to those publishers that such papers were published in a TRB E-Circular from the IRSC event and were peer reviewed by TRB AFB20. Of course, papers with significant modifications may not involve the expectations noted above.

## Questions:

Send questions regarding this “Call for Abstracts” to: [smaher@nas.edu](mailto:smaher@nas.edu)

## Topics of interest:

General topics of interest for the IRSC include those in all areas which promote the dissemination of research, best practices, and public policy related to the design, testing, selection, placement, and in-service performance of roadside safety hardware and geometric features, such as: traffic barriers; crash cushions; structural supports for luminaires, signals, and utilities; drainage structures; and other safety features located in the transportation system right-of-way. Other topical areas of interest may include new innovations, methodologies, and technologies that: reduce roadside encroachments, lane departures, and cross-median crashes; provide cost-effective safety advances to benefit the traveling public and nearby vulnerable road users; and reduce the frequency and severity of roadside crashes.

Presentation and paper abstracts are being sought to address the strategic goals of the IRSC, as described above. Specific topics of interest to the IRSC may include the following:

### Innovations in Roadside Safety Hardware and Features

- Advances in rigid, semi-rigid, and flexible barriers
- New approach guardrail transitions
- Innovative bridge rails and median barriers
- Technologies for accelerated bridge rail construction
- New energy-absorbing technologies – crash cushions, guardrail end terminals, TMAs, & luminaire poles
- Recent advances in landscape treatments & aesthetic barriers
- Geometric features (i.e., slopes, ditches, drainage culverts, curbs, pavement edges)
- Work-zone devices
- Advances in breakaway sign support, luminaire, and traffic signal pole technologies
- Treatments for developing and other countries

### Advancements in Roadway Safety Features

- High-Friction Surface Treatments (HFSTs)
- Lane marking and retro-reflectivity
- Speed tables and speed bumps

### Roadside Safety Design and Hazard Mitigation

- Cost-effective safety improvements for low-volume roads and developing countries

- Aesthetic safety practices & treatments
- Median design and crash prevention
- Barrier selection criteria
- Clear zone guidelines
- Narrow hazards - trees, utility poles, signs, and traffic signals
- Urban roadside safety design, including ADA
- Installation criteria for roadside features
- Performance tolerance for roadside safety hardware
- Improved visibility, delineation, and messaging
- Vulnerable user safety – pedestrians, bicyclists, & motorcyclists
- Case studies – proven methods and best practices
- Sustainable design and solutions

#### **Simulation, Testing, and Evaluation Methods**

- Harmonization of crash testing standards
- Updates to MASH and EN1317 safety performance criteria
- Computer simulation and computational mechanics
- Enhanced vehicle models for FEA simulation
- Improved material models for FEA simulation
- Simulation success stories
- Dynamic component testing
- Advances in surrogate test vehicles
- Full-scale vehicle crash testing

#### **Vehicle Technologies and Safety Considerations**

- Advances in Vehicle to Roadside Infrastructure (V2RI) technologies
- Connected vehicles
- Crash analysis with Airbag Control Module (ACM) data
- New safety innovations in vehicles
- Barrier compatibility for vehicles and motorcycles

#### **Roadway Departure Data Collection and Analysis**

- Asset management and roadside inventory
- Rollover and cross-median crashes
- Before/after crash data studies
- In-service performance evaluations
- Risk-based and economic analyses
- Safety data collection
- Safety improvements through accident reconstructions
- Concepts, products, and methods designed to reduce roadway departure crashes
- Real-world crash data

#### **Safety Policy, Guidelines, Plans, Programs, and Strategies**

- “Safe System Approach”
- Strategic Highway Safety Plans
- *Decade of Action for Road Safety* – Action & Progress
- Road/roadside safety audits or management systems
- Tort risk mitigation strategies for road agencies
- Life-cycle cost considerations
- Safety analysis tools, including decision trees
- Safety benefits of speed reduction & increased enforcement
- Implementation guidelines for safety treatments
- Maintenance of existing roadside safety infrastructure
- Temporary traffic control safety
- Safety considerations in asset management