

TRB ACS20(1)

Safety Analytical Methods Subcommittee

**A subcommittee of the TRB Committee
on Safety Performance and Analysis**

TRB Annual Meeting 2023



First time attendees

Attendance

- Menti.com and code: 7640 5123



Welcome!

Agenda

1. **Subcommittee scope, activities, leadership roles**
2. Facilitated discussion: **Performance-based design: Safety analysis needs for future editions of the Green Book**
3. **Update on NCHRP 17-100: Leveraging Artificial Intelligence and Big Data to Enhance Safety Analysis**
4. **Research Needs** Statement (RNS) discussion
5. **Other**
 - **Consensus study**, Jeevan Singh (NJDOT, member of consensus study team)
 - Update on national efforts and initiatives (e.g., NCHRP projects)
 - Upcoming events
 - Events during TRB, other
 - Subcommittee participants and task forces/working groups
 - New methods/theories (e.g. white papers, e-circular, special issues, RNS)
 - Promotion of applications (e.g. workshops, training, RNS)
 - Ad hoc issues with the Highway Safety Manual (e.g., RNS)
 - Liaisons with other committees/subcommittees
 - Open floor
6. **Adjourn**

Scope of subcommittee

The **Safety Analytical Methods subcommittee** supports the parent committee's charge to:

- Foster the development of new theories and analytical methods to advance the science of safety to meet the needs of future technologies and road users
- Promote the application of these methods and supporting tools to gain new safety knowledge, and the institutionalization of science-based methods

Activities of subcommittee

The following **activities** will be undertaken **as needed**:

- Generating Research Need Statements for consideration by the Committee related to analytical methods and procedures for highway safety performance
- Serving as the Committee's primary resource for assessing technical issues in data-driven highway safety performance analysis methods
- Evaluating the effectiveness of current and proposed data-driven methods and tools and their use to assess highway safety performance (in conjunction with *TRB Committee AED60*).
- The Subcommittee will monitor emerging ideas and approaches in safety analysis, i.e., include artificial intelligence, safety simulation, causal and structural modeling and surrogate measures of safety.
- The Subcommittee will monitor applicable analytical methods from other disciplines, such as econometrics, epidemiology and biostatistics.
- The Subcommittee will promote analysis and development of quantitative metrics for evaluating the use of emerging and non-traditional data sets not already used in safety, such as emergency medical transport and care, hospital records and other public health databases, crowd-sourcing data, social network data, tort/legal settlement data, driver and motor vehicle records, and naturalistic driving data.
- Serving as a resource for analytical methods pertinent to other ACS20 subcommittees and task groups, including the *Surrogate Safety Measures Subcommittee* and the *Pedestrian and Bicycle Safety Analysis Subcommittee*.

Leadership roles for the subcommittee

Secretary/ communications coordinator*	Taking and posting meeting agendas/minutes, maintaining the subcommittee contact list, and information distribution.
Research coordinator	Assisting with development and submission of research needs statement, identifying research topics for white papers and TRB E-circulars. - <i>Bahar Dadashova (TTI)</i>
TRB event coordinator	Supporting paper review and planning for TRB sessions. - <i>Jonathan Wood (Iowa State)</i>
Liaison Coordinator*	Promoting subcommittee activities through the connection with end-users, professionals and other committee/subcommittees.

* Volunteers needed - contact Ida/ Xiao

Performance-based design: Safety analysis needs for future editions of the Green Book

Research needs

NCHRP 17-100

Artificial intelligence

Leveraging Artificial Intelligence and Big
Data to Enhance Safety Analysis

Research topics

New ideas, teaming up to develop ideas to submit to Doug Harwood

Topics

Keep this in mind... evaluation criteria:

- a) the overall importance of conducting research on this topic
- b) do you believe that State DOTs will consider completion of research on this topic to be a key priority

Other items

Other items

- Update on national efforts and initiatives
- Upcoming events
- Subcommittee membership and task forces/working groups:
 - New methods/theories (e.g. white papers, e-circular, special issues, RNS)
 - Promotion of applications (e.g. workshops, training, RNS)
 - Ad hoc issues with the Highway Safety Manual (e.g., RNS)
- Liaisons with other committees/subcommittees
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Thank you

