

OF THE NATIONAL ACADEMIES

COMMITTEE ON SAFETY PERFORMANCE AND ANALYSIS (ACS 20) Safety Analytical Methods Subcommittee, ACS20(1) AGENDA – 2024 TRB ANNUAL MEETING (TUESDAY)

Additional material to be posted: http://www.trbacs20.org

Tuesday, January 9, 2024 10:15AM – 12:00 PM ET Liberty Salon JK (M4), Marriott Marquis

10:15 am Call to Order and Introductions Ida van Schalkwyk/Xiao Qin Subcommittee scope, and leadership roles Ida van Schalkwyk/Xiao Qin

10:30 am Presentation and discussion of HSM Pooled Fund Project: Applications of Data Driven Safety Analysis: Exploring the Validity of Combining Predictive Methods in the HSM Scott Himes

Project Scope: The HSM promotes the Empirical Bayes (EB) method for analyzing project alternatives to improve reliability in estimates of safety performance. The HSM supplement clarifies the EB method cannot be used for any alternatives if it is not applicable for all alternatives. This has led agencies to avoid the EB method in general, including "future no-build" scenarios. Considering only predicted crash frequency treats locations as "average" locations. The purpose of this effort was to identify an effective approach for consistently and reliably incorporating crash history, demonstrate the role calibration plays in safety analysis, and confirm the appropriate traffic volume for use in project alternative analysis.

11:30 am Research Needs Statement (RNS) discussion All

11:50 am Other All

- Update on national efforts and initiatives
- Upcoming events
- Subcommittee membership and task forces/working groups
- Liaisons with other committees/subcommittees
- Open floor

12:00 pm Adjourn Ida van Schalkwyk

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Subcommittee Scope and Mission January 8, 2021 (Draft)

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

The following activities will be undertaken as needed:

- 1. Generating Research Need Statements for consideration by the Committee related to analytical methods and procedures for highway safety performance
- 2. Serving as the Committee's primary resource for assessing technical issues in data-driven highway safety performance analysis methods
- 3. 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).
- 4. 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.
- 5. The Subcommittee will monitor applicable analytical methods from other disciplines, such as econometrics, epidemiology, and biostatistics.
- 6. 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.
- 7. 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.

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