TRB ANB20(3) sub-committee on
Surrogate Measures of Safety

ICTCT sub-committee on
Surrogate Measures of Safety

Workshop

Surrogate Measures of Safety for Heterogeneous Traffic: Automation, Cyclists, and Pedestrians

When: 12th January 2020, 9:00 AM-12:00 PM
Where: Washington, D.C., Convention Center, 143B

Sponsoring Committee: Safety Data, Analysis and Evaluation (ANB20)
Co-sponsoring Committee: Pedestrian (ANF10) and Bicycle (ANF20)

Co-organizers: Nicolas Saunier, *Polytechnique Montreal (Canada)*
Aliaksei Laureshyn, *Lund University (Sweden)*

As traffic systems quickly evolve with the automation of driving, the safety of vulnerable road users will remain as important as ever. In these changing conditions, it is crucial to be able to assess safety swiftly, which can only be done with non-crash observations or surrogate measures of safety. Such measures also contribute to a better understanding of the factors that lead to collisions. This workshop will cover the recent developments in the field, including automated data-collection methods.

Programme

9:00	Welcome	**Nicolas Saunier** *Polytechnique Montreal (Canada)*
9:05	SMoS validation re-visited: serious hinders for 'classical' validations and 'relative' validation as a way out	**Aliaksei Laureshyn** *Lund University (Sweden)*
9:15	Extreme value theory approaches for traffic conflict based crash estimation: modelling advancements and applications	**Tarek Sayed** *University of British Columbia (Canada)*
9:25	Probabilistic approach to motion prediction in detection of evasive actions	**Carl Johnsson** *Lund University (Sweden)*
9:35	**Panel discussion 1:** Methodological issues	
10:15	*Break*	
10:30	Video analytics for smart cities: generating better data to make our intersections smarter and safer	**Franz Loewenherz** *City of Bellevue (USA)*
10:40	Signalized intersection to roundabout conversion in heterogeneous traffic context: estimation of safety benefits using surrogate measures	**Anurag Pande** *California Polytechnic State University (USA)*
10:50	Let's not wait for micro-mobility crashes	**Annie Chang** *McGill University (Canada)*
11:00	Automated Shuttle Interactions in City Traffic	**Étienne Beauchamp** *Polytechnique Montréal (Canada)*
11:10	**Panel discussion 2:** Case studies and SMoS prospects for practitioners	
11:55	Closing words	**Aliaksei Laureshyn** *Lund University (Sweden)*

Surrogate Measures of Safety (SMoS) are indicators derived from observation and safety gradation of non-crash events in traffic with the ultimate goal to estimate the expected crash/injury frequency as well as to get a better understanding of the crash mechanisms and contributing factors. SMoS are often advocated as an alternative (or a complement) to historical crash records in conditions when such data is unavailable or limited in amount and quality.

Sub-committee on Surrogate Measures of Safety ANB20(3) belongs to the TRB standing committee ANB20 Safety Data, Analysis and Evaluation Committee. It was created in 2008 with the aim to promote and guide research and development on surrogate measures, their implementation, validation and applications.

International Co-operation on theories and Concepts in Traffic safety (ICTCT) is an international association created in 1970s by researchers working with traffic conflict techniques. The scope of the association interests has gradually grown to embrace various aspects of traffic safety, however, the SMoS sub-committee pursues its core interest and promotes the subject by sharing literature, courses, facilitating data and software exchange and organising special sessions and workshops.

The workshop materials can be accessed later at: https://www.ictct.net/surrogate-measures-safety/workshops/trb2020/