

99th TRB Annual Meeting
Surrogate Measures of Safety Subcommittee ANB20(3)
<https://sites.google.com/site/surrogatesafety/>

Wednesday, January 15th, 2020, 10:15 AM - 12:00 PM
Marriott Marquis, Marquis Salon 8 (M2)

Chair: Nicolas Saunier

Prepared by Étienne Beauchamp, revised by Nicolas Saunier

1. Opening remarks - Nicolas Saunier

Nicolas Saunier mentioned that participants can register to be on the subcommittee mailing list on its [website](#).

2. Introduction of participants - all

3. Discussion and approval of the 2019 meeting minutes - all

No comments. Approval of the minutes proposed by Nicolas Saunier. Signing of the presence sheet by participants.

4. Updates from liaisons with other TRB groups and International Associations

○ Geometric Design (AFB10)

A participant, who attended the Geometric Design committee meeting, mentioned that committee is merging and renamed.

○ ANB20(5) Joint Subcommittee on Speed and Safety

A participant mentioned the debate around speed and surrogate measures of safety (SMoS), and that Sunday's workshop brought new perspectives.

○ Future Directions in Safety Analysis ANB20(1)

A participant of the ANB20(1) meeting mentioned the intent to solidify the subcommittee scope and reach to be more visible, to reach out for breakthroughs and new research applying big data and AI.

Another participant mentioned the continued interest and rise of microscopic simulations for safety.

○ International Co-operation on Theories and Concepts in Traffic Safety (ICTCT) - Aliaksei Lareshyn

Aliaksei Lareshyn gave an update on ICTCT. The scope of ICTCT is now larger. An extra workshop was scheduled for 2020 (see website). He also quickly mentioned the 9th International Cycling Safety Conference in 2020 in Lund.

○ SAE committee on Surrogate Measures of Safety - Aliaksei Lareshyn

No update about the SAE committee.

5. Surrogate measures at the 99th TRB Annual Meeting - Synthesis of Papers - Nicolas Saunier

Bismarck Ledezma-Navarro identified 25 papers. A participant commented on his concern about the use of surrogate measures of safety for automated vehicles (AV): using indicators that were used and calibrated for human drivers is not suitable for AVs.

6. Research updates and presentations

- SSAM: Are we there yet?, Li Zhang

Li Zhang gave an update about SSAM ([GitHub](#)). He showed conflict points and provided generally used surrogate measures, then went quickly through the SSAM software by showing the details one can provide, the different infrastructure types and the data analysis the software can perform.

Several questions were raised about the use of SSAM to make simulations and make decisions, and about case studies that demonstrate its reliability. Li Zhang answered that it depends on the application. A participant mentioned an engineering firm that used this for at least 10 projects. Nicolas Saunier stated that, for highways and locations that were not considered in the original validation of SSAM, there is no guarantee.

- Indiana research on traffic conflicts method, Andrew Tarko

Andrew Tarko showed a recent research project in Indiana (2014 to 2020). The project started with a PhD student working on image technology and extreme value theory. He also skimmed over the demonstration of the results and the equipment used. Two TScan units were built recently. Future work for 2020-2022 was presented: validation of studied SMOs and threshold estimation. There was also research undergoing on predicting crashes from conflict severity and developing analysis tools to expand short-term traffic conflicts.

- Surrogate Measures of Safety with a focus on Vulnerable Road users: An exploration of theory, practice, exposure and validity, Carl Johnsson

Carl Johnsson presented his recent research findings. There was a clear difference between what humans consider as relevant and what indicators select as relevant. Studies relying on human pre-selection of events were not comparable to studies relying on automated methods. Nevertheless, encounters (exposure events between road users) and conflicts were strongly connected.

A participant asked about the difference between situations reported by students and by the computer. Carl Johnsson answered that he believes that indicators do not capture perfectly a conflict, and considers indicators result in many false positives, while humans report few false positives.

7. New research directions, research needs statements and session/workshop ideas - all
8. Website, wiki, surveys and dissemination activities in the context of existing efforts - all

- Recent and upcoming books and chapters

Andrew Tarko mentioned his book on SMOs coming up with Elsevier and a previously published chapter.

Aliaksei Lareshyn was also writing a chapter on SMOs.

9. Coming conferences, meetings, research opportunities and other matters - all
 - 6th [International Symposium on Highway Geometric Design](#), Amsterdam - The Netherlands, 28 June - 1 July 2020, featuring the [Urban Streets Symposium](#)
 - [ICTCT](#) extra workshop in Accra, 2-3 April 2020, and regular workshop in Berlin, 22-23 October 2020

No other upcoming event was mentioned.

10. The meeting was adjourned.