

Symposium 2021 Breakout Session Title:

B305, Part 1/B405, Part 2-Safety Assurance of Automated Driving

Session Contact/Organizers:

- Adrian Zlocki, Dr., Director of Automated Driving, fka GmbH, Aachen, Germany
- Lutz Eckstein, Univ.-Prof. Dr.-Ing., Director and Chair, Institute of Automotive Engineering (ika), RWTH Aachen University, , Germany

Session Description

In spite of many years of research, Safety Assurance of Automated Vehicles is still a field of action, discussion and harmonization in order to safely and efficiently introduce automated driving to public roads. The session will focus on progress and international exchange based on ongoing activities around the globe. It brings together relevant international experts on safety assurance and provides a platform to formulate the most urgent open questions and a research agenda.

Especially methodologies and safety argumentations are currently being elaborated. This session offers the chance to leverage synergies for international stakeholders, and it also paves the road to prepare international standards based on the state of the art.

Goals/Objectives/Outputs

Goals:

- Provide the state of the art on current activities and initiatives
 - Present, exchange and combine methodologies for safety assurance
 - Discuss comparisons and communication for safety argumentation of automated vehicles
 - Foster International harmonization of approaches
 - Identify further research and standardization needs
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- Outputs:
 - Identification of international progress being made in safety assurance
 - Identification of future needs (efforts, resources, etc.) in developing/using safety assurance methods
 - Comparison of requirements on safety of automated vehicles
 - Sharing of best practices on safety assurance and lessons learned
 - Fostering interaction between participants and speakers from industry, universities and governmental bodies
 - Contribution to harmonization on international level

Agenda

Day 1: Safety Argumentation in state of the art projects and initiatives

Wednesday, July 14, 7:00 AM – 10:00 AM CDT – Session 1

- 7:00 AM – 7:30 AM Introduction and general overview by Lutz Eckstein (ika)
- 7:30 AM – 8:10 AM: Overview Part 1 (10 min. presentation + 10 min Discussion each)
- Toward transparency of the AD/ADAS safety - Satoshi Tanigoshi (Toyota)
- Safety argumentation in VVM (Germany)- Helmut Schittenhelm (Damiler)
- 8:15 AM – 9:15 AM: Overview Part 2 (10 min. presentation + 10 min Discussion each)
- Cooperative and Highly Automated Driving Safety Study - An Australian approach to understand road safety impact of Automated Driving - Prof. Sebastien Glaser (University of Queensland)
- Safe Enough: Approaches to Assessing Acceptable Safety for Automated Vehicles - Laura Fraade-Blanar (RAND)
- Chinese safety argumentation for AVs - Prof. Shengbo Li (Tsinghua University)
- 9:15 AM – 9:50 AM: Discussion (all)

Day 2: Safety Argumentation and Scenario Selection for Safety Assurance Test Cases

Thursday, July 15, 8:00 AM – 11:00 AM CDT – Session 2

- 8:00 AM – 8:10 AM Introduction by Adrian Zlocki (fka)
- 8:10 AM – 9:10 AM: Safety Argumentation (10 min. presentation + 10 min Discussion each)
- Activities of NHTSA – Dee Williams (NHTSA)
- Scenario Based Safety Argumentation : French activities - Stéphane Geronimi (Stellantis) and Emmanuel Arnoux (Renault)
- Architecting Aurora's Safety Approach– Kevin Gay (Aurora)
- 9:10 AM – 10:10 AM: Scenario Selection (10 min. presentation + 10 min Discussion each)
- Titel – Trend Victor (Waymo)
- Scenario database activities of the German Federal Highway Institute (BASt) - Claus Pastor (BASt)
- Scenario Selection for Safety Assurance Test Cases - Anne Collin (Motional)
- 10:10 AM – 10:40 AM: Discussion (all)
- 10:40 AM – 11:00 AM Wrap up and Outlook by Lutz Eckstein (ika) and Adrian Zlocki (fka)

Related Sessions:

Automated Driving System (ADS) Safety Metrics in Theory and Practice