



Systems, Software and Safety 2021

System and software safety in electronic systems is becoming increasingly central in many industries and indeed as part of often critical societal infrastructure. The systems become ever more complex, connected and autonomous — and the software continues to grow. This poses many challenges even for mature organizations, requiring approaches that go beyond established best practices.

The Scandinavian conference on safety critical systems and software has become a central meeting place for Scandinavian safety experts from industry, public and academic organizations. It is an opportunity to share experiences and make new contacts. The conference features a first day with distinguished keynotes, industrial and research presentations, followed by a second day with two parallel tracks of workshops about different challenges, techniques, standards and methods. In the evening of the first day there is a conference dinner to meet old friends and establish new contacts.

Warm welcome to the conference, this year in Göteborg.

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Time: 23-24 November 2021

Place: Lindholmen Science Park,
Göteborg

Organizers: Addalot Consulting AB,
SAFER/Chalmers, KTH and ICES

Cost (excl. VAT):	Early bird*	Late
Standard	1595:-	2595:-
Student	1195:-	1195:-

*Early bird price before October 4

Final registration: 15 November

Full program and registration:

<http://safety.addalot.se/>

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VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

Tuesday 23 November - Plenary day

Time	Content	Presenter
09:00-09:15	Welcome and introduction	Nicolas Martin-Vivaldi/ Fredrik Asplund
09:15-10:15	Keynote: BOEING 737 MAX	Sven E Hammarberg, BVR
10:15-10:35	Break	
10:35-11:05	Scaled Agile for Safety-Critical Systems	Jan-Philipp Steghöfer, Chalmers
11:05-11:35	Agile and Functional Safety	Johan Bergström, Agreat AB
11:35-12:05	Understanding the Safety-Security Implications for Robotic and Autonomous Systems	Nikita Johnson, University of York
12:05-13:00	Lunch	
13:00-14:00	Keynote: Safety, complexity, AI and automated driving - holistic perspectives on safety assurance	Simon Burton, Fraunhofer
14:00-14:30	Safety Process for Different Legislation	Per Johannessen, Volvo
14:30-15:00	Break	
15:00-15:30	Bridging the gap between functional safety and software development for safety critical systems	Mattias Lindgren, Combitech AB
15:30-16:00	Safety Argumentation of Autonomous Drive Function	Ali Nouri, Volvo Cars
16:00-16:30	BOAUT Project - Marine Assurance	Johan Holmqvist, Carmenta

Conference dinner

Wednesday 24 – Parallel tracks

08:30-09:30: Keynote: Fredrik Törner, Volvo Cars: The Automotive Safety Confusion – What's the fuzz with Functional Safety, SOTIF and Positive Risk Balance?

Automated driving level 3 and 4 – How to argue safety and what counts as evidence?

Members in the competence network for Safety assurance at SAFER Vehicle and Traffic Safety Centre.

Automation affects everyone and the potential social benefits with self-driving vehicles are huge, partly through increased traffic safety. What happens when you implement a new technology where all the possible problems that can occur during usage are not yet known? How do you set up your research and development then, and what can you learn from other areas? In this workshop we will address the new issues and malfunctions that can occur in AD level 3 and 4, and provide some of the reasons that AD safety is very different to showing that automated driving level 1 and 2 is safe.

Safety for Testing Autonomous Vehicles at Existing Proving Grounds,

Erik Frick - AstaZero, Johan Degerman - SafeRadar, Marvin Damschen, Anders Thorsén - RISE, Arvid Pearson - Volvo Cars

Proving ground facilities around the world face a new challenge: how to include testing of autonomous driving (AD) vehicles into their normal testing practices. Today, the core component that keeps testing safe is a skilled, trained and experienced human test driver. However, many future self-driving vehicles will literally not have room to fit a human test driver.

This workshop will focus on the monitoring of proving grounds to enable safe testing of manually and autonomously driven vehicles. We will present results from the ongoing Vinnova project ETAVEP gathered on the AstaZero and Hällered proving grounds.

The workshop will be divided in sub-topics: Vehicle Test Requirements, Safety Zone, Global and Local Monitoring. Workshop participants can try out the Safety Zone concept in hands-on exercises and look at the ETAVEP vehicle prototype.

MBRASA Safety Analysis, Heike Schneider - Syntell

Current functional safety standards (e.g., ISO26262), focus on single vehicles, machines etc. The new challenge is to conduct risk assessments to encompass multiple vehicles or machines where parts of the end-to-end function reside in the edge and where communication is done wirelessly. The MBRASA project will provide a workshop on safety analyses for systems-of-systems in relation to industrial best practice.

Safety Cultures in Automotive, Mark Hirche, Per Johannessen – Volvo Group

Safety Cultures are important to ensure safety at the same time as it is less tangible. This workshop will dive into how safety cultures for different roles affect operational safety. Roles includes product developers, line managers, project managers, drivers, operators and other users such as traffic participants. We will primarily cover road vehicles, both off and on road, at the same time as we invite other domains to contribute. The specific purpose to address after understanding different safety cultures is to see how safety cultures can be improved for the different roles.



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Morning 09:30-12:30

Afternoon 13:30-16:30