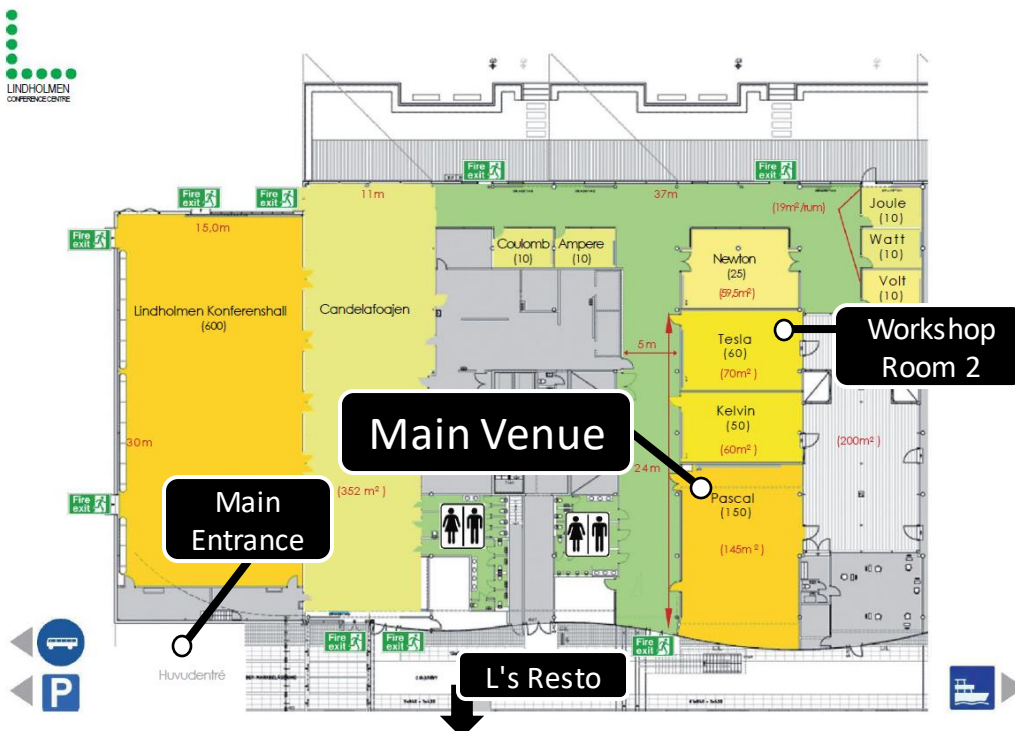




Scandinavian Conference on Systems and Software and Safety 2022

Warm welcome to the Scandinavian conference on safety critical systems and software, a central meeting place for Scandinavian safety experts from industry, public and academic organizations. This year we are back in Gothenburg in collaboration with SAFER Vehicle and Traffic Safety Centre at Chalmers.

Venue Map (with Emergency Exits)



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VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS

Tuesday 22/11, Plenary day**8:30- Registration and Coffee**Fredrik Asplund, KTH
Magnus Granström, SAFER
Nicolas Martin-Vivaldi, Addalot

Time	Content	Presenter
09:00-09:15	Welcome and introduction	Fredrik Asplund, Magnus Granström, Nicolas Martin-Vivaldi
09:15-10:15	Keynote: A Man-in-the-Middle of my Heart Attack	Marie Elisabeth Gaup Moe, NTNU
10:15-10:35	Break	
10:35-11:05	Ergo, SMIRK is Safe: A Safety Case for a ML Component in a Pedestrian Emergency Brake System	Markus Borg, CodeScene
11:05-11:35	Adversarial Image Attacks Against Automotive Systems	Andreas Lundberg, Arriwer Software AB
11:35-12:05	An AEB based use-case approach for robustness and safety using distributed AI and ML for autonomy	Murat Erdogan, Veoneer
12:05-13:00	Lunch, with lunch talk from our sponsor Knightec: Open collaboration for system safety across industries	Knightec
13:00-14:00	Keynote: Visual Commonsense for the Self-Driving Car	Mehul Bhatt, Örebro Universitet
14:00-14:30	Severity Minimization Motion Planning for Autonomous Vehicles	Masoumeh Parseh, KTH
14:30-15:00	Break	
15:00-15:30	Model-Based Safety Analysis with SMP-Tool, a Stochastic Extension of Matlab Stateflow	Mattias Nyberg, Scania
15:30-16:00	Adaption of the SAHARA method for Intelligent Distributed Grids	Ted Strandberg, RISE
16:00-16:30	On Safety Strategies for Autonomous Transport Solutions	Zhaifira Magnfalt and Per Johannessen, Volvo Group

Marie Elisabeth Gaup Moe
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CodeScene**Andreas Lundberg**
Arriwer Software AB**Murat Erdogan**
Veoneer**Mehul Bhatt**
ORU**Masoumeh Parseh**
KTH**Mattias Nyberg**
Scania**Ted Strandberg**
RISE**Zhaifira Magnfalt**
Volvo Group**Per Johannessen**
Volvo Group**Fredrik Warg**
RISE**Muhammad Rusyadi Ramli**, KTH**Tom Strandberg**
CAG Syntell**Joakim Fröberg**
Safety Integrity**Martin Törngren**
KTH**Christina Rux**
WirelessCar**18:00- Conference dinner at Lindholmen's Resto**

(Lindholmospiren 5)

Wednesday 23/11, Workshop day**08:30-09:30 Introduction, and Keynote: Software System Design for the Connected Vehicle, Christina Rux, WirelessCar**

Venue: Pascal	Venue: Tesla
Managing continuous assurance of complex dependable systems, Fredrik Warg, RISE Systems where safety and cybersecurity assurance is vital are increasing in complexity amid a growing business demand for faster update cycles. These systems further typically include machine learning elements, an area where establishing assurance methods are work-in-progress. Several methods are proposed in literature, including design-time methods (e.g., safety-contract based design) and run-time techniques (e.g., safety supervisors). The FFI research project SALIENCE4CAV focuses on continuous assurance for road vehicles and collaborative vehicles in confined areas. We will discuss the suitability of the existing assurance methods, including the use of safety contracts and quantitative risk acceptance criteria, as well as possibilities and obstacles for their industry adoption.	Understanding CPS Trustworthiness, Muhammad Rusyadi Ramli, KTH Cyber-Physical Systems (CPS), such as most contemporary vehicles and machinery, are evolving to become smarter, more autonomous, connected and collaborating. Provided with unprecedented capabilities, CPS also represent unprecedented complexity and bring new risks that go beyond classical dependability. In paving the way for such more capable and complex CPS, it is essential that trustworthiness is considered and incorporated during the CPS life cycle. This refers to both technical trustworthiness attributes (such as safety, reliability, availability and security), and social considerations (such as ethics, transparency and privacy). This workshop will introduce the current state-of-the-art and a novel trustworthiness framework. We hope to provide a forum for researchers and practitioners to discuss and analyse existing methods and challenges related to trustworthiness and CPS.
12:30-13:30 Lunch at Lindholmen's Resto (Lindholmospiren 5)	
Embracing complexity of Systems-of-Systems using Model-Based Risk Assessment and Safety Analysis (MBRASA), Tom Strandberg, CAG Syntell, and Joakim Fröberg, Safety Integrity Given the trends of connectivity and autonomy, a current challenge is to ensure safety among multiple vehicles or machines, so called systems-of-systems, where parts of the end-to-end function reside in the edge and where communication is done wirelessly. Based on such extended systems definition, the hazard and risk analysis need to be extrapolated to ensure trustworthiness for the extended scope. The purpose of this workshop is to present and obtain feedback on the evolution of the model-based approach to risk assessment and safety analysis (MBRASA) of systems-of-systems that was the topic of a workshop at SCSS2021.	Automated and connected driving and the promises and challenges of cellular technology for systems of systems, Martin Törngren, KTH The complexity of the tasks that Automated Vehicles (AV) have to deal with have been grossly underestimated. To deliver the promises of trustworthy highly performing automated driving services, AV design and operation has to provide self- and environmental awareness, deal with uncertainty, and manage risks in run-time, while dealing with cybersecurity threats and unknowns. Connectivity and collaboration bears promises to solve many of these concerns, but also introduce new safety and cybersecurity challenges. The workshop will be interactive to stimulate discussions, examining these challenges. Ongoing research at KTH will also be presented including the PERCy project and the KTH-based TECoSA research center.

Morning 09:30-12:30

Afternoon 13:30-16:30