Tuesday 22/11, Plenary day



Fredrik Asplund, KTH
Magnus Granström, SAFER
Nicolas Martin-Vivaldi, Addalot

8:30- Registration and Coffee

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, RISE
11:05-11:35	Adversarial Image Attacks Against Automotive Systems	Andreas Lundberg, Arriver 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	
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	Daniel Skarin, Zhafira Magnfält, and Per Johannessen, Volvo Group

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Per Johannessen
Volvo Group

Zhafira Magnfält
Volvo Group

Christina Rux
WirelessCar

Fredrik Warg
RISE

Muhammad Rusyadi Ramli, KTH

Tom Strandberg
Syntell

Heike Schneider
Syntell

Martin Törngren
KTH

Wednesday 23/11, Workshop day

08:30-09:30 Introduction, and Keynote: Software System Design for the Connected Vehicle, Christina Rux, WirelessCar

Morning 09.30-12:30

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 fucuses 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** (Lindholmspiren 5)	

Afternoon 13:30-16:30

Embracing complexity of Systems-of-Systems using Model-Based Risk Assessment and Safety Analysis (MBRASA), Tom Strandberg and Heike Schneider, Syntell 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 SCSSS2021.	**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.

18:00- Conference dinner at Lindholmen's Resto

(Lindholmspiren 5)