

Welcome to a Software Center Cybersecurity Workshop

April 27, 2022

At the Software Center/Mälardalen University workshop we will bring together experts from academia and industry to talk about the problems, challenges, and solutions in the domain of cybersecurity. The workshop is an open hybrid event and will take place at Mälardalen University.

Time: 13:00 - 17:00

Place: Mälardalen University, Västerås, Sweden - room Omega
(and digitally, over Teams: links will be distributed after registration)

Agenda: <https://www.software-center.se/event/cyber-security/>

Registration: <https://forms.gle/a1gS4nCh26jGA33Q7>

Agenda

13:00 Welcome: Marjan Sirjani (Mälardalen University, Sweden)

13:05 Digitalization: The Driver for Cybersecurity:
Jan Bosch (Chalmers & Software Center, Sweden)

13:25 Cybersecurity, Safety and Resilience:
Marjan Sirjani (Mälardalen University, Sweden)

13:45 Automotive Cybersecurity - The Challenges:
Nasser Nowdehi (Volvo Cars, Sweden)

14:10 Automotive Security Cybersecurity
Verification – the Past, the Present, the Future:
Stefan Marksteiner (AVL/AT, Austria)

14:30 Automotive Cybersecurity: yet another concern,
set of standards and regulations! Let's take a
multi-concern perspective:
Barbara Gallina (Mälardalen University, Sweden)

14:45 Break

15:00 Reflections on Supply Chain Attack Risk Mitigation:
Kim Hyldgaard (Grundfos, Denmark)

15:25 Cybersecurity in Construction Machinery:
Sheela Hariharan, Talvén Jarmo (Volvo Construction
Equipment, Sweden)

15:40 Intrusion Detection Systems using Tiny Twins:
Fereidoun Moradi (Mälardalen University, Sweden)

16:00 Trading off Consistency and Availability in
Cyber-Physical Systems:
Edward Lee (UC Berkeley, USA)

16:30 Predictable Coordination for Safety-Critical
Real-Time Systems
Soroush Bateni (University of Texas, Dallas, USA)

16:55 Closing

Speakers and topics

At the workshop, **Jan Bosch (Chalmers)** talks about how digitalization makes cybersecurity important; and he will highlight cases from the 17 member companies of Software Center (www.software-center.se). **Marjan Sirjani (Mälardalen University)** talks about cybersecurity, safety, and resilience and the ongoing research in some of the projects on cybersecurity at Mälardalen University.

There will be talks on Automotive Cyber-security, **Nasser Nowdehi (Volvo Cars)** explores the current and future state of automotive cybersecurity and its challenges; **Stefan Marksteiner (AVL/AT)** talks about automated cybersecurity testing, and Barbara **Gallina (Mälardalen University)** talks about the automotive standards and regulations from a multi-concern perspective.

Kim Hyltdgaard (Grundfos) explains how in a supply chain attack it is difficult to deal with the vast attack surface, and he will look at some of the challenges and a few mitigating initiatives. **Sheela Hariharan** and **Talvén Jarmo (VCE)** will talk about Cybersecurity in Construction Machinery. **Fereidoun Moradi (Mälardalen University)** will explain how a tiny digital twin can improve attack detection at runtime and help in cyber-resilience.

Edward Lee (UC Berkeley) talks about consistency and availability in cyber-physical systems and how that affects safety. **Soroush Bateni (UT Dallas)** uses an open-source full-stack autonomous driving software, Autoware. Auto 1.0, which relies on ROS 2 to demonstrate how the arbitrary ordering in the handling of messages (caused by communication timing not handled properly by the ROS 2 framework) can be a significant problem. He presents an alternative framework for real-time distributed embedded systems.

Contact us

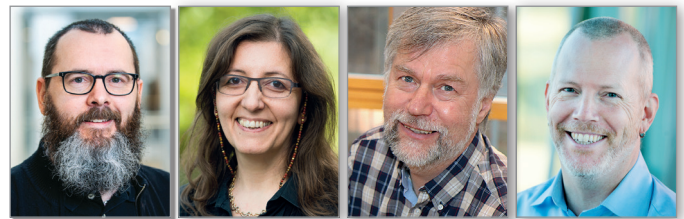
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For agenda up-dates, visit the Software Center web site
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