



Research Institutes of Sweden

Interplay Between Safety and Security

With the increase in connectivity of safety-critical systems, it is important to assure that these systems are secure. Today's assessment methods are usually only addressing either safety or security aspects. The interplay analysis between safety and security is the area where both aspects are considered to design, build and assess a safe and secure system. This analysis is part of a broader area of interest where several dependability and security properties are studied.


Who We Are


Dependable Transport Systems is a unit of RISE Research Institutes of Sweden. Comprising of 13 researchers, including 10 accomplished PhDs and two dedicated PhD candidates, our team is at the forefront of cutting-edge research in the areas of safety and cybersecurity.


We are renowned for our collaborations and projects with numerous EU partners.

What We Do

 **Research Collaboration:** Actively participating in impactful research projects spanning the functional safety and cybersecurity domains.

 **Rapid Prototyping:** Rapid prototype development of autonomous machines using in-house developed, open-source software platforms.

 **Standardisation Activities:** Providing support for interpretation and application of standards in both functional safety and cybersecurity.

 **Risk Analysis and Assessment:** In-depth risk assessments for robust safety measures and cybersecurity resilience.

 **Cybersecurity Expertise:** Specialised focus on fault & attack injection, IoT cybersecurity, cloud cybersecurity, software cybersecurity and safety for AI.

 **Training Initiatives:** Empowering professionals through specialised training programs in functional safety and cybersecurity.

Selected Projects

R2DATO (EU Rail JU): Integrating digitalisation and automation into European rail networks, with innovative solutions like Virtually Coupled Train Sets (VCTS).



AGRARSENSE (Chips JU): Smart, digitalised components and systems for data-based agriculture and forestry.



SUNRISE (Horizon Europe): Safety assurance framework for connected and automated mobility systems.



VALU3S (ECSEL JU): Evaluate the state-of-the-art verification & validation (V&V) methods and tools for automated systems.
Coordinated by RISE.



Domains:

- Railway
- Automotive
- Mobile Machinery
- Maritime
- Energy

Areas of Expertise:

- Safety & Cybersecurity for Autonomous Systems
- Experimental Verification & Validation
- Development of Physical Prototypes
- Development of Simulation Env.
- Accredited functional safety and cybersecurity assessors: ISO 26262, ISO/SAE 21434
- Research, courses and support: ISO 26262, ISO/SAE 21434, IEC 62443



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Within the Europe's Rail Joint Undertaking,
RISE is an affiliated entity to the
Swedish Transport Administration.



TRAFIKVERKET