RELIANT: Industrial graduate school on Reliable, Safe and Secure Intelligent Autonomous Systems

The industrial research school **RELIANT targets reliable, safe and secure intelligent autonomous Cyber-Physical Systems** (CPS) and aims to be instrumental in deployment of the latest research results regarding intelligent autonomous systems in **Swedish industry**. Our partners are found within vehicle solutions in transportation and construction, autonomous and intelligent systems, as well as electronics, communications and software for autonomous CPS. The results of RELIANT will support all business sectors where **next generation products are assumed to have autonomous functionality with maintained or increased reliability, safety and security**.

Industrial partners are welcome!
Present partners are: Alten, Arcticus Systems, Nordic Electronic Partner, Qamcom, RISE, Senseair, Unibap, Volvo Autonomous Solutions, Volvo Construction Equipment.

RELIANT activities
RELIANT is an integrated part of the Mälardalen University (MDU) strategic research area affiliated with the research environment Embedded Systems (ES), and comprises of three complementary activities:

1. **Research**, organized in the form of PhD research projects in industrial contexts. The PhD students will work in close cooperation with senior researchers at MDU, industrial specialists, and international researchers and experts.

2. **Networking activities**, to establish strong networks between PhD students, industrial specialists, and managers as well as with international and national researchers.

3. **Courses**, seminars, and activities related to multidisciplinary competence especially targeting engineering of next generation of reliable, safe and secure intelligent autonomous Cyber-Physical Systems.

A primary goal of RELIANT is to strengthen the Swedish competitiveness within safety, security and reliability in intelligent autonomous high-performance CPS. Topics covered are related to system and software engineering in CPS; resilient, safe and secure CPS; self-configuring and self-healing CPS; autonomous collaborative CPS; dependability in heterogenous and evolving computing environments in CPS; and reliable and secure connectivity for CPS.

Unique for the RELIANT research school is that all PhD-projects will be oriented around a common **virtual use-case**. The common use-case will ensure that students and companies all contribute to, and learn from, something larger than their individual project.

Another goal of RELIANT is to make significant advances in technology and methodology for development of **intelligent autonomous high-performance CPS** and use of such systems in modern industries. The results should be able to use COTS (Commercial-of-The-Shelf) components and development tools, making results directly applicable to industrial use. RELIANT will target the conjunction of autonomy and **reliability** in combination with **safety** and **security**, with the goal to integrate all this in CPS. A key aspect of RELIANT is to address such problems through the collective experience facilitated by the virtual use-case concept.

Industrial PhD students
- Joint activities for all PhD students
- Full coverage of supervisor costs
- A salary support of 150kSEK/year and PhD student
- Travel budget for the student and company mentor
- Budget for open publications, software licenses, etc.

RELIANT
Industrial graduate school
Mälardalen University

www.es.mdu.se/reliant/

Contact us

Mikael Sjödin
Mälardalen University
+46-70-288 2829
mikael.sjodin@mdu.se

Anna Ericson Öberg
Volvo
anna.ericson.oberg@volvo.com

Malin Rosqvist
Software Center
+46-76-0853346
malin.rosqvist@software-center.se