The LIT OIC Introduces the LIT Secure and Correct Systems Lab

Nine institutes are working at the LIT Secure and Correct Systems Lab to ensure that electronics are safe and working the way they are supposed to.

Prof. Wille, you are in charge of running the Lab. Why is the LIT Secure and Correct Systems Lab located at the LIT OIC?

Prof. Robert Wille: One of our lab's main ideas is to pool the expertise at a total of nine institutes and bring everyone together. Our team consists of scientists from different disciplines. The OIC lets us – literally - put everyone "under one roof". If everyone worked individually at the institutes, we would lose a lot of the interdisciplinary synergy we are looking for.

What makes the LIT Secure and Correct Systems Lab unique?

Prof. Robert Wille: Electronic systems (whether highly visible systems, such as smartphones, or less visible systems, such as vehicle brakes) are a prevalent aspect in our everyday lives. However, for everything to work safely and the way they are supposed to, a countless range of factors needs to be taken into consideration. Inaccurate specifications can form the base for future security gaps. Errors made when developing hardware or software can have catastrophic consequences. Maintenance and updates are also important once a system has been delivered. Also, even if a system is taken out of service, security issues should still be addressed so that, for example, old information does not fall into the wrong hands. This whole spectrum - starting with an idea to implementation, use and decommissioning systems - must be handled by several people and not by an individual person or institute alone. Our lab's unique aspect is bringing various levels of expertise together.

What is your current favorite project?

Prof. Robert Wille: Our work is too diverse to choose just one favorite project. We develop knowledge-based business models so we are constantly thinking about digital identities, guaranteeing the development of safe and correct software and hardware, protecting systems from hackers, etc.; plus, we also working on future projects such as quantum computers and quantum encryption. In short: All of our projects are great! ;)

How does the LIT OIC benefit research?

Prof. Robert Wille: Research thrives on innovation and creativity. This is something that cannot be "ordered by higher-level authorities", but rather it requires space for inspiration, exchange, and development. The OIC facilities – as well as the events and functions - provide ideal conditions. Add the proximity to the companies located at the OIC and this ensures we are not "locked away" in some academic ivory tower without real-world connections.

More about the Lab
More about the LIT OIC