

Institute of Innovative Safety and Security (THA\_innos)

## Cyber Security for Industrial Components and Systems

Industrial control systems (ICSs) cover many processes in our society, from fully automated production to critical infrastructures like energy and water management. The cybersecurity of the systems and the components used therein are essential to protect life and wealth as we know it. Recent advances in standardization, like the IEC 62443, can be seen as guidelines for the future. However, component manufacturers, system integrators, and asset owners face various challenges. Applied cybersecurity research aims to close the gap between security requirements and efficient, practical implementations of suitable protection measures.



Figure 1: Industrial Security Lab



Figure 2: Embedded System Security Analysis

### Scope of the internships, applied study semester, or theses:

The research in Embedded System Security or Industrial Security at the Institute of Innovative Safety and Security (THA\_innos) offers a wide range of constantly changing internship and thesis opportunities. If you are interested in these fields, we would like to ask you to request Prof. Dr. Merli to arrange an appointment for further information.

### Special requirements:

- Interest in embedded systems security and/or industrial control systems security
- Basic knowledge of embedded systems engineering and/or industrial automation
- Basic knowledge of network communication and cryptography

**Qualification level:** Advanced Bachelor's degree or Master's degree

**Programs lines:** SRI, A2S, BA/MA

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