

## Internships and Masters Theses

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The [AIT Austrian Institute of Technology GmbH](#), Department Safety & Security offers as part of industrial and research projects various internships and Masters Theses in the area of **IT Security**.

### 1. Overall description and Context of the Work

Information derived from critical infrastructure control (e.g., SCADA) networks plays an important role for the enterprises that operate them. This is leading to an increasing number of enterprise ICT networks and systems being coupled to the control networks that, for example, support the operation of critical infrastructures such as power grids. A key concern for critical infrastructure operators is being able to understand the potential risks of coupling ICT infrastructures to their existing control networks. A particularly challenging question that must be addressed is whether the introduction of ICT systems will lead to an increased likelihood of safety-related incidents (in the physical domain), such as power surges or outages that could lead to loss of life. This is particularly challenging because of the lack of historical information related to such events, caused by cyber-attacks or otherwise.

### 2. Problem Description

The aim of this piece of work is to develop a methodology that can be used to better understand the risks of coupling ICT systems to critical infrastructure control networks. Evidently, the scope of this project is quite large. Therefore, students are encouraged to discuss narrowing its scope to suit their interests. For example, a project may focus on methodologies for modelling of ICT systems and control networks that support a risk assessment process; software tools could be developed to support this activity. Also, a project may focus more on the theoretical aspects of a risk assessment approach. This work will be done in the context of the EU PRECYSE project.

### 3. Required Skills

In-depth knowledge of IT Security. Skills as necessary with respect to the scope of the project, e.g., software development, system modelling, or basic statistical methods.

## Location

### 2444 Seibersdorf or 1220 Tech Gate Vienna

We offer: Free AIT company bus that makes access to Seibersdorf from Vienna easy.  
Company supported canteen lunch.

## Contact

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