



Lehrstuhl für Sicherheit in der Informatik  
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*Announcement of a Master's Thesis in Cooperation with Fraunhofer AISEC, Garching*

# Development and Evaluation of a Security Simulation Framework for Industry 4.0

## Motivation

Modeling & Simulation (M&S) is a suitable approach for security evaluations on complex environments such as cyber-physical systems used in future manufacturing settings. These industrial landscapes are currently conceived but already draw the attention of attackers, for example, Stuxnet or the attack on the German steel mill in 2014.

## Task Description

Current available simulation environments need to be evaluated towards their feasibility for a holistic security and Industry 4.0 testbed. An important task within the evaluation is the integrability of existing security libraries (e.g., mbedTLS or Matrix-SSL). A concept for the testbed is to be developed and a subset of selected aspects of this concept is to be implemented.

## Requirements

- Good practical programming skills
- Background in IT Security
- Experience with M&S and industrial environments is beneficial

Date of announcement: 25th October 2016, begin of work possible as of now.

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