

Forschungspraxis, Master's Thesis, Bachelor's Thesis

# Implementation of Logic Locking Schemes

To prevent against IP Theft and Overproduction, Logic Locking is proposed as a solution. Logic Locking strives to obfuscate the functionality of the design, and introduce a key that must be provided to the design for correct operation.

Many Logic Locking Schemes have been proposed. Of particular interest are locking schemes that protect against sophisticated attacks. One such scheme is proposed in [1], called Meerkat.

In this thesis, you will implement the Meerkat logic locking scheme and evaluate it for various metrics.

[1] <https://arxiv.org/pdf/1703.10187.pdf>

## Prerequisites

The following list of prerequisites is neither complete nor binding, but shall give you an idea, what the topic is about.

- Sufficient knowledge in a High-Level Programming language for implementing the locking scheme. Proficiency in Python is especially useful.
- Basic to intermediate knowledge of a hardware description language such as vhdl or verilog, as you must understand how to apply a logic locking scheme to hardware circuits.

## Contact

If you are interested in this topic, don't hesitate to ask for an appointment via

[alex.hepp@tum.de](mailto:alex.hepp@tum.de)

Please include a grade report and a CV, so I can evaluate different focus areas to fit your experience.

## Advisors

Alexander Hepp