

The Chair of Theoretical Information Technology has an immediate opening for a

Bachelor/Master Thesis, Research Internship: Implementation and development of attack strategies in a HW- Testbed

Within the 6G-life project, transmission systems that go beyond Shannon's communication approach are to be developed, in order to achieve a more secure, efficient and resilient communication in novel 6G systems. To verify the security of the developed transmission system experimentally, efficient and close to optimal attack strategies of the eavesdropper have to be developed.

Content of the project and areas of responsibility

- Research into the area of LDPC
- Development of an attack strategy for the LDPC transmission
- Evaluation with software simulations
- Integration into our hardware environment (NI USRP software-defined radios)
- Experimental verification of the simulation results

Your qualifications

- Good knowledge in the following subjects: information theory, communications engineering, algorithms and data structures
- Hands-on programming skills in one of the following languages: MATLAB, Python and C/C++
- Familiarity with Linux systems, GPU programming, and communication standards (LTE, 5G-NR) is a plus
- Goal-oriented, independent and structured work style

To apply just send an e-mail to johannes.voichtleitner@tum.de with the subject "attack-strategies". Make sure to add your latest transcript of records and a short description of yourself!

Technical University of Munich

Chair of Theoretical Information Technology
Prof. Holger Boche
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Munich, April 2022

