Chair of Communication Networks
TUM Department of Electrical and Computer Engineering
Technical University of Munich

Bachelor's Thesis

Analysis and implementation of 4G/5G downlink scheduling algorithms in OpenAirInterface

Resource allocation has always been one of most critical components of mobile communciations as it influences the user's throughput, latency and other critical parameters. In that regard, 4G/5G technologies are always in need of emerging algorithms to further improve the scheduling efficiency. In particular, practical implementations of such algorithms are relevant compared to simulations, as they reveal complications that cannot be captured in normal simulations.

The focus of this thesis will be on development and implementation of scheduling approaches for increasing efficiency in resource allocation and network performance. The evaluation will be performed in a proof of concept using OpenAirInterface platform.

Prerequisites

- Strong mathematical background.
- Solid programming skills (python, matlab, c++).
- Knowledge of optimization techniques is a plus.

Advisors

Arled Papa