

Open Semester Project (HS18, FS19):

Analytic Investigation and Approaches to Certain Problems in Wireless Indoor Localization

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Enabling wireless localization in GPS-denied indoor environments is an important goal of wireless research. This endeavour is however complicated by multipath propagation, shadowing and the limited accuracy of distributed clock synchronization. Advanced schemes address these issues but problems remain in various situations, which shall be investigated analytically.

Tasks

- Incorporate exceptional situations in the error analysis of a novel scheme.
- To improve the scheme in these situations, investigate candidate approaches based on probability theory, combinatorics and linear operators.

Prerequisites

- A good understanding of basic probability theory and linear algebra.
- Ability to autonomously look up mathematical tools and apply them.
- Attended an ITET master-level lecture on wireless communications.
- Basic Matlab skills.