Communication and Distributed Systems (COMSYS / Informatik 4)

Mobile and Wireless Networking
- Large scale Wi-Fi systems for secure mobility across different network domains
- Wireless propagation models as basis for indoor navigation
- New devices offer new ways of communication
- Link estimation helps to structure wireless devices in a multi-hop network

Distributed Sensing and Processing
- Smartphones can be used as sensing systems for pedestrian navigation
- Combine sensor data to get more accurate information
- Protocol interactions improve overall system performance
- Parallelization can yield speed-up of simulations for large scenarios

Research Overview
- Network System Design, Protocol Design, and Development
  - Security and Privacy: New threats and privacy concerns must be adequately addressed
  - Efficiency: Key requirement of practical protocols, requires careful design and precise evaluation
  - Adaptable Protocols: Need to adapt to deal with new approaches
  - Scalability: Communication systems must often support thousands of interconnected devices
  - Reliability: Providing reliable services in distributed and mobile scenarios

Teaching Overview
- Bachelor courses
  - Lectures: Operating Systems and Application Software
  - Lab Project: Communication and Operating Systems
- Master courses
  - Thesis: Distributed Systems and Networks

Team & Fun
- Life@...sometimes more than just research and teaching

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