

Communication and Distributed Systems (COMSYS / Informatik 4)



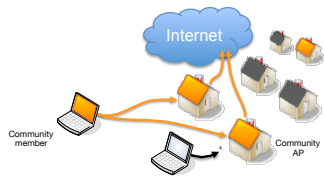
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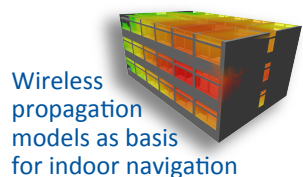
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Research Overview

Mobile and Wireless Networking

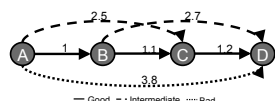


Large scale Wi-Fi systems for secure mobility across different network domains



Wireless propagation models as basis for indoor navigation

New devices offer new ways of communication

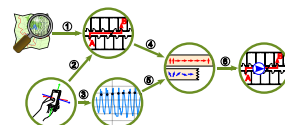


Link estimation helps to structure wireless devices in a multi-hop network

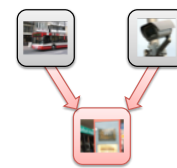
Network Concepts and Architectures

Distributed Sensing and Processing

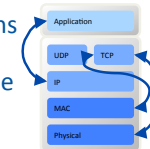
Smartphones can be used as sensing systems for pedestrian navigation



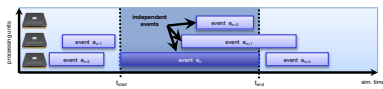
Combine sensor data to get more accurate information



Protocol interactions improve overall system performance



Parallelization can yield speed-up of simulations for large scenarios



Security and Privacy

New threats and privacy concerns must be adequately addressed

Mobility

Communication becomes increasingly mobile. This challenges the design of existing solutions

Efficiency

Efficiency, as key requirement of practical protocols, requires careful design and precise evaluation

Scalability

Communication systems must often support thousands of interconnected devices

Adaptability

Today's networks undergo constant changes. Protocols need to be adaptive to deal with dynamic network behavior and structural change

Reliability

Providing reliable services in distributed and mobile scenarios is challenging and requires robust protocol and system design

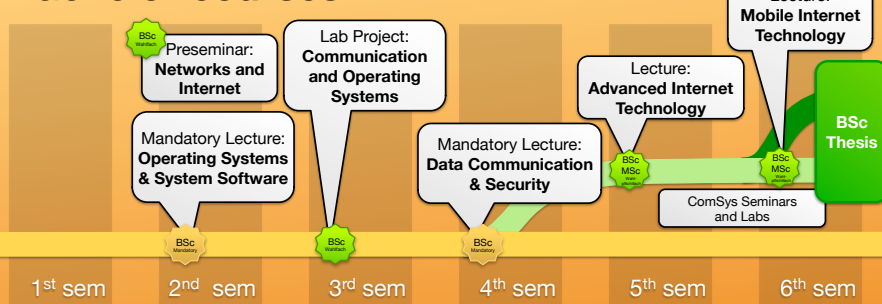
Network System Design, Protocol Design, and Development

Models, Methods, and Tools for Protocol Development

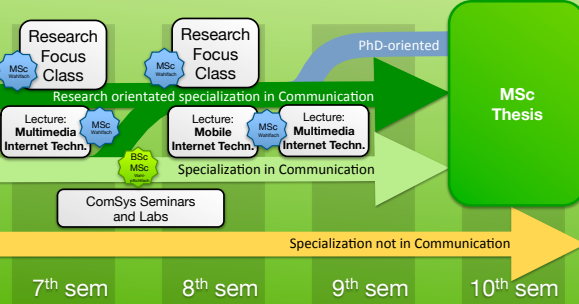


Teaching Overview

Bachelor courses

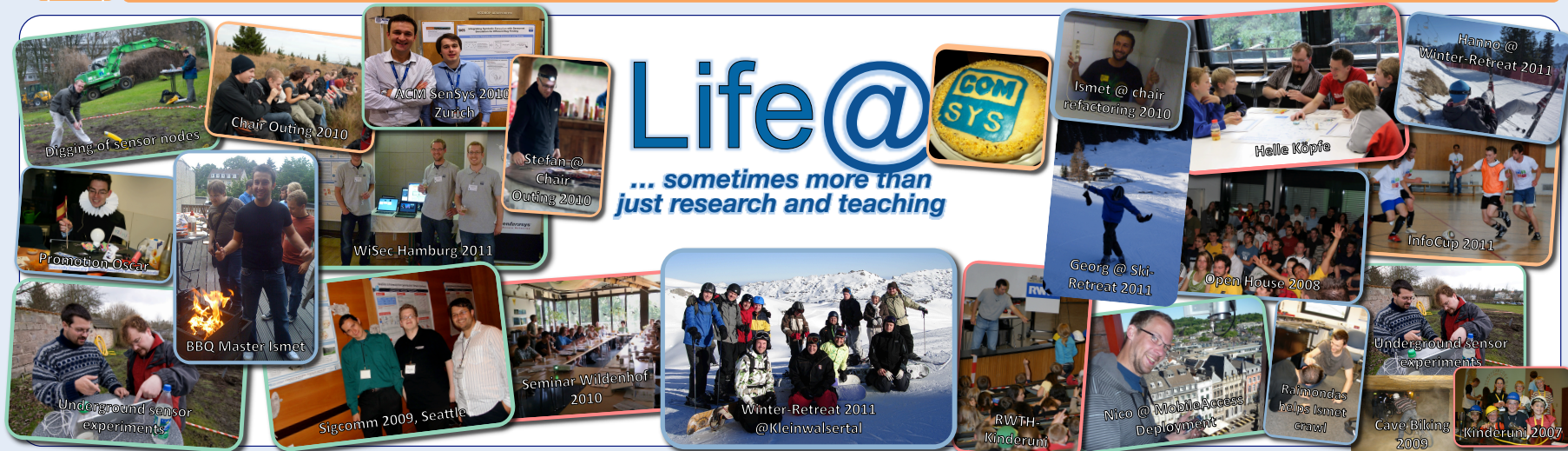


Master courses



PhD

Team & Fun



Life@COMSYS
... sometimes more than just research and teaching

