Algorithms for Radio Networks
Organization

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Organization

› **Web page**
  • [https://cone.informatik.uni-freiburg.de/lehre/aktuell/afrnws13](https://cone.informatik.uni-freiburg.de/lehre/aktuell/afrnws13)

› **Forum**
  • for discussions, remarks, critics, funnies, etc.

› **Lecture**
  • Monday 10:15-12:00, room 101/SR 01-016
  • Friday 10:15-11:00, room 101/SR 01-016

› **Exercises**
  • Friday 11:15-12:00, room 101/SR 01-016
  • starts 08.11.2013
Contents

- Basics of Wireless Communication
- Cellular Networks
- Mobile Ad Hoc Networks
  - Routing
  - Localization and mobility
- Wireless Sensor Networks
  - Medium Access, mobility, data aggregation, sensor coverage, energy
- Localization
  - ToA, TDOA, RSSI, Cell-based, anchorless
- MIMO
  - basics, modulation, throughput, directed communication, diversity
Exam

- **Oral exam**
  - from your solutions presented in the exercises
    - at least one question
  - closed book exam
- **Exam registration online**
- **Questions in the exam**
  - from the lecture and the exercises
Online Documents

- Online documents are only available within the university
  - ask for password
  - slides
  - recordings
  - exercises
Literature

- Murthy, Manoj, Ad Hoc Wireless Networks, Prentice Hall 2004
- Schiller, Mobile Communications, Addison-Wesley, 2000
- Zhao, Guibas, Wireless Sensor Networks – An Information Processing Approach, Morgan Kaufmann, 2004
- Wu, Handbook on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks
- Perkins, Ad Hoc Networking, Addison-Wesley, 2000
- research papers from the field
- more to be announced