Bachelor & Master Theses in Computer Networks

No Lecture
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CoNe Freiburg

University of Freiburg
Computer Networks and Telematics
Prof. Christian Schindelhauer

Final Meeting
(before the exams)

➤ **Meeting Point: Waldkirch, main station**
➤ **Date: Tuesday 27.02.2006 14:01**
(Train departs Freiburg main station at 13:40)

➤ **Plan**
  – Hike the Kastelburg
  – Picknick
➤ **BYOF**
  – Order drinks on-line
– **Don't forget**
  – Food
  – Umbrella
  – Matches

Bachelor-Arbeit in der Informatik

➢ **12 ECTS-Punkte für Arbeit**

- 4/5 der Note
- Umfang 3 Monate

➢ **3 ECTS-Punkte für Präsentation**

- 1/5 der Note
- hochschulöffentlich
- vor zwei Prüfern (mit Beisitzer)

Master-Arbeit in der Informatik

➢ **Arbeit**

- 27 ECTS-Punkte
- 6 Monate
- englischer oder deutscher Sprache

➢ **Präsentation**

- 3 ECTS-Punkte

➢ **Siehe auch**

- http://www.informatik.uni-freiburg.de/studienberatung/master/index.htm

Topics

- **Wireless Sensor Networks**
  - Medium Access Protocol
  - Routing
  - Lifetime
  - Mobility and Scalability
- **Mobile Ad-Hoc-Networks**
  - 3-MANET (Simulation)
- **Peer-to-Peer-Networks**
  - TooFree
  - 3-Nuts
- **Storage-Area-Networks**
  - Insane (File Area Network over the Internet)
- **Telematics**
  - Integrated Simulations for Self-organizing Networked Robots
  - Localization using environmental sound events

Methodology

- **Theory**
  - Algorithms
  - Models
  - Lower bounds
- **Emperical Research**
  - Field tests
  - Simulation
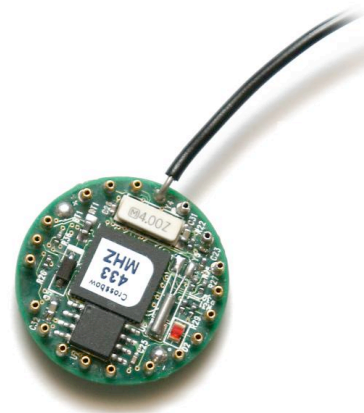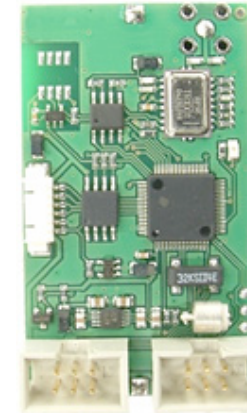- **Prototypes**
  - Design
  - Implementation
  - Test

Hardware in WSN

➢ **Scatterweb**

  – http://www.scatterweb.com/

  – ECR

  – ESB

➢ **Crossbow**

  – http://www.xbow.com/Products/

  – Mica2

  – Mica2dot

Simulation Environments

➤ **The Network Simulator - ns-2**

  – http://www.isi.edu/nsnam/ns/

➤ **OMNet++**

  – Discrete Event Simulation System

  – http://www.omnetpp.org/

➤ **Homegrown solutions**

Thank you

Wireless Sensor Networks
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