The **Mobile Systems Group** works on the design, modeling, and analysis of future networked communication systems, with focus on mobile wireless networking.

Research expertise covers distributed algorithms and protocols, network theory, modeling and performance analysis, and system and protocol architectures.

Teaching includes graduate courses and seminars on wireless communications and mobile networking as well as undergraduate courses on electricity and magnetism.

Established by Bettstetter in October 2005, the group is part of the **Institute of Networked and Embedded Systems** and resides in the Lakeside Science & Technology Park.

Institute of Networked & Embedded Systems
University of Klagenfurt
Lakeside Park B02, 9020 Klagenfurt, Austria
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Personnel

1 Full professor
1.5 Administrative staff members
2 Senior researchers (PostDocs)
3 Research and teaching staff members
5 Research project staff members
2 Research scholarship holders

At a Glance

- International team
- Well-balanced research portfolio
- High-impact fundamental research
- Collaborations with industry
- High-quality teaching in small classes
- Focus on graduate & postgraduate studies
- Modern infrastructure and offices
- High rate of third-party funding

Infrastructure

- IBM® Rational® including SDL Suite
- IBM® ILOG® CPLEX optimizer
- IEEE and ACM digital libraries
- MATLAB®, Simulink®, various toolboxes
- Maple®, MapleSim®, and Mathematica®
- OPNET® network simulation
- Programmable radio platform WARP®
- Simulation cluster
- Wireless sensor devices

Infrastructure via Lakeside Labs

- Digital sampling oscilloscope
- Flying robots Microdrones® and AscTec®
- Signal generators
- Vector signal analyzer

Mobile Systems Group

Univ.-Prof. Dr.-Ing. Christian Bettstetter
http://mobile.uni-klu.ac.at

ALPEN-ADRIA
UNIVERSITÄT
KLAGENFURT

INSTITUTE OF NETWORKED AND
EMBEDDED SYSTEMS

Current Research Topics and Projects

- Cooperative relay communications in wireless networks
- Collaborative unmanned aerial vehicles
- Engineering of self-organizing systems
- Flooding in random and complex networks
- Self-organizing time synchronization

Selected Collaborators

- DOCOMO Euro-Labs
- Max Planck Institute for Dynamics and Self-Organization
- Lakeside Labs GmbH
- Soongsil University Seoul
- Orange Labs (France Telecom Group)
- University of Passau
- University of Porto

Recent Awards

- IEEE Vehicular Techn. Society, Best student paper, April 2009
- IEEE Vehicular Techn. Society, Best paper, May 2008

Lakeside Labs
Research and Technology Cluster
http://www.lakeside-labs.com

This platform for science, technology, and innovation focusses on **self-organizing networked systems**. It sets the stage for creative ideas, high-quality research, and industry-related projects. Founded by Bettstetter in 2008, it funds an international team of 23 scientists, project managers, and assistants. The Mobile Systems Group participates in several projects.

Interactive and Cognitive Systems (ICE)
European Doctoral School
http://www.icephd.org

The Mobile Systems Group is part of the European doctoral school ICE, which is offered together with four European universities. Funded by the European Commission within the **Erasmus-Mundus** program, it promotes scientific excellence and mobility. About 40 PhD students will be attending ICE from 2010 until 2017.

Raising the level of self-organization will help mastering the increasing complexity and dynamics of networked systems.

Doctoral schools are excellent platforms to perform coherent high-quality research and teaching.