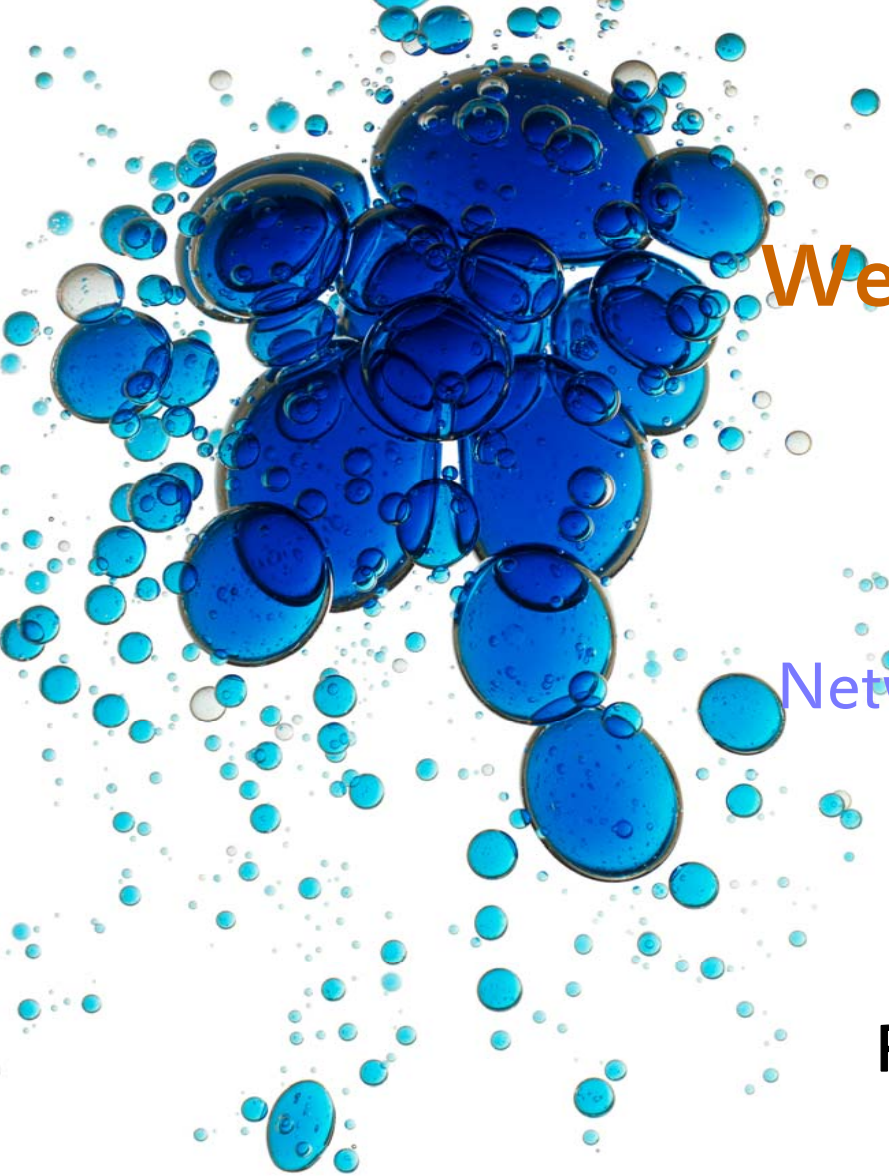

Welcome to Lakeside Labs

Christian Bettstetter

University of Klagenfurt
Networked and Embedded Systems

Lakeside Labs

Research Days on Engineering of Self-Organizing Systems

Klagenfurt, July 12, 2010

ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Lakeside Labs

University of Klagenfurt

Schools / Departments

- Cultural Studies
- Economics, Business Administration
- Technical Sciences
- Interdisciplinary Studies
- 10.000 students in total

Technical Sciences

- Applied Computing
- Intelligent System Technologies
- Multimedia Technology
- Software Engineering
- Mathematics and Statistics
- Networked and Embedded Systems
- 1.000 students

Lakeside Labs

What is Lakeside Labs?

- Science and technology cluster in self-organizing networked systems
- Initiative of the University of Klagenfurt and other stakeholders
- Founded in 2008 with about 2.5 MEUR/year for 5– 7 years
- Currently funds about 25 people

What is the role of the company Lakeside Labs GmbH?

- Link between universities, research institutes, and companies
- Research project management (incl. financial management)
- Science communications (esp. new media)
- International recruiting support and gender mainstreaming
- Events like career academy, talks, and research days
- Guest professorships

Research and Innovation Activities

Research areas

- Collaborative unmanned aerial vehicles
- Cooperative communications in wireless networks
- Self-organizing multimedia systems
- Smart multi-sensor networks
- Self-organizing synchronization
- Designing self-organizing systems
- Adaptive energy management for wireless devices

Erasmus-Mundus European doctoral school @ U Klagenfurt

Technology transfer projects

- Tri-ICT with Northern Italy
- Prompt-ICT with Slovenia

Research Days

Concept

- Small workshop with invited participants
- Intensive week with space for creative ideas
- Talks, group work, and social events
- Academia and industry; multidisciplinary
- Germ cell for joint research activities

History

- 08: Self-organizing ICT systems
- 09: Robustness of self-organizing systems
- 10: Engineering of self-organizing systems

Research Days

Joint activities resulting from previous years

- Conference publications – ACM Autonomics, IWSOS, ISABEL
- Project proposals – EU FP7, ESF
- Visits and invited talks
- Co-chairing conferences – IWSOS
- Informal collaborations

Goals for this year

- Intensify established contacts – Special group work sessions
- Decide on common project(s) – Friday sessions

Engineering of Self-Organizing Systems

- To what extend can **today's systems** be **replaced or complemented** by self-organizing systems, taking into account
  - constraints and acceptance of the technology and
  - risks for users?

- How to **design and engineer** technical self-organizing systems?
  - Are traditional approaches for system and software engineering suited?
  - What are building blocks or paradigms for the design?

These are difficult questions …