

# Software Engineering Research at TUT

Ilkka Haikala  
Kai Koskimies  
Tommi Mikkonen  
Tarja Systä

## What is characteristic to SE research at TUT?

- Close collaboration with industry
  - Case studies, evaluations and analysis, interviews, tool transfer, papers and publications etc.
- Aims at bridging research and teaching
- Emphasis on constructive research
  - We like to build things...
- Read more: [practise.cs.tut.fi](http://practise.cs.tut.fi)

# Research themes over the years

- Software modeling and design (Kai, Tommi, Ilkka, Tarja)
  - UML, concern-based methods
- Software architectures (Kai, Ilkka)
  - More on this in a few minutes...
- Mobile systems (Tommi)
- Web programming (Tommi, Antero Taivalsaari)
  - More on this in a few minutes...

# Research themes over the years

- Software maintenance and evolution (Kai, Tarja)
  - Example: tools and methods for ensuring that architectural rules have been followed in the implementation
    - a dissertation (by Johannes Koskinen) will be defended on upcoming Friday...
  - Program comprehension
- Software testing (Mika Katara)
  - Model-based testing
  - Aspects and testing

# Research themes over the years

- Service-based systems (Tarja)
  - SOA, Web services, ReST
  - Service orchestrations, process modeling
- Open source research (Imed Hammouda, Timo Aaltonen, Tommi)
  - E.g. building open source communities
  - See <http://tutopen.cs.tut.fi/>