

EINLADUNG

Zeit: Montag, 22. März 2010, 15.00 Uhr

Ort: Raum 5052, Ahornstr. 55

Referent: M.S. Comp.Sci. (USA) Olaf Landsiedel

Titel: Mechanisms, Models, and Tools for Flexible Protocol Development and Accurate Network Experimentation

Abstract:

The diversity of applications in the Internet and the heterogeneity of today's networked platforms make the development of communication protocols complex and time-consuming. This work introduces mechanisms, models, and tools to reduce the complexity and engineering effort required for protocol development and evaluation. It makes the following three contributions:

- Rapid communication system development through algorithmic invariants: Similarities in protocol mechanisms are extracted into modular building blocks to reduce the complexity of communication system development. This modularity enables fast protocol composition from generic, reusable protocol mechanisms, so called algorithmic invariants.
- Flexible network experimentation through platform abstraction: We introduce a unified platform based on a thin abstraction layer for protocol implementation. It enables protocols to gradually evolve across platforms and evaluation tools avoiding frequent reimplementations.
- Accurate simulation through fine-grained calibration: We present automated instrumentation of models with system properties to calibrate network simulation. It allows accurately analyzing the time dependent behavior and power consumption of networked devices early in the development cycle.

Es laden ein: Die Dozenten der Informatik