

EINLADUNG

Zeit: Donnerstag, 11. März 2010, 11:00 Uhr

Ort: Hörsaal AH VI, Ahornstr. 55

Referent: Dipl.-Inform. Daniel Klink

Titel: Three-Valued Abstraction for Stochastic Systems

Abstract:

For stochastic systems - incorporating probabilistic and timed behaviour - in recent years, model checking algorithms have been developed to complement long-standing techniques in performance and dependability analysis. To fight the infamous state space explosion problem that arises when model checking complex systems given in a high-level description language such as stochastic petri nets, we developed a three-valued abstraction framework allowing for radical reductions of the models state space.

In this talk, we concentrate on exploiting three-valued abstraction of stochastic systems in a compositional way. This combines the strengths of aggressive state-based abstraction with compositional modeling. Applying this principle to interactive Markov chains yields abstract models that combine interval Markov chains and modal transition systems in a natural and orthogonal way. Further, it allows for the analysis and three-valued model checking of such compositional stochastic systems when classical techniques fail due to excessive memory consumption.

Es laden ein: Die Dozenten der Informatik