

## EINLADUNG

Zeit: Donnerstag, 11. März 2010, 16.30 Uhr

Ort: AH I, Ahornstr. 55

Referent: Dr. Michael Huth,  
Imperial College, London (United Kingdom)

Titel:  $\mu$ -Automata: New Foundations for Discrete-Time  
Probabilistic Verification

### Abstract:

In the automata-based approach to verification, an automaton accepts as its language a set of models. This approach comes with a host of important techniques that make it widely used: specifications and models alike have meaning-preserving representations as automata, model checking reduces to acceptance of input for an automaton, satisfiability and validity checking reduce to emptiness and universality checks of automata (respectively), automata are closed under Boolean operations, model refinement reduces to language containment, and simulations efficiently under-approximate language containment.

We develop such an automata-based approach to probabilistic verification that supports all techniques aforementioned, where models are countable, discrete-time, labeled Markov chains and probabilistic specifications subsume all formulas written in probabilistic computation tree logic.

(This is joint work with Nir Piterman and Daniel Wagner).

Es laden ein: Die Dozenten der Informatik