

## EINLADUNG

Zeit: Dienstag, 03. Mai 2011, 11.00 Uhr

Ort: Raum 4017 (Seminarraum Informatik 1),  
Ahornstr. 55

Referent: Prof. Dr. John Lygeros,  
ETH Zürich

Titel: Stochastic Hybrid Systems: Reachability and  
Related Properties

### Abstract:

Stochastic hybrid systems have emerged recently as a framework for modeling systems that involve the interaction of discrete and continuous dynamics, as well as probabilistic uncertainty. Research in this area has been motivated by applications of stochastic hybrid systems to areas as diverse as systems biology, transportation, telecommunications and electrical power networks. The talk will present an introduction to stochastic hybrid systems with emphasis on questions related to reachability. We will concentrate primarily on stochastic hybrid systems that evolve in discrete time and whose evolution at each step can be influenced by external inputs. We will show how reachability problems for this class of systems can be addressed based on methods from stochastic optimal control and discuss extensions to more general properties encoded in probabilistic temporal logics.

(The central part of the presentation will be based on joint work with Sean Summers and Federico Ramponi.)

Es laden ein: Die Dozenten der Informatik