



EINLADUNG

zum

ZIH-Seminar

Titel: **What does “multi” mean in multi-agent systems?
Towards robust simulation tools**

Referent: **Dr. Nazim Fatès
MAIA Team – INRIA Nancy Grand-Est – LORIA lab C22**

Abstract:

Imagine that you want to model a population of individuals that live in a discrete two-dimensional environment. Individuals obey simple laws that involve only the state of their immediate neighbourhood. Depending on the simulation tools you have, depending on how much effort you want to invest, you will have to choose one of the numerous mathematical frameworks that are available to you. The purpose of my talk is to compare multi-agent systems and cellular automata as a modelling tool. I will present various examples showing the pros and cons for each framework. I will try to demonstrate that multi-agent systems do not necessarily deserve the bad reputation they have. It is possible to describe a multi-agent system with the same mathematical rigour that cellular automata provide. Focusing on the well-known Langton's ants system, I will illustrate how such a description not only removes ambiguities of description but also allows us to discover new phenomena.

Ort: **Fakultät Informatik, kleines Ratszimmer (Zi. 1005)**

Zeit: **Dienstag, 12. Oktober 2010, 11:00 Uhr**

gez. Prof. Dr. Wolfgang E. Nagel