

## EINLADUNG

Zeit: Dienstag, 28. Juni 2011, 10.00 Uhr

Ort: AH 3, Ahornstr. 55

Referent: Prof. Dr. Martin Lange,  
Universität Kassel

Titel: Logic and Algorithms for the Foundations of  
Computer Science

### Abstract:

After giving a brief overview of my academic past I will present two current activities in the area of computational logic and foundational computer science.

The first one is concerned with the access to hard decision and computation problems from various disciplines using logic. We will show how model checking and partial evaluation can be used to obtain new algorithms for such problems, for instance in the area of bio-informatics.

The second activity falls into the area of foundational work for formal methods, namely program synthesis. As with verification, synthesis aims at aiding the design of correct programs, here realised by automatic program generation. It is closely related to the satisfiability problems of the used specification languages. We will explain the challenges for the field of logic that are imposed by software synthesis as opposed to hardware synthesis, and sketch a plan of work - some done, some to be done - in this direction.

We will conclude with ideas for future work in the area of logic and discrete systems.

Es laden ein: Die Dozenten der Informatik