

EINLADUNG

Zeit: Donnerstag, 02. Juni 2005, 16.30 Uhr

Ort: AH I, Ahornstr.55

Referent: Prof. Dr. Deepak Kapur,
University of New Mexico, Albuquerque, USA

Titel: "Can Algebraic Geometry Rescue Program Verification?"

Abstract:

A new approach for automatically generating polynomial equations as program invariants from imperative programs will be presented. The focus will be on the algebraic geometry methods, particularly how for a subclass of programs, conjunctions of polynomial equations as invariants can be generated automatically without knowing any input/output specification of a program. The method has been implemented and used successfully to generate polynomial invariants of nontrivial numerical programs. The critical role of algebraic geometry in discovering these results will be discussed. It is proposed that equally rich theories about other data structures will have to be developed in order to make progress in automatically generating program invariants expressed in terms of properties of such data structures.

This work is done jointly with Enric Rodriguez Carbonell.

Es laden ein: Die Dozenten der Informatik