Informatik-Kolloquium

Rheinisch-Westfälische Technische Hochschule Aachen
Lehrstuhl für Informatik II

EINLADUNG

Zeit: Donnerstag, 03. Juli 2003, 16.30 Uhr

Ort: AH I, Ahornstr.55

Referent: Herrn Prof. Dr. Javier Esparza
Universität Stuttgart

Titel: Model checking pushdown processes

Abstract:

Pushdown processes are pushdown automata seen under a different light: we are not interested in the languages they recognise, but in the transitions systems they generate. These are infinite transition systems with pairs of the form (control state, stack content) as states.

In January 1997 I gave a talk at the RWTH Aachen on the problem of checking if all the infinite executions of a pushdown process satisfy a formula of Linear Temporal Logic (LTL). At that time my motivation, and that of my co-authors, was purely theoretical. Six years later, this work has produced the Moped tool, a model-checker for pushdown systems able to find bugs in Windows XP drivers with 27000 lines of code.

In this talk I'll sketch the (rather long) way from the theory to the realisation. Since the audience is unlikely to remember the content of the 1997 talk, I will spend some time refreshing the basic ideas. I will then present some experimental results, and, time permitting, I'll sketch some other applications.

This is joint work with Stefan Schwoon.

Es laden ein: Die Dozenten der Informatik