Informatik-Kolloquium

Rheinisch-Westfälische Technische Hochschule Aachen
Lehr- und Forschungsgebiet für Informatik II

EINLADUNG

Zeit: Donnerstag, 10. Jan. 2002, 17.00 Uhr

Ort: Raum AH I, Ahornstr.55 (ehem. PH)

Referent: Prof. Dr. Aart Middeldorp, University Tsukuba/Japan

Thema: Approximating Dependency Graphs using Tree Automata Techniques

Abstract:

Termination of term rewriting has been studied for decades and many powerful techniques have been developed. In recent years the dependency pair method of Arts and Giesl emerged as the most powerful technique for proving termination automatically. In this method a rewrite system is transformed into a set of ordering constraints such that termination of the rewrite system is equivalent to the solvability of the constraints. The generated constraints are typically solved by standard techniques (polynomial interpretations, path orders), even when these techniques are not applicable to the original rewrite system. We show that the method can be improved by using tree automata techniques to obtain better approximations of the dependency graph. This graph determines the ordering constraints that need to be solved in order to conclude termination. We further show that by using our approximations the dependency pair method provides a decision procedure for termination of right-ground rewrite systems.

Es laden ein: Die Dozenten der Informatik