

EINLADUNG

Zeit: Donnerstag, 30. Sept. 2004, 16.30 Uhr

Ort: AH I, Ahornstr.55

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Titel: "A General Theorem on Termination of Rewriting"

Abstract:

Previously we have considered theorems on the weak- and strong-normalisation of a cut-elimination procedure for display calculi. In formalising a published proof of the strong-normalisation theorem in the Isabelle theorem prover, we discovered a complication which had earlier been overlooked, and devised a new proof which overcame the problem.

We describe this work briefly.

Subsequently we re-expressed the strong-normalisation result in general terms, as a theorem about the well-foundedness of a certain ordering on first-order terms, thereby allowing us to prove the termination of certain systems of rewrite rules.

We show how to use our theorem to prove the well-foundedness of various examples, for which the recursive path ordering has previously been used. Next, we give examples of systems of rewrite rules which cannot be handled by these methods but which can be handled by ours.

Finally, we show that our method can also prove the termination of the Knuth-Bendix ordering and a key result in the dependency pair method.

All the results we describe have been formalised in the Isabelle theorem prover.

Es laden ein: Die Dozenten der Informatik