

Problem #11 (Solved !)

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Summary: Is unicity of normal forms a modular property of standard conditional systems?

A conditional term-rewriting system has rules of the form $p \Rightarrow l \rightarrow r$, which are only applied to instances of l for which the condition p holds. A “standard” (or “join”) conditional system is one in which the condition p is a conjunction of conditions $u \downarrow v$, meaning that u and v have a common reduct (are “joinable”). Is unicity of normal forms (UN) a modular property of standard conditional systems? See also [Mid93].

Remark

This has been answered in the negative by giving a counterexample [Sch02].

Bibliography

- [Mid90] Aart Middeldorp. *Modular Properties of Term Rewriting Systems*. PhD thesis, Vrije Universiteit, Amsterdam, The Netherlands, 1990.
- [Mid93] Aart Middeldorp. Modular properties of conditional term rewriting systems. *Information and Computation*, 104(1):110–158, 1993.
- [Sch02] Kai Scheffermann. A counterexample to the modularity of unicity of normal forms for join conditional term rewriting systems. Preprint pr309, Universität Hannover, Institut für Mathematik, April 2002.