2nd International Workshop on Reduction Strategies in Rewriting and Programming (WRS 2002)

affiliated with RTA 2002, held as part of FLoC 2002
Copenhagen, Denmark, July 21, 2002

Call for Papers and Participation

Workshop Co-chairs

Bernhard Gramlich	TU Wien
Salvador Lucas	TU Valencia

Program Committee

Sergio Antoy	U Portland State
Roberto Di Cosmo	U Paris VII
Bernhard Gramlich	TU Wien
Michael Hanus	U Kiel
Claude Kirchner	LORIA Nancy
Paul Klint	CWI & U Amsterdam
Salvador Lucas	TU Valencia
Manfred Schmidt-Schauss	U Frankfurt a. M.
Yoshihito Toyama	U Tohoku

Invited Speakers

Aart Middeldorp	U Tsukuba
Vincent van Oostrom	U Utrecht

Important Dates

Submission:	**April 15, 2002**
Notification:	May 27, 2002
Final versions:	June 17, 2002
Workshop:	July 21, 2002

Background and Aims: Reduction strategies in rewriting and programming have attracted an increasing attention within the last years. New types of reduction strategies have been invented and investigated, and new results on rewriting / computation under particular strategies have been obtained. Research in this field ranges from primarily theoretical questions about reduction strategies to very practical application and implementation issues. The need for a deeper understanding of reduction strategies in rewriting and programming, both in theory and practice, is obvious, since they bridge the gap between unrestricted general rewriting (computation) and (more deterministic) rewriting with particular strategies (programming). Moreover, reduction strategies provide a natural way to go from operational principles (e.g., graph and term rewriting, narrowing, lambda-calculus) and semantics (e.g., normalization, computation of values, infinitary normalization, head-normalization) to implementations of programming languages.
The workshop wants to provide a forum for the presentation and discussion of new ideas and results, recent developments, new research directions, as well as of surveys on existing knowledge in this area. Furthermore we aim at fostering interaction and exchange between researchers and students actively working on such topics. The workshop will be held in conjunction with RTA 2002 in Copenhagen (Denmark) on July 21, 2002.
The workshop is (co-)organized by TU Valencia and TU Wien.

Topics of Interest include, but are not restricted to:

- theoretical foundations for the definition and semantic description of reduction strategies
- strategies in different frameworks (term rewriting, graph rewriting, infinitary rewriting, lambda calculi, higher order rewriting and explicit substitutions, conditional rewriting, rewriting with built-ins, narrowing, constraint solving, etc.) and their application in (equational, functional, functional-logic) programming (languages)
- properties of reduction strategies / computations under strategies (e.g., completeness, computability, decidability, complexity, optimality, (hyper-)normalization, cofinality, fairness, perpetuality, context-freeness, neededness, laziness, eagerness, strictness)
- interrelations, combinations and applications of reduction under different strategies (e.g., equivalence conditions for fundamental properties like termination and confluence, applications in modularity analysis, connections between strategies of different frameworks, etc.)
- program analysis and other semantics-based optimization techniques dealing with reduction strategies
- rewrite systems / tools / implementations with flexible / programmable strategies as essential concept / ingredient
- specification of reduction strategies in (real) languages
- data structures and implementation techniques for reduction strategies.

Submissions: We solicit papers on all aspects of reduction strategies in rewriting and programming. Submissions should describe unpublished work, except for survey papers which are explicitly welcome, too. Submissions should not exceed 10 pages (however, survey papers may be longer) and be sent in postscript format to the PC co-chairs (`wrs02@dsic.upv.es`) before **April 15, 2002**. Submissions should include the title, authors' names, affiliations, addresses, and e-mail. Selection of papers by the PC will be based on originality, significance, and correctness. Final versions will be due by June 17, 2002.

Publication: The final workshop proceedings will be published in the *Electronic Notes in Theoretical Computer Science (ENTCS)* series of Elsevier. Preliminary hardcopy proceedings will be available at the workshop. A special issue of the Journal of Symbolic Computation on *Reduction Strategies in Rewriting and Programming* will be designated for revised and extended versions of selected contributions from both WRS 2001 (Utrecht, May 2001) and WRS 2002.

WRS 2002 Web Site: `http://www.dsic.upv.es/users/elp/WRS2002/`