Fifth International Workshop on Reduction Strategies in Rewriting and Programming (WRS'05)

part of the Federated conferences on Rewriting, Deduction and Programming (RDP 2005) Nara, Japan, April 22nd, 2005

CALL FOR PAPERS AND PARTICIPATION

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.

Workshop co-chairs:

| Roberto Di Cosmo | (Paris 7, France) |
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| Yoshihito Toyama | (Tohoku, Japan) |

Program committee:

April 22, 2005

| Sergio Antoy Eduardo Bonelli Roberto Di Cosmo Bernhard Gramlich Stefano Guerrini Salvador Lucas Aart Middeldorp Yoshihito Toyama | (Portland) (Stevens) (Paris 7) (Wien) (Roma) (Valencia) (Innsbruck) (Tohoku) | 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. | |
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| Invited speakers: Kokichi Futatsugi | (JAIST, Japan) | Therefore any progress in this area is likely to be of interest not only to the rewriting community, but also to neighbouring fields like functional programming, functional-logic programming, and termination proofs of algorithms. | |
| Hongwei Xi | (Boston, USA) | | |
| Important dates: | | The workshop wants to provide a forum for the presentation and discussion of new ideas and results, recent developments, new research directions, as | |
| January 21, 2005 January 31, 2005 February 25, 2005 March 18, 2005 | Abstracts Submission Notification Final version | 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. | |

Topics of interest include, but are not restricted to:

Workshop

- 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). Please, send a message containing the title, authors, and abstract of your submission before January 21, 2005 to the PC co-chairs at wrs05@pps.jussieu.fr. The full version of your submission should be sent in postscript or PDF format before January 31, 2005. 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 March 18, 2005.

Publication: accepted papers will be included in the preliminary workshop proceedings that will be available at the workshop. The final proceedings will be published in the Electronic Notes in Theoretical Computer Science (ENTCS) series of Elsevier.

WRS'05 site: http://www.dicosmo.org/WRS05