

## Preface

This volume contains the proceedings of the *16th International Conference on Rewriting Techniques and Applications* (RTA 2005), which was held on April 19–21, 2005, at the Nara-Ken New Public Hall in the center of the Nara National Park in Nara, Japan.

RTA is the major forum for the presentation of research on all aspects of rewriting. Previous RTA conferences were held in Dijon (1985), Bordeaux (1987), Chapel Hill (1989), Como (1991), Montreal (1993), Kaiserslautern (1995), Rutgers (1996), Sitges (1997), Tsukuba (1998), Trento (1999), Norwich (2000), Utrecht (2001), Copenhagen (2002), Valencia (2003), and Aachen (2004).

This year, there were 79 submissions from 20 countries, of which 31 papers were accepted for publication (29 regular papers and 2 system descriptions). The submissions came from France (10 accepted papers of the 23.1 submitted papers), USA (5.6 of 11.7), Japan (4 of 9), Spain (2.7 of 6.5), UK (2.7 of 4.7), The Netherlands (1.7 of 3.8), Germany (1.3 of 2.3), Austria (1 of 1), Poland (1 of 1), Israel (0.5 of 0.8), Denmark (0.5 of 0.5), China (0 of 4), Korea (0 of 4), Taiwan (0 of 1.3), Australia (0 of 1), Brazil (0 of 1), Russia (0 of 1), Switzerland (0 of 1), Sweden (0 of 1), and Italy (0 of 0.3).

Each submission was assigned to at least three Program Committee members, who carefully reviewed the papers, with the help of 111 external referees. Afterwards, the submissions were discussed by the Program Committee during one week through the Internet by means of Andrei Voronkov's *EasyChair* system. I want to thank Andrei very much for providing his system which was very helpful for the management of the submissions and reviews and for the discussion of the Program Committee.

The Program Committee decided to award a prize of 100,000 Yen for the best paper to the article *Extending the Explicit Substitution Paradigm* by Delia Kesner and Stéphane Lengrand. Moreover, student travel grants were awarded to Jérôme Rocheteau (author of the paper  *$\lambda\mu$ -Calculus and Duality: Call-by-Name and Call-by-Value*) and Wojciech Moczydłowski (co-author of the paper *Termination of Single-Threaded One-Rule Semi-Thue Systems*).

RTA 2005 had three invited talks, by Yoshihito Toyama (*Confluent Term Rewriting Systems*), Philip Wadler (*Call-by-Value is Dual to Call-by-Name – Reloaded*), and Amy Felty (*A Tutorial Example of the Semantic Approach to Foundational Proof-Carrying Code*). The talk by Amy Felty was a joint invited talk of RTA and the collocating *7th International Conference on Typed Lambda Calculi and Applications* (TLCA 2005).

Since RTA 2005 marked the 20th anniversary of RTA, this anniversary was celebrated with a special session of invited talks on the history and future of RTA and rewriting. For this session, we invited Gérard Huet (*Before RTA: Early Days in Rewriting Research*), Jean-Pierre Jouannaud (*Twenty Years Later*), and Nachum Dershowitz (*Open. Closed. Open.*). I want to thank both the invited

speakers of RTA and of the anniversary session for their interesting and inspiring talks.

RTA 2005 was held as part of the *Federated Conference on Rewriting, Deduction, and Programming* (RDP), together with the following events. I wish to thank the organizers of these events for making the conference even more attractive:

- *7th International Conference on Typed Lambda Calculi and Applications*, TLCA 2005 (Program Chair: Paweł Urzyczyn, Conference Chair: Masahito Hasegawa)
- *6th International Workshop on Rule-Based Programming*, RULE 2005 (Horatiu Cirstea, Narciso Martí-Oliet)
- *19th International Workshop on Unification*, UNIF 2005 (Laurent Vigneron)
- *5th International Workshop on Reduction Strategies in Rewriting and Programming*, WRS 2005 (Roberto Di Cosmo, Yoshihito Toyama)
- IFIP Working Group 1.6 on Term Rewriting (Claude Kirchner)

Many people helped to make RTA 2005 a success. In particular, I want to thank Hitoshi Ohsaki, the conference chair of RTA 2005, and the other members of the Organizing Committee, who organized the conference in a very careful and completely perfect way. I am also very grateful to the members of the Program Committee, to the external reviewers, to the former and current publicity chairs of RTA (Femke van Raamsdonk and Ralf Treinen), to the sponsors of the conference, and to René Thiemann and Peter Schneider-Kamp for helping with many technical problems.