

Foreword

The last ten years have seen a gradual fragmentation of the Automated Reasoning community into various disparate groups, each with its own Conference: the Conference on Automated Reasoning (CADE), the International Workshop on First-Order Theorem Proving (FTP), and the International Conference on Automated Reasoning with Analytic Tableau and Related Methods (TABLEAUX) to name three. During 1999, various members of these three communities discussed the idea of holding a joint Conference in 2001 to bring our communities together again. The plan was to hold a one-off Conference for 2001, to be repeated if it proved a success. This volume contains the Papers presented at the resulting event: the first International Joint Conference on Automated Reasoning (IJCAR 2001), held in Siena, Italy, from June 18–23, 2001.

We received 88 research Papers and 24 Systems descriptions as submissions. Esch Submission was fully refereed by at least three peers who were asked to write a report on the quality of the submissions. These reports were accessible to members of the program committee via a web-based System specially designed for electronic discussions. As a result we accepted 37 research Papers and 19 System descriptions, which make up these proceedings. In addition, this volume contains full Papers or extended abstracts from the five invited speakers.

Ten one-day Workshops and four tutorials were held during IJCAR 2001. The automated theorem proving System competition (CASC) was organized by Geoff Sutcliffe to evaluate the performance of Sound, fully automatic, classical, first-Order automated theorem proving Systems. The third Workshop on Inference in Computational Semantics (ICoS-3) and the 9th Symposium on the Integration of Symbolic Computation and Mechanized Reasoning (CALCULEMUS-2001) were co-located with IJCAR 2001, and held their own associated Workshops and produced their own separate proceedings.

We would like to acknowledge the enormous amount of work put in by the members of the program committee, the various steering committees, the IJCAR officials, and additional referees named on the following pages. In particular, we would like to thank Fabio Massacci and Marco Baiocchi for organizing the Conference itself, Gernot Salzer for installing and maintaining the software for our web-based reviewing procedure, and Gertrud Bauer for assembling these proceedings. Finally, we thank the sponsors named on the following pages for their financial support.

April 2001

Rajeev Goré,
Alexander Leitsch,
Tobias Nipkow

Conference Chair and Local Organization

Fabio Massacci (Univ. di Siena, Italy)

Program Committee Chairs

Rajeev Goré (Australian National Univ., Canberra)
Alexander Leitsch (TU Wien)
Tobias Nipkow (TU München)

Program Committee

Rajeev Alur (Philadelphia)
Franz Baader (Aachen)
Matthias Baaz (Wien)
Bernhard Beckert (Karlsruhe)
Ricardo Caferra (Grenoble)
Roy Dyckhoff (St Andrews)
Ulrich Furbach (Koblenz)
Rajeev Gore (Canberra)
Didier Galmiche (P-Y)
Harald Ganzinger (MP1 Saarbrücken)
Jean Goubault-Larrecq (INRIA Rocq.)
Reiner Hähnle (Chalmers)
John Harrison (Intel, Hillsboro)
Deepak Kapur (New Mexico)
Henry Kautz (ATT, Florham Park)
Michael Kohlhase (Saarbrücken)
Alexander Leitsch (TU Wien)
Zohar Manna (Stanford)
Tobias Nipkow (TU München)
Peter Patel-Schneider (Bell Labs)
Frank Pfenning (Pittsburgh)
Andreas Podelski (MP1 Saarbrücken)
Wolfgang Reif (Augsburg)
Gernot Salzer (Wien)
Moshe Vardi (Houston)

Invited Speakers

Neil D. Jones (DIKU, Denmark)
Lawrence C. Paulson (Univ. of Cambridge, UK)
Helmut Schwichtenberg (Univ. München, Germany)
Andrei Voronkov (Univ. of Manchester, UK)
Doron Zeilberger (Temple Univ., USA)

IJCAR Officids

Conference Chair: Fabio Massacci (Univ. di Siena, Italy)

Program Committee Chairs:

Rajeev Gore (Australian National Univ., Canberra)

Alexander Leitsch (TU Wien)

Tobias Nipkow (TU München)

Workshop Chair: Dieter Hutter (DFKI Saarbrücken, Germany)

Tutorial Chair: Toby Walsh (Univ. of York, U.K.)

Publicity Chair: Peter Baumgartner (Univ. Koblenz, Germany)

Treasurer: Enrico Giunchiglia (Univ. di Genova, Italy)

IJCAR Steering Committee:

Fabio Massacci (IJCAR 2001 Conference Chair)

Ulrich Furbach (President of CADE Inc.)

Frank Pfenning (Vice-President of CADE Inc.)

Peter Schmitt (Vice-President of TABLEAUX)

Maria Paola Bonacina (President of FTP)

Ricardo Caferra (Representative of FTP)

Local Organization: Marco Baiocchi, Fabio Massacci (Univ. di Siena, Italy)

IJCAR Sponsors

IJCAR gratefully acknowledges the sponsorship of:

Association for Automated Reasoning

Consiglio Nazionale delle Ricerche (CNR)

European Research Consortium on Informatics and Mathematics (ERCIM)

Monte dei Paschi di Siena SpA - Banca dal 1947

Univ. degli Studi di Siena

Associazione Italiana per l'Intelligenza Artificiale (AI*IA)

CADE Inc.

European Association for Theoretical Computer Science (EATCS)

European Coordinating Committee for Artificial Intelligence (ECCAI)

German Informatics Society (GI)

Additional Reviewers

Andreas Abel	Jürgen Giesl	Norbert Preining
Wolfgang Ahrendt	Bernhard Gramlich	Aarne Ranta
Farid Ajili	Elmar Habermalz	Muriel Roger
Thomas Baar	Miki Hermann	Ulrike Sattler
Peter Baumgartner	Joshua Hodas	Renate Schmidt
Andrew Bernard	Kahlil Hodgson	Klaus Schneider
Steven Bird	Jacob M. Howe	Tobias Schröder
Alexander Bockmayr	Tomi Janhunen	Carsten Schürmann
Thierry Boy de Ia Tour	Fairouz Kamareddine	John Slaney
Stefan Brass	Manfred Kerber	Andrew Slater
Krysia Broda	Alexander Koller	Gernot Stenz
Chad E Brown	Miyuki Koshimura	Frieder Stolzenburg
Ernst Buchberger	Dominique Larchey-Wemhing	Lutz Strassburger
Diego Calvanese	Reinhold Letz	Armando Tacchella
Domenico Cantone	Carsten Lutz	Tanel Tammet
Serena Cerrito	Heiko Mantel	Cesare Tinelli
Kaustuv Chaudhuri	William McCune	Stephan Tobies
Agata Ciabattoni	Andreas Meier	Christian Urban
Koen Classen	Daniel Mery	Stephane Vaillant
Evelyne Contejean	Aart Middeldorp	Hans P. van Ditmarsch
Veronica Dahl	Georg Moser	Vincent van Oostrom
Hans de Nivelle	Paliath Narendran	Femke van Raamsdonk
Stephane Demri	Robert Nieuwenhuis	Jaco van de Pol
Jörg Denzinger	Jean-Marc Notin	Helmut Veith
Michael Dierkes	Hans-Jürgen Ohlbach	Andrei Voronkov
Devdatt Dubhashi	Enno Ohlebusch	Uwe Waldmann
Niklas Een	Jens Otten	Joe Warren
Uwe Egly	Lawrence C. Paulson	Kevin Watkins
Wolfgang Faber	Nicolas Peltier	Adnan Yahya
Christian Fermüller	Brigitte Pientka	Jürgen Zimmer
Wan Fokkink	Jeff Polakow	Erich Grädel
Martin Giese	Alberto Policriti	

Author Index

- Anger, Christian 325
Armando, Alessandro 663
Armeln, Pablo A. 289
Audemard, Gilles 427
Avenhaus, Jürgen 658
Avron, Arnon 529
- Baader, Franz 92
Beckert, Bernhard 626
Beeson, Michael 318
Benedetti, Marco 331
Boigelot, Bernard 611
Bonacina, Maria Paola 448
- Cerrito, Serenella 137
Cialdea Mayer, Marta 137
Compagna, Luca 663
- Doutre, Sylvie 272
- Egly, Uwe 561
- Fariñas del Cerro, Luis 453
Fauthoux, David 453
Fiedler, Armin 416
Formisano, Andrea 152
- Galmiche, Didier 696
Ganzinger, Harald 242, 514
Gasquet, Olivier 453
Giese, Martin 545
Giesl, Jürgen 469
Giunchiglia, Enrico 347, 364
- Haarslev, Volker 29, 61, 701
Hähnle, Reiner 182
Happe, Jens 459
Henocque, Laurent 427
Herzig, Andreas 453
Hillenbrand, Thomas 257
Hodas, Joshua S. 670
Hodgson, Kahlil 443
- Jodogne, Sébastien 611
Jones, Neil D. 1
- Kapur, Deepak 469
Konczak, Kathrin 325
Kreitz, Christoph 421
- Larchey-Wendling, D. 696
Letz, Reinhold 381
Lev, Iddo 529
Linke, Thomas 325
Löchner, Bernd 658
Longin, Dominique 453
Lorigo, Lori 421
Lücke, Jörg 690
Luther, Marko 386
Lutz, Carsten 45, 121
Lynch, Christopher 499
- Maratea, Massimo 347
Massacci, Fabio 453
McAllester, David 514
Mengin, Jérôme 272
Méry, D. 696
Middeldorp, Aart 593
Möller, Ralf 29, 61, 701
Morawska, Barbara 499
Murray, Neil V. 182
- Narizzano, Massimo 364
Nieuwenhuis, Robert 242, 257
Nivela, Pilar 242
de Nivelles, Hans 211
Nogin, Aleksey 421
- Omodeo, Eugenio G. 152
- Pastre, Dominique 685
Patel-Schneider, Peter F. 464
Paulson, Lawrence C. 5
Peltier, Nicolas 578
Pientka, Brigitte 401
Pliuskevičius, Regimantas 107
Pratt-Hartmann, Ian 211
Pym, David J. 289
- Ranise, Silvio 663
Reif, Wolfgang 642
Riazanov, Alexandre 257, 376
Rosenthal, Erik 182

- Sattler, Ulrike 76
Schellhorn, G. 642
Schlager, Steffen 626
Schmitt, Stephan 421, 561
Schulz, Stephan 370
Sebastiani, Roberto 464
Slaney, John 443
Stenz, Gernot 381
Stuber, Jürgen 195
Sturm, Holger 121
Szeider, Stefan 168

Tacchella, Armando 347, 364
Tamura, Naoyuki 670
Temperini, Marco 152
Thums, Andreas 642

Tobies, Stephan 92
Turhan, Anni-Yasmin 61

Urbain, Xavier 485

Vardi, Moshe Y. 76
Voronkov, Andrei 13, 257, 376

Waldmann, Uwe 226
Wang, Kewen 305
Wessel, Michael 29
Wolper, Pierre 611
Wolter, Frank 121

Zakharyashev, Michael 121
Zambonin, Davide 347

Automated Reasoning

First International Joint Conference, IJCAR 2001 Siena,

Italy, June 18-23, 2001 Proceedings

Gore, R.; Leitsch, A.; Nipkow, T. (Eds.)

2001, XIII, 712 p., Softcover

ISBN: 978-3-540-42254-9