

Preface

The Symposium on Theoretical Aspects of Computer Science (STACS) is held annually, alternating between France and Germany. The STACS meetings are organized jointly by the Special Interest Group for Theoretical Computer Science of the Gesellschaft für Informatik (GI) in Germany and the Maison de l'Informatique et des Mathématiques Discrètes (MIMD) in France.

STACS 2001 was the 18th in this series, held in Dresden, February 15-17, 2001. Previous STACS symposia took place in Paris (1984), Saarbrücken (1985), Orsay (1986), Passau (1987), Bordeaux (1988), Paderborn (1989), Rouen (1990), Hamburg (1991), Cachan (1992), Würzburg (1993), Caen (1994), München (1995), Grenoble (1996), Lübeck (1997), Paris (1998), Trier (1999), and Lille (2000). It may be worth noting that in 2001 the symposium was held in one of the new states of reunited Germany for the first time. The proceedings of all of these symposia have been published in the Lecture Notes in Computer Science series of Springer-Verlag.

STACS has become one of the most important annual meetings in Europe for the theoretical computer science community. It covers a wide range of topics in the area of foundations of computer science: algorithms and data structures, automata and formal languages, computational and structural complexity, logic, verification, and current challenges. This year, 153 submissions were received, mostly in electronic form, from more than 30 countries, with a fair portion from non-European countries. We would like to thank Jochen Bern who designed the electronic submission procedure which performed marvelously and was of great help to the program committee. The program committee met for two days in Dresden and selected 46 out of the 153 submissions. Most of the papers were evaluated by four members of the program committee, partly with the assistance of subreferees. We thank the program committee for the thorough and careful work. Our gratitude extends to the numerous subreferees. The program committee was impressed by the high scientific quality of the submissions as well as the broad spectrum they covered. Because of the constraints imposed by the limited period of the symposium, a number of good papers could not be accepted.

We thank the three invited speakers at this symposium, Julien Cassaigne (Marseille), Martin Grohe (Chicago), and Dexter Kozen (Ithaca) for accepting our invitation to share their insights on new developments in their research areas.

We would like to express our sincere gratitude to all the members of the *Institut für Theoretische Informatik* and to the local organizing committee who invested their time and energy to organize this conference.

We would like to acknowledge the various sources of financial support for STACS 2001, especially the Deutsche Forschungsgemeinschaft (DFG), the Ministerium für Wissenschaft und Kunst des Landes Sachsen, and Freunde und Förderer der TU Dresden.

December 2000

Afonso Ferreira
Horst Reichel

Program Committee

D. Barrington
 A. Bertone
 J. Blömer
 V. Blondel
 J. D. Boissonnat
 M. Bousquet-Mélou
 M. Dietzfelbinger
 A. Ferreira
 L. Fribourg
 G. Gastin
 A. Marchetti-Spaccamella
 H. Reichel (Chair)
 G. Rote
 N. Vereshchagin
 Th. Wilke

**Local Arrangements
Committee**

H. Vogler
 P. Buchholz

Referees¹

Parosh Abdulla	Danièle Beauquier	Yegor Bryukhov
Luca Aceto	Luca Becchetti	Peter Buerigisser
Micah Adler	Béatrice Berard	Jan van den Bussche
Marc Aiguier	Anna Bernasconi	Christian Cachin
Susanne Albers	Gilles Bernot	Benoit Caillaud
Paola Alimonti	J. Berstel	T. Calamoneri
Eric Allender	Andre Berthiaume	Cristian Calude
Jean-Paul Allouche	A. Bertoni	Olivier Carton
Helmut Alt	Ingrid Biehl	Julien Cassaigne
Karine Altisen	Norbert Blum	Franck Cassez
Andris Ambainis	Luc Boasson	N. Cesa-Bianchi
Klaus Ambos-Spies	Bernard Boigelot	Aleksey Chernov
Christoph Ambuehl	Paolo Boldi	Alexey Chernov
Eric Angel	M. A. Bonuccelli	Christian Choffrut
A. Arnold	Ahmed Bouajjani	Francesc Comellas
Giorgio Ausiello	Amar Bouali	Hubert Comon
Philippe Balbiani	Olivier Bournez	David Coudert
E. Bampis	Mireille Bousquet-Melou	Jean-Michel Couvreur
Klaus Barthelmann	Julian Bradfield	Yves Crama
Reuven Bar-Yehuda	Andreas Brandstädt	Pierluigi Crescenzi
Christina Bazgan	Peter Brass	M. Crochemore
Cristina Bazgan	Roberto Bruni	Carsten Damm
Marie-Pierre Beal	Véronique Bruyère	Fabrizio d'Amore

¹ The list of referees was compiled automatically from the database that was used by the program committee. We apologize for any omissions and inaccuracies.

Philippe Darondeau	Silvio Ghilardi	Ralf Klasing
Jürgen Dassow	Dora Giammarresi	Ines Klimann
Anuj Dawar	Joachim Giesen	Christian Knauer
Olivier Delmas	Alfredo Goldman	J. Koebler
Stephane Demri	Massimiliano Goldwurm	Pascal Koiran
Olivier Devillers	K. Gorbunov	Ulli Kortenkamp
Pr. Roberto Di Cosmo	Erich Graedel	Guy Kortsarz
Volker Diekert	Suanne Graf	Klaus Kriegel
Gilles Dowek	Giovanna Guaiana	Danny Krizanc
Dirk Draheim	Irène Guessarian	Vladimir Krupski
F. Drewes	David Guijarro	Antonin Kucera
Michael Drmota	Bruno Guillaume	G. Kucherov
Manfred Droste	P. Habermehl	Ralf Kuesters
Jean-Christophe Dubacq	Michel Habib	Dietrich Kuske
Sergey Dudakov	Nicolas Halbwachs	Denis Lapoire
Serge Dulucq	Michael Hanus	Francois Laroussinie
Jérôme Durand-Lose	Johan Hastad	Michel Latteux
Christoph Durr	Jean-Michel Helary	Alexandre Laugier
Stefan Edelkamp	Edith Hemaspaandra	C. Lautemann
Henrik Ejersbo Jensen	Miki Hermann	Sylvain Lazard
Peter van Emde Boas	Philippe Herrmann	Hanno Lefmann
Ioannis Z. Emiris	Ulrich Hertrampf	Vincent Lefèvre
Lars Engebretsen	Frank Hoffmann	Stefano Leonardi
Jeff Erickson	Michael Hoffmann	W. Lindner
Kousha Etesami	Thomas Hofmeister	Annie Liu
Alexandre Evfimievski	Steffen Hölldobler	Christof Loeding
Hugues Fauconnier	Tsan-sheng Hsu	Markus Lohrey
Sándor Fekete	I. Izmetiev	Luc Longpre
Stefan Felsner	Gerard Jacob	Rita Loogen
Paolo Ferragina	Andreas Jakobý	Tamas Lukovszki
Mauro Ferrari	David Janin	Jon Machta
Afonso Ferreira	Klaus Jansen	Frederic Magniez
Thomas Firley	Thierry Jéron	Jean Mairesse
Emmanuel Fleury	Tomasz Jurdzinski	Johann Makowsky
Dimitris Fotakis	Yan Jurski	Ornaghi Mario
Pierre Fraigniaud	Astrid Kaffanke	Jean-Yves Marion
Paolo G. Franciosa	Christos Kaklamanis	B. Martin
Daniele Frigioni	Sampath Kannan	Conrado Martinez
Bernd Gaertner	Burghard von Karger	Paolo Massazza
Giulia Galbiati	Paul Kearney	Jiri Matousek
Jerome Galtier	Richard Kennaway	Giancarlo Mauri
Harald Ganzinger	Claire Kenyon	Alexander May
Paul Gastin	Astrid Kiehn	R. Mayr
Cyril Gavoille	Daniel Kirsten	R. McNaughton
F. Geurts	Marcos Kiwi	Lutz Meifner

Guy Melançon	Steffen Reith	Hendrik Tews
C. Mereghetti	Eric Rémila	Bernhard Thalheim
Yves Metivier	Antonio Restivo	Denis Therien
Friedhelm Meyer auf der Heide	Mark Reynolds	Peter Thiemann
C. Moore	Herve Rivano	Martin Thimm
Nicole Morawe	J. M. Robson	Wolfgang Thomas
Michel Morvan	Andrei E. Romashchenko	Sophie Tison
Larry Moss	Gianluca Rossi	Jacobo Toran
Till Mossakowski	Jörg Rothe	Mauro Torelli
Laurent Mounier	Michel de Rougemont	Francoise Tort
Andrei Muchnik	Jan Rutten	Denis Trystram
Madhavan Mukund	Mike Saks	Savio Tse
Markus Müller-Olm	Massimo Santini	Max Ushakov
Anca Muscholl	Martin Sauerhoff	Erich Valkema
Kedar Namjoshi	P. Savicky	Brigitte Vallee
Giri Narasimhan	Christian Schindelhauer	Oleg Verbitsky
Mark-Jan Nederhof	Michael Schmitt	Yann Verhoeven
Sotiris Nikolettseas	Philippe Schnoebelen	Adrian Vetta
Damian Niwinski	Uwe Schöning	M. Vidyasagar
Vincnet van Oostrom	Rainer Schuler	Sebastiano Vigna
Friedrich Otto	Nicole Schweikardt	Berthold Vöcking
Martin Otto	Thomas Schwentick	Heribert Vollmer
Christophe Paul	Camilla Schwind	M. Vyalyi
Gheorghe Paun	Geraud Senizergues	Michael Vyugin
W. Penczek	Alexander Shen	Vladimir V'yugin
Paolo Penna	Amin Shokrollahi	Stephan Waack
Mati Pentus	Mihaela Sighireanu	Klaus Wagner
Stephane Perennes	David Simplot	RFC Walters
Pino Persiano	Vaclav Snasel	Rolf Wanka
Antoine Petit	Roberto Solis-Oba	Osamu Watanabe
Rossella Petreschi	Paul Spirakis	Klaus Weihrauch
Ulrich Pferschy	Ludwig Staiger	Pascal Weil
Birgit Pfitzmann	Yannis Stamatiou	Emo Welzl
Claudine Picaronny	Kathleen Steinhöfel	Rolf Wiehagen
Giovanni Pighizzini	Andrea Sterbini	Gerhard Wöginger
Jean-Eric Pin	Iain Stewart	Haiseung Yoo
Axel Poigne	Colin Stirling	Stanislav Zak
Lorant Porkolab	Howard Straubing	Thomas Zeugmann
Alex Rabinovich	Gregoire Sutre	Martin Ziegler
R. Ramanujam	Till Tantau	Wieslaw Zielonka
Klaus Reinhardt	Sergey Tarasov	Alexander Zvonkin
	Gábor Tardos	Uri Zwick

Sponsoring Institutions

- Deutsche Forschungsgemeinschaft (DFG)
- Ministerium für Wissenschaft und Kunst des Landes Sachsen
- Freunde und Förderer der TU Dresden.