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Rüdiger Reischuk Michel Morvan (Eds.)

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Rüdiger Reischuk
Medizinische Universität zu Lübeck, Institut fürTheoretische Informatik
Wallstraße 40, D-23560 Lübeck, Germany
E-mail: reischuk@informatik.mu-luebeck.de

Michel Morvan
Université Denis Diderot Paris 7, LITP-IBP
2, place Jussieu, F-75251 Paris Cedex 05, France
E-mail: morvan@litp.ibp.fr

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Preface

STACS, the Symposium on Theoretical Aspects of Computer Science, is held annually, alternating between France and Germany. STACS is organized jointly by the Special Interest Group for Theoretical Computer Science of the Gesellschaft für Informatik (GI) in Germany and the Special Interest Group for Applied Mathematics of the Association Française des Sciences et Technologies de l'Information et des Systemes (AFCET) in France. Its format is a two-and-a-half day conference (Thursday morning to Saturday noon) at the end of February each year, presently with parallel sessions in two tracks and plenary talks given by invited speakers.

STACS'97, the 14th in this series, is scheduled to be held in Lübeck from February 27 to March 1, 1997. 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), and Grenoble (1996).

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. For STACS'97, 139 submissions from all over the world and most European countries were received. This year, for the first time papers could be submitted to STACS electronically. About two-thirds of all authors chose this way, and the vast majority of such papers arrived by the submission deadline, August 30, 1996.

Thanks to *Jochen Bern* and *Christoph Meinel* in Trier and *Gerhard Buntrock* and *Christian Schindelhauer* in Lübeck, who made the electronic submission procedure possible by setting up a submission robot in Trier, then forwarding the files to Lübeck and finally handling the files here.

The submitted papers address basic problems from many areas of computer science, in particular algorithms and data structures, computational complexity, automata and formal languages, structural complexity, parallel and distributed systems, parallel algorithms, semantics, specification and verification, logic, computational geometry, cryptography, learning and inductive inference.

The members of the program committee are: *Jean-Paul Allouche* (Orsay), *Jürgen Dassow* (Magdeburg), *Afonso Ferreira* (Lyon), *José Luiz Fiadeiro* (Lisbon), *Rusins Freivalds* (Riga), *Martin Kummer* (Karlsruhe), *Mirek Kutylowski* (Wrocław/Paderborn), *Christian Lengauer* (Passau), *Michel Morvan* (Paris, cochair), *Laurence Puel* (Orsay), *Prabhakar Ragde* (Waterloo), *Rüdiger Reischuk* (Lübeck, chair), *Miklos Santha* (Orsay), *Val Tannen* (Philadelphia), and *Dorothea Wagner* (Konstanz). Every submission was carefully evaluated by several members of the program committee (typically five), partially using the help of colleagues who served as subreferees. The committee was impressed by the scientific quality of the submissions as well as the broad spectrum they cover.

The program committee met in Lübeck November 1 and 2, 1996. By unanimous vote 46 papers were selected for presentation. Because of the constraints

imposed by the format of the conference, a number of good papers could not be included in the program.

We would like to thank the program committee for its demanding work in evaluating the significance and scientific merits of all submissions within such a short period of time between the submission deadline and the meeting. It turned out that electronic correspondence before the real meeting helped a lot to accelerate and support the decision process. The program committee has tried to do its best to make a fair selection, but their is no doubt that the "optimal solution" (if it exists at all) can only be approximated given the bounded amount of time and space. Our gratitude extends to the numerous subreferees who have assisted in this process (listed separately).

The proceedings of this conference as of all previous ones will be published in the series Lecture Notes in Computer Science by *Springer-Verlag, Heidelberg.*

We also thank the three invited speakers *Bernhard Steffen* (Passau), *Stephane Gaubert* (Rocquencort), and *Oded Goldreich* (Rehovot) for accepting our invitation and sharing with us their insights on some new and exciting developments in their areas.

Thanks to all members of the *Institut für Theoretische Informatik der Med. Universität zu Lübeck,* who have helped us to organize the meeting: *Gerhard Buntrock, Gabriele Claasen, Karin Genther, Jens Heinrichs, Andreas Jakoby, Christian Schindelhauer,* and *Stephan Weis.*

Further information about STACS'97 can be found in the WorldWideWeb on its homepage `http://www.itheoi.mu-luebeck.de/stacs97` (professionally installed and maintained by *Karin Genther* and *Andreas Jakoby*).

Thanks also to the various sources who have supported STACS'97: *Wissenschaftsministerium des Landes Schleswig-Holstein, Deutsche Forschungsgemeinschaft, European Community Directorate for Science, Research and Development, Hewlett Packard, Delcom Vertriebsgesellschaft, Commerzbank Lübeck, Computerfachhandel JessenLenz, Buchhandlung Dreier, Weingut Jakoby-Blümling,* and other organizations.

Lübeck, January 1997

Rüdiger Reischuk

Michel Morvan

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