

# Lecture Notes in Computer Science

Edited by G. Goos and J. Hartmanis

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## STACS 87

4th Annual Symposium on Theoretical Aspects  
of Computer Science

Passau, Federal Republic of Germany, February 19–21, 1987  
Proceedings

Edited by  
F.J. Brandenburg, G. Vidal-Naquet and M. Wirsing

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## Foreword

The Fourth Annual Symposium on Theoretical Aspects of Computer Science (STACS 87) was held on February 19-21, 1987 in Passau, Germany. It was preceded by Symposia in Paris (1984), Saarbrücken (1985) and Orsay (1986).

The Symposium was organized jointly by the Special Interest Group for Theoretical Computer Science of the Gesellschaft für Informatik (GI), the special interest group for applied mathematics of the Association Française des Sciences et Techniques de l'Information, de l'Organisation et des Systèmes (AFCET), and the University of Passau. It is held alternatively in France and Germany.

In response to the call for papers 125 papers were submitted. The program committee met on October 3rd and selected 34 papers chosen on the basis of their scientific quality and relevance to the Symposium. Three invited talks were given by R. Book, G. Kahn and K. Mehlhorn.

For the first time, ten software systems showing ways and possibilities for applying results of research in Theoretical Computer Science were demonstrated at the Symposium and latest research results were informally presented as posters. This volume contains the invited presentations, the selected papers and abstracts of the systems demonstrations.

The program committee of STACS 87 consisted of

Jean Berstel, Paris  
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Emo Welzl, Graz

On behalf of the program committee the program chairman would like to thank all those who submitted papers and the referees who helped for the task of evaluating papers.

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IBM Deutschland GmbH, Stuttgart  
SIEMENS AG, München  
SUN Microsystems GmbH, München  
Symbolics GmbH, Frankfurt  
Volksbank Passau-Freyung eG, Passau

is gratefully acknowledged. Finally we would like to thank Mrs. C. Daniels and Ms. R. Eggerl for their help in preparing and organizing the conference, Mr. H. Hussmann for his help in installing the systems demonstrations and Springer-Verlag for their excellent cooperation concerning the publication of this volume.

Passau, February 1987

F.J. Brandenburg, G. Vidal-Naquet, M. Wirsing

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