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# **DEVELOPMENTS IN LANGUAGE THEORY II**

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**AT THE CROSSROADS OF MATHEMATICS,  
COMPUTER SCIENCE AND BIOLOGY**

Editors

**Jürgen Dassow  
Grzegorz Rozenberg  
Arto Salomaa**

World Scientific

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COMPUTER SCIENCE AND BIOLOGY**

Magdeburg, Germany

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Editors

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## PREFACE

*Developments in Language Theory* is a series of conferences where the first one was held in Turku (Finland) in July 1993, the second one was organized in Magdeburg (Germany) in July 1995, and the third one will take place in Greece in 1997.

This volume contains all invited lectures given by *Jean Berstel* (Paris, France), *Volker Diekert* (Stuttgart, Germany), *Juraj Hromkovič* (Kiel/Germany), *Kai Salomaa / Sheng Yu* (Turku, Finland / London, Canada) and all contributions presented at the second conference on Developments in Language Theory in Magdeburg and, in addition, the invited lecture by *Dora Giammarresi* (L'Aquila, Italy) who was absent by pregnancy.

The papers were selected by an international program committee from the submissions based on a call for paper by a refereeing procedure.

The subjects of the papers cover most parts of the theory of languages, corresponding automata and related fields. They concern

- combinatorial properties of words, sequences of words and sets of words and codes,
- classical problems as decidability, closure with respect to operations and relations to logics and algebra,
- different of control mechanisms for derivations,
- grammar systems for distributed generation of languages,
- generation and properties of languages of graphs, pictures, other higher dimensional objects and infinite words,
- trace languages and languages related to Petri nets as models of concurrency,
- applications of languages especially in connection with parsing.

Already the program in Magdeburg was mainly ordered according to such an classification, and we have also done this with the contributions of this volume.

The papers show that there is an international interest and excellent research in the theory of languages. We believe that the volume is of interest for researchers and graduate students in theoretical computer science and mathematics.

**Acknowledgement:** We are grateful to

- the Program Committee consisting of Alessandra Cherubini, Jürgen Dassow (chair), Matthias Jantzen, Helmut Jürgensen, Gheorghe Păun, Grzegorz Rozenberg and Arto Salomaa,

- the members Henning Bordin, Jürgen Dassow (chair), Dagmar Dörge, Annerose Klimpel and Bernd Reichel of the Organizing Committee,
- the Otto-von-Guericke University of Magdeburg, the foundation Deutsche Forschungsgemeinschaft, the enterprise SIEMENS AG, the state capital Magdeburg and the Fraunhofer Institute Magdeburg for their financial support which were essential for the success of the conference,
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Jürgen Dassow  
Grzegorz Rozenberg  
Arto Salomaa

December 1995

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