# Lecture Notes in Computer Science

Edited by G. Goos and J. Hartmanis

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J. Dassow J. Kelemen (Eds.)

# Aspects and Prospects of Theoretical Computer Science

6th International Meeting of Young Computer Scientists
Smolenice, Czechoslovakia, November 19–23, 1990
Proceedings

Springer-Verlag
Berlin Heidelberg New York London
Paris Tokyo Hong Kong Barcelona

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CR Subject Classification (1987): D.2, F.1–4, I.2–4

ISBN 3-540-53414-8 Springer-Verlag Berlin Heidelberg New York
ISBN 0-387-53414-8 Springer-Verlag New York Berlin Heidelberg



Printing and binding: Druckhaus Beltz, Hemsbach/Bergstr.
2145/3140-543210 – Printed on acid-free paper

# Foreword

This volume contains the text of the tutorial lecture, the texts of five invited lectures and the texts of twenty short communications contributed for presentation at the Sixth International Meeting of Young Computer Scientists, IMYCS'90, held at Smolenice Castle, Czechoslovakia, November 19-23, 1990.

The IMYCSs have been organized biennially since 1980 by the Association of the Slovak Mathematicians and Physicists in cooperation with Comenius University, Bratislava, and with other institutions. The aim of the meetings is threefold: (1) to inform on newest trends, results, and problems in theoretical computer science and related fields through a tutorial and invited lectures delivered by internationally distinguished speakers, (2) to provide a possibility for beginners in scientific work to present and discuss their results, and (3) to create an adequate opportunity for establishing first professional relations among the participants.

Short communications included in this proceedings were selected from 47 papers submitted in response to the call for papers. The selection was made on the basis of originality and relevance of presented results to theoretical computer science and related fields by the Programme Committee. The members of the Programme Committee were E. Csuhaj-Varjú (Budapest), J. Dassow (chairman, Magdeburg), S. K. Dulin (Moscow), K. P. Jantke (Leipzig), J. Karhumäki (Turku), A. Kelemenová (Bratislava), M. Křivánek (Prague), K. J. Lange (Munich), J. Sakarovitch (Paris), and M. Szijártó (Györ). The editors wish to thank all of them as well as to subreferees G. Asser, A. Brandstaedt, M. Broy, V. Diekert, C. Dimitrovici, P. Ďuriš, H. Giessmann, D. Hernandez, J. Hromkovič, J. U. Jahn, I. Kalaš, J. Kelemen, I. Korec, V. Koubek, M. Kráľová, M. Krause, F. Kröger, A. Kučera, M. Kunde, L. Kühnel, S. Lange, R. Letz, P. Mikulecký, M. Pawlowski, J. Procházka, H. Reichel, W. Reisig, G. Riedewald, E. Ružický, P. Ružička, S. Schönherr, K. Schultz, M. Tegze, E. Tiptig, J. Vyskoč, R. Walter, J. Wiedermann, R. Wiehagen, H. Wolter, T. Zeugmann, and maybe some others not mentioned here who assisted the members of the Programme Committee in evaluating the submissions.

On behalf of all the participants of IMYCS'90 we express our gratitude to the members of the organizational staff of the Meeting, especially to Peter Mikulecký for chairing the Organizing Committee.

The editors are highly indebted to all contributors for preparing their texts carefully and on time. We would like to acknowledge gratefully the support of the organizing institutions: Association of Slovak Mathematicians and Physicists, Institute of Computer Science and Department of Artificial Intelligence of the Comenius University, Bratislava, Department of Computers of the Slovak Institute of Technology, Bratislava, and the Mathematical Institute of the Slovak Academy of Sciences, Bratislava.

We highly appreciate the excellent cooperation with Springer-Verlag in the publication of this volume.

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