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Edited by G. Goos and J. Hartmanis

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FOREWORD

This volume contains papers which were contributed for presentation at the 6th Symposium on Mathematical Foundations of Computer Science - MFCS'77, held at Tatranská Lomnica, Czechoslovakia, September 5-9, 1977.

The symposium was organized by the Computing Research Centre in Bratislava. The following institutions have cooperated in providing their support: The Faculty of Mathematics and Physics of the Charles University, Prague; the Faculty of Natural Sciences of the Šafárik University, Košice; the Faculty of Natural Sciences of the Komenský University, Bratislava; the Institute of Computing Technique of the Technical University, Prague; Institute of Technical Cybernetics of the Slovak Academy of Sciences; the Association of Slovak Mathematicians and Physicists and the Slovak Cybernetical Society.

The title of the symposium, "Mathematical Foundations of Computer Science" was chosen six years ago by the Polish organizers for the first meeting in the series and in 1974 it was used also for a seminar held at the International Banach Centre in Warsaw. In subsequent years it became a widely accepted designation for this new and important branch of science. It is understandable that this designation, or its close variants, will be used for other scientific events in the same areas, such as some of the recent symposia and seminars, held both in the United States and in Europe.

The present Proceedings include 15 invited papers and 46 short communications, the latter having been selected by the Program Committee from among

the 117 submitted papers on the basis of, originality and relevance to the following principal areas of interest: automata and formal languages, computability theory, analysis and complexity of algorithms, theoretical aspects of programming and of programming languages, theoretical aspects of operating systems and mathematical approaches to artificial intelligence.

The papers in these Proceedings were not formally refereed. It is anticipated that most of them will appear in a more polished and complete form in scientific journals.

The organizers of the symposium are much indebted to all of the contributors to this program, especially to the authors of the papers. Thanks are also due to all the above mentioned cooperating institutions for their valuable and all round assistance and to all people who helped in the organization of the Symposium.

Special thanks are due to Professor A. Klas, director of the Computing Research Centre in Bratislava for his generous support of not only MFCS'77 but of all MFCS symposia held in Czechoslovakia.

The Program Committee of MFCS'77 consisted of the following members:

I.M. Havel /chairman/, J. Bečvář, J. Gruska, J. Hořejš, I. Korec, M. Novotný, B. Rován and J. Štůrc. A number of referees helped the Program Committee evaluate the submitted papers.

The organization was done mainly by the following members of the Organizing Committee: G. Andrejková, Z. Durayová, R. Filustek, J. Gruska /Symposium Chairman/, A. Guráňová, I.M. Havel, M. Chytil, A. Jelínková, M. Markusová, P. Mikulecký, I. Prívára, B. Rován /Organizing Secretary/, and I. Šujan.

The help of Springer-Verlag, which has published these Proceedings, is also highly appreciated.

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