

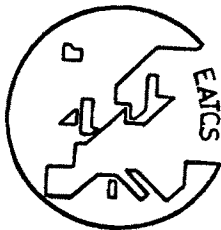
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158

Foundations of Computation Theory

Proceedings of the 1983 International
FCT-Conference
Borgholm, Sweden, August 21–27, 1983



Edited by Marek Karpinski



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The International Conference on "Foundations of Computation Theory - 1983" follows thematically the series of the international FCT-conferences founded in 1977 in Poznan-Kornik, Poland. The program of the conference, including invited lectures and selected contributions, falls into eight categories:

- * Constructive Mathematics in Models of Computation and Programming
- * Abstract Calculi and Denotational Semantics
- * Theory of Machines, Computations, and Languages
- * Nondeterminism, Concurrency, and Distributed Computing
- * Abstract Algebras, Logics, and Combinatorics in Computation Theory
- * General Computability and Decidability
- * Computational and Arithmetic Complexity
- * Analysis of Algorithms and Feasible Computing

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UNDER THE AUSPICES OF:

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PREFACE

The papers in this Volume constitute the proceedings of the 1983 International Conference on "Foundations of Computation Theory", FCT '83, held at Borgholm, Sweden, August 21-27. The Conference is to follow thematically the series of the international FCT-conferences initiated in 1977 in Poznan-Kornik, Poland. The Conference was organized by the University of Linköping with the cooperation of University of Bonn under the auspices of the European Association for Theoretical Computer Science, the Royal Swedish Academy of Engineering Sciences, Gesellschaft für Informatik, e.V., Bonn, and the Swedish Society for Information Processing.

The Swedish Board for Technical Development (STU) provided the financial support that made this Conference possible.

The Proceedings contain the texts of the addresses given by the invitation of the International Program Committee falling into one of the two categories:
- invited addresses, and - (selected) contributions.

The 34 papers (- shorter communications) were selected on April 7 and 8, 1983 at the Program Selection Committee Meeting in Bonn from the large number of papers submitted to the organizers in response to the Call for Papers. The International Program Committee consisted of: K.R. Apt (Paris), G. Ausiello (Rome), A.J. Blikle (Warsaw), E. Börger (Dortmund), W. Brauer (Hamburg), M. Broy (Munich), L. Budach (Berlin), R. Burstall (Edinburgh), P. van Emde Boas (Amsterdam), F. Gecseg (Szeged), J. Gruska (Bratislava), M.A. Harrison (Berkeley), J. Hartmanis (Ithaca), K. Indermark (Aachen), M. Karpinski (Bonn), D. Kozen (Yorktown Heights), J. van Leeuwen (Utrecht), L. Lovasz (Budapest), A. Mazurkiewicz (Warsaw), G.L. Miller (Cambridge, Mass.), P. Mosses (Aarhus), B. Nordström (Gothenburg), M. Paterson (Warwick), A. Salomaa (Turku), C.P. Schnorr (Frankfurt), J.W. Thatcher (Yorktown Heights).

My thanks, at this place, go to the members of this Committee (which I have had pleasure to chair) as well as to all subreferees for the FCT '83 (see the separate page) for all their efforts and time they invested in reading submitted papers.

The definite decision to organize the "Foundations of Computation Theory - 1983" Conference in Sweden was made in late November, 1982. That it really took place in 1983 is due to initiative and continuing support and encouragement of Professor Erik Sandewall of Linköping University, who served also as Conference Organizing Chairman, as well as my colleagues A. Lingas, and J. Maluszynski from the Organizing Committee. The extraordinary short time for preparation of the Conference added another difficulty factor to its Program and Organizing Committees. The extent of their success is to be measured by this LNCS-Volume.

The Committee owe special debt to Professor K.H. Böhling for his continuing support while making the Program of the Conference in Bonn.

I am deeply indebted to Mariele Knepper whose outstanding work as the Program Secretary was genuine source of support to all of us, and decisive for the smooth work of the FCT-Program Committee - as it was. I wish to thank R. Verbeek for running all the computer programs for the April's Program Committee Meeting in Bonn. Our thanks go to Lillemor Wallgren, The Organizing Secretary, for the masterful way she handled all the complex organizational matters of her secretariate

Finally, I wish to thank the many persons, too numerous, perhaps, to name for the enthusiastic support of the idea of this FCT-Conference. They all contributed not only to the success of the Conference in its present shape - but to its very existence in this year in the first place - as well.

June 1983

Marek Karpinski

Referees of FCT'83

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Foundations of Computation Theory

FCT '83

August 21-27, 1983

Borgholm, Sweden

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