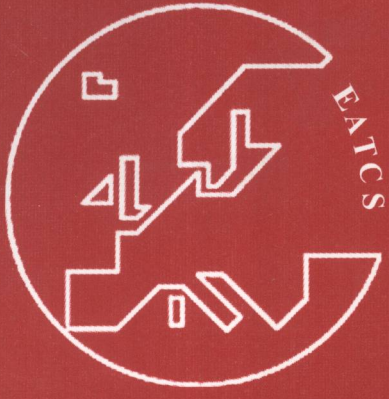
Yossi Azar
Thomas Erlebach (Eds.)

LNCS 4168

Algorithms – ESA 2006

14th Annual European Symposium
Zurich, Switzerland, September 2006
Proceedings



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Library of Congress Control Number: 2006931490

CR Subject Classification (1998): F.2, G.1-2, E.1, F.1.3, I.3.5, C.2.4, E.5

LNCS Sublibrary: SL 1 – Theoretical Computer Science and General Issues

ISSN 0302-9743
ISBN-10 3-540-38875-3 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-38875-3 Springer Berlin Heidelberg New York

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11841036 06/3142 5 4 3 2 1 0

Lecture Notes in Computer Science 4168

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

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Preface

This volume contains the 70 contributed papers and abstracts of 3 of the 5 invited talks presented at the 14th Annual Symposium on Algorithms (ESA 2006), held at ETH Zurich in Zurich, Switzerland, September 11–13, 2006. The papers in each section of the proceedings are arranged alphabetically. The five distinguished invited speakers were Erik Demaine, Lisa Fleischer, László Lovász, Kurt Mehlhorn, and Ron Shamir.

Since 2002, ESA has consisted of two tracks, with separate Program Committees, which deal respectively with:

- The design and mathematical analysis of algorithms (the "Design and Analysis" track)
- Real-world applications, engineering, and experimental analysis of algorithms (the "Engineering and Applications" track)

Previous ESAs in the current two-track format were held in Rome, Italy (2002); Budapest, Hungary (2003); Bergen, Norway (2004); and Palma de Mallorca, Spain (2005). The proceedings of these symposia were published as Springer's LNCS volumes 2461, 2832, 3221 and 3669, respectively.

Papers were solicited in all areas of algorithmic research, including but not limited to algorithmic aspects of networks, approximation and on-line algorithms, computational biology, computational finance and algorithmic game theory, computational geometry, data structures, databases and information retrieval, external-memory algorithms, graph and network algorithms, graph drawing, machine learning, mobile and distributed computing, pattern matching and data compression, quantum computing, and randomized algorithms. The algorithms could be sequential, distributed or parallel. Submissions were especially encouraged in the area of mathematical programming and operations research, including combinatorial optimization, integer programming, polyhedral combinatorics and network optimization.

Each extended abstract was submitted to one of the two tracks. The extended abstracts were read by at least three referees each, and evaluated on their quality, originality, and relevance to the symposium. The Program Committees of both tracks met at ETH Zurich on May 27–28, 2006. The Design and Analysis track selected 52 out of 215 submissions. The Engineering and Applications track selected 18 out of 72 submissions.

ESA 2006 was sponsored by the EATCS (European Association for Theoretical Computer Science). The EATCS sponsorship included an award of euro 500 for the authors of the best student paper. The award was shared by Frederic Dorn for his paper "Dynamic Programming and Fast Matrix Multiplication" and Michal Meyerovitch for her paper "Robust, Generic and Efficient Construction of Envelopes of Surfaces in Three-Dimensional Space."

The Program Committees of the two tracks of ESA 2006 consisted of:

Design and Analysis Track

Pankaj Agarwal	Duke University
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Rolf Niedermeier	University of Jena
Cliff Stein	Columbia University
Roberto Tamassia	Brown University
Suresh Venkatasubramanian	AT&T

ESA 2006 was held along with the 6th Workshop on Algorithms in Bioinformatics (WABI), the 4th Workshop on Approximation and Online Algorithms (WAOA), the Second International Workshop on Parameterized and Exact Computation (IWPEC), and the 6th Workshop on Algorithmic meThods and Models for Optimization of railwayS (ATMOS) in the context of the combined conference ALGO 2006. The Organizing Committee of ALGO 2006 consisted of, all from ETH Zurich:

Franziska Hefti
Michael Hoffmann (Chair)
Angelika Steger
Emo Welzl
Peter Widmayer

We would like to thank ETH Zurich, in particular Michael Hoffmann and Emo Welzl, for the hospitality at the Program Committee meeting.

We hope that this volume offers the reader a representative selection of some of the best current research on algorithms.

June 2006 Yossi Azar and Thomas Erlebach

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