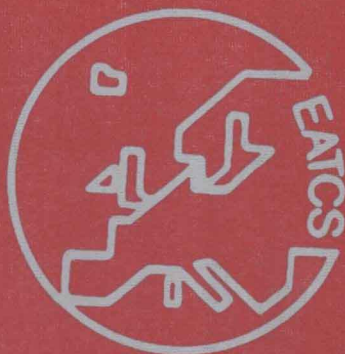


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Matthew Hennessy
University of Sussex, School of Cognitive and Computing Sciences
Falmer, Brighton, BN1 9QN, United Kingdom
E-mail: matthewh@cogs.susx.ac.uk

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Preface

This volume contains the contributions of the 29th International Colloquium on Automata, Languages, and Programming (ICALP) held July 8–13, 2002 in Málaga, Spain. The diversity and the quality of the scientific program of ICALP 2002 serve as evidence that theoretical computer science with all its aspects continues to be a vibrant field and is increasingly turning into a valuable and abundant source of ideas and concepts for other research disciplines and applications.

ICALP has been the main annual scientific event of the European Association for Theoretical Computer Science (EATCS) for almost thirty years, making ICALP one of the best-established conferences in theoretical computer science and EATCS one of the world's largest and oldest theoretical computer science organizations.

To reflect the two parts of the EATCS journal Theoretical Computer Science (TCS), ICALP's technical program is split into two parts: while track A is devoted to algorithms, automata, complexity, and games, track B focuses on logic, semantics, and theory of programming.

In response to the call for papers, the program committee received 269 submissions from 34 countries: 204 for track A and 65 for track B. Each paper was reviewed by at least three program committee members who were often assisted by subreferees. The committee met on March 16, 2002 in Málaga and selected 83 papers (64 from track A and 19 from track B) for presentation. The program committee was overwhelmed by the quality and the quantity of submissions and had to reject many good submissions because of the limited number of available time-slots. We wish to thank all authors who submitted extended abstracts and all referees who helped in the thorough evaluation process.

The EATCS best paper award was given to Lars Engebretsen, Jonas Holmerin, and Alexander Russell for their track A contribution *Inapproximability Results for Equations over Finite Groups*. Seth Pettie's paper entitled *A Faster All-pairs Shortest Path Algorithm for Real-Weighted Sparse Graphs* was given the best student paper award for track A. Thomas Colombet received the best student paper award for his track B contribution *On Families of Graph Having a Decidable First Order Theory with Reachability*.

In addition to the accepted contributions, this volume contains the award-winning lectures by Maurice Nivat who received the EATCS award and by Géraud Sénizergues who was awarded the Gödel prize, as well as the invited lectures by Manuel Hermenegildo, Heikki Mannila, Madhav Marathe, Andrew Pitts, and John Reif.

The following workshops were held as satellite events of ICALP 2002 with Inmaculada Fortes and Llanos Mora as coordinators: Computability and Complexity in Analysis (CCA 2002), Algorithmic Methods and Models for Optimization of Railways (ATMOS 2002), 7th International Workshop on Formal Methods for Industrial Critical Systems, Foundations of Wide Area Network Computing, Formal Methods and Component Interaction, and Unification in Non-classical Logics. Another significant event in conjunction with ICALP 2002 was held on

July 11: the presentations of the projects funded by the “FET-Global Computing proactive initiative” (<http://www.cordis.lu/ist/fetgc.htm>) were given in the Global Computing Event (organized by the IST of the EC).

We sincerely thank the organizers of ICALP 2002 for all their work (especially José Luis Triviño for his work in the preparation of these proceedings), and the Escuela Técnica Superior de Ingeniería Informática (Computer Science School) of Málaga University (Spain) for their support in the organization.

We also thank the sponsors of ICALP 2002, namely Unicaja (the first savings bank of Andalucía), the University of Málaga, the Science and Technology Minister (under contract TIC2000-3086-E), and Málaga City Council.

July 2002

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