

Preface

The *28th International Colloquium on Automata, Languages and Programming* (ICALP 2001) was held July 8-12, 2001 in the Aldemar-Knossos Royal Village near Hersonissos on Crete, Greece. This volume contains all contributed papers presented at ICALP 2001, together with the invited lectures by Ahmed Bouajjani (Paris), Martin Große-Rhode (Berlin), Mogens Nielsen (Aarhus), and Ingo Wegener (Dortmund) and two of the keynote lectures, by Christos Papadimitriou and Boris Trakhtenbrot.

For almost 30 years now, ICALP has been the main annual event of the European Association for Theoretical Computer Science (EATCS). The ICALP program currently consists of track A: *Algorithms, Automata, Complexity, and Games* and track B: *Logic, Semantics, and Theory of Programming*.

In response to the Call for Papers, the program committee received 208 submissions: 162 for track A, 46 for track B. The committee met on March 23/24, 2001 in Barcelona and selected 80 papers for inclusion into the scientific program. The selection was based on originality, quality, and relevance to theoretical computer science. We wish to thank all authors who submitted extended abstracts for consideration, and all 366 referees who helped in the extensive evaluation process. The program committee for ICALP 2001 consisted of:

TRACK A

| | |
|--|--|
| Maxime Crochemore (Marne-la-Vallée) | Jose Rolim (Geneva) |
| Leslie A. Goldberg (Warwick) | Peter Sanders (Saarbrücken) |
| Mordecai J. Golin (Hong Kong) | Erik M. Schmidt (Aarhus) |
| Juraj Hromkovic (Aachen) | Maria Serna (Barcelona) |
| Giuseppe F. Italiano (Rome) | Jack Snoeyink (Chapell Hill) |
| Viggo Kann (Stockholm) | Athanasios K. Tsakalidis (Patras) |
| Ludek Kucera (Prague) | Jan van Leeuwen (Utrecht, <i>chair</i>) |
| Bill McColl (Oxford and Synchron Inc.) | Dorothea Wagner (Konstanz) |
| David Peleg (Rehovot) | |

TRACK B

| | |
|--------------------------------|--|
| Samson Abramsky (Oxford) | Eugenio Moggi (Genova) |
| Kim B. Bruce (Williamstown) | Ugo Montanari (Pisa) |
| Stavros Cosmadakis (Patras) | Damian Niwinski (Warsaw) |
| Hartmut Ehrig (Berlin) | Fernando Orejas (Barcelona, <i>chair</i>) |
| Javier Esparza (München) | Catuscia Palamidessi (Penn State) |
| Thomas A. Henzinger (Berkeley) | Andreas Podelski (Saarbrücken) |
| Jean-Pierre Jouannaud (Orsay) | Hanne Riis Nielson (Lingby) |
| Jose Meseguer (SRI Menlo Park) | |

The *EATCS Best Paper Award* was given to William Hesse (Amherst MA, also *Best Student Paper*) and to Parosh Aziz Abdulla, Luc Boasson, and Ahmed Bouajjani (Uppsala/Paris) for their respective papers in ICALP 2001.

ICALP 2001 was a very special ICALP. Two other leading Computer Science conferences co-located with ICALP this time: the 13th Annual ACM Symposium

on Parallel Algorithms and Architectures (SPAA 2001), and the 33rd Annual ACM Symposium on Theory of Computing (STOC 2001), giving the joint participants an unprecedented opportunity in Europe to see the advances in a broad spectrum of foundational computer science research. It was the first time ever that STOC had been held outside of the USA.

During STOC 2001 and ICALP 2001 the following special events took place: (a) the *Turing Award Lecture* by Andrew C-C. Yao (Princeton), (b) the *EATCS Distinguished Service Award* for Corrado Böhm (Rome), (c) the *Greek Computer Society/CTI Prize* for Christos Papadimitriou (Berkeley) recognizing him as the most influential scientist of Greek origin for his contributions to the foundations of computer science, and (d) the *Gödel Prize 2001* awarded to S. Arora, U. Feige, S. Goldwasser, C. Lund, L. Lovasz, R. Motwani, S. Safra, M. Sudan, and M. Szegedy for their fundamental papers on PCP's and the complexity of approximation problems. Special attention was given to the 80th birthday of B.A. Trakhtenbrot (Tel Aviv).

Several high-level workshops were held as 'satellite events' of ICALP 2001, with Christos Zaroliagis (Patras) as coordinator. This included the following workshops: *Algorithmic Methods and Models for Optimization of Railways* (ATMOS 2001), *Böhm's Theorem: Applications to Computer Science Theory* (BOTH 2001), *Graph Transformation and Visual Modeling Techniques* (2nd Int. Workshop, GT-VMT 2001), and *Verification of Parameterized Systems* (VEPAS 2001). The scientific program of ICALP 2001 showed that theoretical computer science is a vibrant field, deepening our insights into the foundations and futures of computing and system design in many modern application areas.

The sponsors of ICALP 2001 included the Information Society DG of the European Commission, the Ministry of the Aegean, the Ministry of Culture, and the Ministry of Education and Religious Affairs of Greece, the Hellenic Pedagogical Institute, the Intracom Institute of Technology (IIT), CTI (Patras), and the following companies: Intracom SA, Intralot SA, Intrasoft SA, ALTEC SA, MLS Multimedia SA, OPAP SA, Pliroforiki Technognosia Ltd, 01 Pliroforiki SA, Rainbow Computer SA, and Systema Informatics SA.

We are very grateful to the Computer Technology Institute (CTI) of Patras University for supporting the organization of ICALP 2001. The organizing committee consisted of: C. Bouras (CTI), S. Bozapalidis (Thessaloniki), R. Efsthadiadou (CTI), C. Kaklamanis (CTI), M. Mavronicolas (Cyprus), C. Nikolaou (ICS-FORTH Crete), S. Nikolettseas (CTI), P. Spirakis (CTI), A. Tsakalidis (CTI), S. Zachos (Athens), and C. Zaroliagis (CTI). We thank Henk P. Penning and Henk van Lingen, system administrators at the Institute of Information and Computing Sciences of Utrecht University, for their outstanding effort in designing and developing the CSCS electronic conference server for ICALP 2001.

July 2001

Fernando Orejas
Paul G. Spirakis
Jan van Leeuwen

Automata, Languages and Programming
28th International Colloquium, ICALP 2001 Crete,
Greece, July 8-12, 2001 Proceedings
Orejas, F.; Spirakis, P.G.; Leeuwen, J. van (Eds.)
2001, XIV, 1086 p., Softcover
ISBN: 978-3-540-42287-7