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Automata, Languages, and Programming

41st International Colloquium, ICALP 2014
Copenhagen, Denmark, July 8-11, 2014
Proceedings, Part II



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Preface

This volume contains the papers presented at ICALP 2014: the 41st International Colloquium on Automata, Languages and Programming, held during July 8–11, 2014, at IT University of Copenhagen. ICALP is the main conference and annual meeting of the European Association for Theoretical Computer Science (EATCS) and first took place in 1972. This year the ICALP program consisted of three tracks:

- Track A: Algorithms, Complexity, and Games
- Track B: Logic, Semantics, Automata, and Theory of Programming
- Track C: Foundations of Networked Computation

In response to the call for papers, the three Program Committees received 484 submissions, a record number for ICALP. Track A received 319 submissions (another record), track B received 106 submissions, and track C received 59 submissions. Each submission was reviewed by at least three Program Committee members, aided by many subreviewers. The committee decided to accept 136 papers, which are collected in these proceedings. The selection was made by the Program Committees based on originality, quality, and relevance to theoretical computer science. The quality of the submissions was very high indeed, and many deserving papers could not be selected.

The EATCS sponsored awards for both a best paper and a best student paper for each of the three tracks, selected by the Program Committees.

The best paper awards were given to the following papers:

- Track A: Andreas Björklund and Thore Husfeldt, “Shortest Two Disjoint Paths in Polynomial Time”
- Track B: Joel Ouaknine and James Worrell, “Ultimate Positivity Is Decidable for Simple Linear Recurrence Sequences”
- Track C: Oliver Göbel, Martin Hoefer, Thomas Kesselheim, Thomas Schließen, and Berthold Vöcking, “Online Independent Set Beyond the Worst-Case: Secretaries, Prophets, and Periods”

The best student paper awards, for papers that are solely authored by students, were given to the following papers:

- Track A: Sune K. Jakobsen, “Information Theoretical Cryptogenography”
- Track B: Michael Wehar, “Hardness Results for Intersection Non-Emptiness”
- Track C: Mohsen Ghaffari, “Near-Optimal Distributed Approximation of Minimum-Weight Connected Dominating Set”

Apart from the contributed talks, the conference included invited presentations by Sanjeev Arora, Maurice Herlihy, Viktor Kuncak, and Claire Mathieu. Abstracts of their talks are included in these proceedings as well.

The program of ICALP 2014 also included presentation of the Presburger Award 2014 to David Woodruff, the EATCS Award 2014 to Gordon Plotkin, and the Gödel Prize to Ronald Fagin, Amnon Lotem, and Moni Naor.

Two satellite events of ICALP were held on 7 July, 2014:

- Trends in Online Algorithms (TOLA 2014)
- Young Researcher Workshop on Automata, Languages and Programming (YR-ICALP 2014)

We wish to thank all the authors who submitted extended abstracts for consideration, the members of the three Program Committees for their scholarly efforts, and all additional reviewers who assisted the Program Committees in the evaluation process. We thank the sponsors Springer-Verlag, EATCS, CWI Amsterdam, and Statens Kunstfond for their support, and the IT University of Copenhagen for hosting ICALP 2014.

We are also grateful to all members of the Organizing Committee and to their support staff.

The conference-management system EasyChair was used to handle the submissions, to conduct the electronic Program Committee meetings, and to assist with the assembly of the proceedings.

May 2014

Javier Esparza
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