

20th International Conference on Principles of Distributed Systems

OPODIS 2016, December 13–16, 2016, Madrid, Spain

Edited by

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■ Preface

The papers in this volume were presented at the 20th International Conference on Principles of Distributed Systems (OPODIS 2016), held on December 13–16, 2016, in Spain. The conference was organized by the Technical University of Madrid (UPM) and took place in the Fundación Gómez Pardo in Madrid.

OPODIS is an open forum for the exchange of state-of-the-art knowledge on distributed computing. With strong roots in the theory of distributed systems, OPODIS has expanded its scope to cover the whole range between the theoretical aspects and practical implementations of distributed systems, as well as experimentation and quantitative assessments. All aspects of distributed systems are within the scope of OPODIS: theory, specification, design, performance, and system building. Specifically, this year the topics of interest of OPODIS included:

- Design and analysis of distributed algorithms
- Synchronization, concurrent algorithms, shared and transactional memory
- Design and analysis of concurrent and distributed data structures
- Communication networks (protocols, architectures, services, applications)
- High-performance, cluster, cloud and grid computing
- Mesh and ad-hoc networks (wireless, mobile, sensor), location and context-aware systems
- Mobile agents, robots, and rendezvous
- Internet applications, social systems, peer-to-peer and overlay networks
- Distributed operating systems, middleware, and distributed database systems
- Programming languages, formal methods, specification and verification applied to distributed systems
- Embedded and energy-efficient distributed systems
- Distributed event processing
- Distributed storage and file systems, large-scale systems, and big data analytics
- Dependable distributed algorithms and systems
- Self-stabilization, self-organization, autonomy
- Security and privacy, cryptographic protocols
- Game-theory and economical aspects of distributed computing
- Randomization in distributed computing
- Biological distributed algorithms

We received 84 submissions and each submission was reviewed by at least three members of the Program Committee with the help of external reviewers, with most papers receiving four reviews or more. This year, the papers of the Program Committee members were reviewed by at least five members of the Program Committee. Overall, the quality of the submissions was very high. Out of the 84 submissions, 31 papers were selected to be included in these proceedings.

Following last year's practice, this edition of OPODIS proceedings appears in the Leibniz International Proceedings in Informatics (LIPIcs) series. LIPIcs proceedings are available online and free of charge to readers, and the production costs are paid in part from the conference budget. The review process was done using EasyChair.

The Best Paper Award was given to David Yu Cheng Chan, Vassos Hadzilacos and Sam Toueg for the paper “Bounded Disagreement”. Moreover, some of the papers were selected

by the Program Committee for a special issue to appear in Theoretical Computer Science, Elsevier.

This year OPODIS had four distinguished invited keynote speakers: Christian Cachin (IBM Research Zurich, Switzerland), Faith Ellen (University of Toronto, Canada), Nir Shavit (MIT, USA), and Willy Zwaenepoel (EPFL, Switzerland).

We would like to thank all authors for submitting their work to OPODIS. We are also grateful to the members of the Program Committee for their hard work and their availability during the physical Program Committee meeting which was held at the University of Lugano on October 20–21, 2016 (with the support of FORTH ICS that provided the teleconference infrastructure). We also thank the external reviewers for their help with the reviewing process.

Organizing this event would not have been possible without the time and the effort of the Organizing Committee, consisting of: Ángel Álvarez, Pilar Manzano, Isabel Muñoz (Technical University of Madrid), Antonio Fernández Anta, Nicolas Nicolaou (Institute IMDEA Networks), Sergio Arévalo (Technical University of Madrid) as local chair, José Luis López-Presa (Technical University of Madrid) as publicity chair, and Andrés Sevilla (Technical University of Madrid) as responsible for the website. On behalf of all participants we thank them for their work that made the conference a truly enjoyable event beyond the scientific and technical aspects.

Finally, we would like to thank the Steering Committee members for their valuable advice and all the sponsors.

December 2016

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