21st International Conference on Principles of Distributed Systems

OPODIS 2017, December 18–20, 2017, Lisboa, Portugal

Edited by
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Preface

The papers in this volume were presented at the 21st International Conference on Principles of Distributed Systems (OPODIS 2017), held on December 18–20, 2017, in Lisbon, Portugal. The conference was organized by the University of Lisbon and took place at the Faculty of Sciences.

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 82 submissions, each of which was reviewed by at least four members of the Program Committee with the help of external reviewers. Overall, the quality of the submissions was very high. Out of the 82 submissions, 30 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 Keren Censor-Hillel and Michal Dory for the paper "Fast Distributed Approximation for TAP and 2-Edge-Connectivity".

This year OPODIS had two distinguished invited keynote speakers: Luís E. T. Rodrigues (INESC-ID, IST-UL, Portugal) and Roger Wattenhofer (ETHZ, 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 in reviewing papers

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and their active participation in the online discussions. 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, notably Ibéria Medeiros responsible for the local arrangements and web site, Miguel Matos who handled publicity, and João Leitão who managed the proceedings.

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 for their support.

December 2017

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