29th International Conference on Principles of Distributed Systems

OPODIS 2025, December 3–5, 2025, Iași, Romania

Edited by

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ACM Classification 2012
Theory of computation → Distributed computing models; Theory of computation → Distributed algorithms; Theory of computation → Concurrent algorithms; Theory of computation → Computability; Theory of computation → Graph algorithms analysis; Theory of computation → Design and analysis of algorithms; Networks → Peer-to-peer networks; Networks → Routing protocols; Networks → Network protocol design; Computing methodologies → Distributed algorithms; Security and privacy → Cryptography; Computer systems organization → Dependable and fault-tolerant systems and networks; Computer systems organization → Fault-tolerant network topologies; Applied computing → Electronic commerce

ISBN 978-3-95977-409-3

Published online and open access by
Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at https://www.dagstuhl.de/dagpub/978-3-95977-409-3.

Publication date
January, 2026

Bibliographic information published by the Deutsche Nationalbibliothek
The Deutsche Nationalbibliothek lists all publications of this volume in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at https://portal.dnb.de.

Digital Object Identifier: 10.4230/LIPIcs.OPODIS.2025.0
ISBN 978-3-95977-409-3 **ISSN 1868-8969** **https://www.dagstuhl.de/lipics**

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ISSN 1868-8969

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Preface

The papers in this volume were presented at the 29th International Conference on Principles of Distributed Systems (OPODIS 2025), held on December 3-5, 2025 in Iaşi, Romania. OPODIS is an open forum for the exchange of state-of-the-art knowledge about distributed computing. With strong roots in the theory of distributed systems, OPODIS has expanded its scope to cover the full spectrum – from theoretical aspects to practical implementations of distributed systems, as well as experimental and quantitative evaluations.

All aspects of distributed systems fall within the scope of OPODIS: theory, specification, design, performance, and system building. Specifically, this year, the topics of interest at OPODIS include:

- Distributed computing theory: impossibility results, complexity, game theory
- Distributed algorithms, distributed graph algorithms
- Distributed ledger practice and theory: blockchains and cryptocurrency, decentralised oracles, second-layer protocols
- Security, privacy, accountability and auditability: cryptographic tools applied to distributed computing, cryptographic distributed protocols, trusted execution environments
- Communication and mobile networks, decentralized systems, and peer-to-peer networks
- Parallelism, concurrency, and multicore systems
- Shared and transactional memory, non-volatile memory, distributed shared memory
- Mobile agents and robots
- Dependability, fault tolerance, consensus, and consistency models
- Formal methods / verification of concurrent / distributed systems
- Concurrent and distributed data structures
- Synchronization

We received 87 submissions, each of which underwent a double-blind peer review process. The submissions were reviewed by at least three Program Committee (PC) members and were extensively discussed by the PC members, using the HotCRP system and an online PC meeting.

In the end, 33 papers were selected to be included in these proceedings, bringing together the work of 113 authors from 65 universities, research institutes and private enterprises, across 24 countries. Overall, the quality of the submissions was very high.

The PC voted to select the best theory paper and the best systems paper in the program. The best theory paper award was given to "*Asynchronous Approximate Agreement with Quadratic Communication*" by Mose Mizrahi Erbes (ETH Zurich) and Roger Wattenhofer (ETH Zurich). The best systems paper award was given to "*Recoverable Lock-Free Locks*" by Hagit Attiya (Technion), Panagiota Fatourou (University of Crete, CSD and FORTH, ICS), Eleftherios Kosmas (Hellenic Mediterranean University), and Yuanhao Wei (University of British Columbia).

The OPODIS proceedings are published in the Leibniz International Proceedings in Informatics (LIPIcs) series. LIPIcs proceedings are available online and free of charge to readers, with production costs covered in part by the conference budget. We are grateful to the LIPIcs editorial staff, who truly set a gold standard in implementing open-access publishing and providing a smooth editorial workflow.

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This year, OPODIS had three distinguished invited keynote speakers: Christof Fetzer (TU Dresden, Germany), Yvonne-Anne Pignolet (DFINITY, Switzerland), and Giuseppe Antonio Di Luna (University of Rome – Sapienza, Italy). We warmly thank all the authors who submitted their work to OPODIS. We are also grateful to the Program Committee members for their hard work in reviewing the papers, their active participation in the online discussions, and their engagement during the Program Committee meeting. We sincerely thank the members of the Steering Committee for their trust and guidance.

This event would not have been possible without the dedication and support of the organising committee of the Faculty of Computer Science, Alexandru Ioan Cuza University of Iaşi (UAIC), the host institution. We are deeply grateful to our sponsors, CEA-List and MigratoryData, for their generous support. We also express our appreciation to the Romanian Ministry of Education and Research, which approved a grant providing partial funding for the conference. Finally, we are grateful to the Romanian Association of Computational Linguistics (ARLC) for providing the framework that enabled the logistical organisation of the conference. We extend our warmest thanks to all those who contributed to making this event possible.

November 2025

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