

20th International Conference on Principles of Distributed Systems

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

Edited by

Panagiota Fatourou

Ernesto Jiménez

Fernando Pedone



Editors

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|----------------------------|-------------------------|----------------------------|
| Panagiota Fatourou | Ernesto Jiménez | Fernando Pedone |
| FORTH ICS & Depart. of | Technical University of | University of Lugano (USI) |
| Comp. Sci., Univ. of Crete | Madrid (UPM) | |
| Crete | Madrid | Lugano |
| Greece | Spain | Switzerland |
| faturu@ics.forth.gr | ernes@etsisi.upm.es | fernando.pedone@usi.ch |

ACM Classification 1998

C.2.4 Distributed Systems, C.4 Performance of Systems, D.1.3 Concurrent Programming, E.1 Data Structures, F.1.2 Modes of Computation

ISBN 978-3-95977-031-6

Published online and open access by

Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at <http://www.dagstuhl.de/dagpub/978-3-95977-031-6>.

Publication date

April, 2017

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

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Digital Object Identifier: 10.4230/LIPIcs.OPODIS.2016.0

ISBN 978-3-95977-031-6

ISSN 1868-8969

<http://www.dagstuhl.de/lipics>

LIPICs – Leibniz International Proceedings in Informatics

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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

Panagiota Fatourou, FORTH ICS & Department of Computer Science, Univ. of Crete
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■ List of Authors

Hamid Arabnejad
IC4, Dublin City University, Dublin, Ireland
hamid.arabnejad@dcu.ie

James Aspnes
Yale University, USA
james.aspnes@gmail.com

Aras Atalar
Chalmers University of Technology, Sweden
aaras@chalmers.se

Jorge Barbosa
LIACC, Faculdade de Engenharia,
Universidade do Porto, Portugal
jbarbosa@fe.up.pt

Joffroy Beauquier
LRI, Paris-South University, France
joffroy.beauquier@lri.fr

Alysson Bessani
LaSIGE, Faculdade de Ciências,
Universidade de Lisboa, Portugal
anbessani@ciencias.ulisboa.pt

Annalisa De Bonis
Università di Salerno, Italy
debonis@dia.unisa.it

Janna Burman
LRI, Paris-South University, France
janna.burman@lri.fr

Christian Cachin
IBM Research – Zürich, Switzerland
cca@zurich.ibm.com

Arnaud Casteigts
LaBRI, University of Bordeaux, France
acasteig@labri.fr

David Yu Cheng Chan
Department of Computer Science, University
of Toronto, Canada
davidchan@cs.toronto.edu

Yen-Jung Chang
Department of Electrical and Computer
Engineering, University of Texas at Austin,
USA
cyenjung@ece.utexas.edu

Tian Ze Chen
Department of Computer Science, University
of Toronto, Canada
tianze.chen@mail.utoronto.ca

Johanne Cohen
LRI-CNRS, Université Paris-Sud, Université
Paris Saclay, France
johanne.cohen@lri.fr

Carole Delporte-Gallet
IRIF, Université Paris-Diderot, France
cd@liafa.univ-paris-diderot.fr

John Derrick
Department of Computing, University of
Sheffield, UK
j.derrick@sheffield.ac.uk

Stéphane Devismes
Université Grenoble Alpes, Grenoble, France
stephane.devismes@imag.fr

Simon Doherty
Department of Computing, University of
Sheffield, UK
s.doherty@sheffield.ac.uk

Brijesh Dongol
Department of Computer Science, Brunel
University, UK
brijesh.dongol@brunel.ac.uk

Hugues Fauconnier
IRIF, Université Paris-Diderot, France
hf@liafa.univ-paris-diderot.fr

Antonio Fernández Anta
IMDEA Networks Institute, Spain
antonio.fernandez@imdea.org

Eli Gafni
UCLA, USA
eli@ucla.edu



- Vijay Garg
Department of Electrical and Computer
Engineering, University of Texas at Austin,
USA
garg@ece.utexas.edu
- Leszek Gasieniec
Department of Computer Science, University
of Liverpool, UK
l.a.gasieniec@liverpool.ac.uk
- Mozhgan Ghasemzadeh
LIACC, Faculdade de Engenharia,
Universidade do Porto, Portugal
ghasemzadeh@fe.up.pt
- Emmanuel Godard
Aix Marseille Univ, CNRS, LIF, France
emmanuel.godard@lif.univ-mrs.fr
- Rachid Guerraoui
EPFL, Switzerland
rachid.guerraoui@epfl.ch
- Theophanis Hadjistasi
University of Connecticut, USA
theophanis.hadjistasi@uconn.edu
- Vassos Hadzilacos
Department of Computer Science, University
of Toronto, Canada
vassos@cs.toronto.edu
- David Hamilton
Department of Computer Science, University
of Liverpool, UK
d.d.hamilton@liverpool.ac.uk
- Meng He
Faculty of Computer Science, Dalhousie
University, Canada
mhe@cs.dal.ca
- Yuan He
UCLA, USA
yuan.he@ucla.edu
- Heidi Howard
University of Cambridge Computing
Laboratory, Cambridge, UK
heidi.howard@cl.cam.ac.uk
- David Ilcinkas
Univ. Bordeaux & CNRS, LaBRI, France
david.ilcinkas@labri.fr
- Leander Jehl
University of Stavanger, Norway
leander.jehl@uis.no
- Colette Johnen
Univ. Bordeaux & CNRS, LaBRI, France
johnen@labri.fr
- Idit Keidar
Department of Electrical Engineering,
Technion, Israel
idish@ee.technion.ac.il
- Pankaj Khanchandani
ETH Zurich, Switzerland
kpankaj@ethz.ch
- Kishori Konwar
Department of EECS, MIT, USA
kishori@csail.mit.edu
- Petr Kuznetsov
Télécom ParisTech, France
petr.kuznetsov@telecom-paristech.fr
- Kim Larsen
Aalborg University, Denmark
kgl@cs.aau.dk
- Mengdu Li
Dark Matter LLC, Canada
meng.du.li@dal.ca
- Nancy Lynch
Department of EECS, MIT, USA
lynch@csail.mit.edu
- Khaled Maâmra
LI-PaRAD, Université Versailles-St. Quentin,
Université Paris Saclay, France
khaled.maamra@uvsq.fr
- Dahlia Malkhi
VMware, Palo Alto, USA
dahliamalkhi@gmail.com
- George Manoussakis
LRI-CNRS, Université Paris-Sud, Université
Paris Saclay, France
george.manoussakis@lri.fr

Russell Martin
Department of Computer Science, University
of Liverpool, UK
russell.martin@liverpool.ac.uk

Fabien Mathieu
Nokia Bell Labs, France
fabien.mathieu@nokia-bell-labs.com

Alexandre Maurer
EPFL, Switzerland
alexandre.maurer@epfl.ch

Muriel Médard
Department of EECS, MIT, USA
medard@mit.edu

Hein Meling
University of Stavanger, Norway
hein.meling@uis.no

Ricardo Mendes
LaSIGE, Faculdade de Ciências,
Universidade de Lisboa, Portugal
rmendes@lasige.di.fc.ul.pt

Yves Métivier
LaBRI, University of Bordeaux, France
metivier@labri.fr

Nicolas Nicolaou
IMDEA Networks Institute, Spain
nicolas.nicolaou@imdea.org

Stavros Nikolaou
Department of Computer Science, Cornell
University, USA
snikolaou@cs.cornell.edu

Tiago Oliveira
LaSIGE, Faculdade de Ciências,
Universidade de Lisboa, Portugal
toliveira@lasige.di.fc.ul.pt

Sriram Pemmaraju
Department of Computer Science, University
of Iowa, USA
sriram-pemmaraju@uiowa.edu

Eloi Perdereau
Aix Marseille Univ, CNRS, LIF, France
eloi.perdereau@lif.univ-mrs.fr

Laurence Pilard
LI-PaRAD, Université Versailles-St. Quentin,
Université Paris Saclay, France
laurence.pilard@uvsq.fr

Narayana Prakash
Department of EECS, MIT, USA
prakashn@mit.edu

Ammar Qadri
University of Toronto, Canada
ammam.qadri@mail.utoronto.ca

Paul Renaud-Goud
Toulouse Institute of Computer Science
Research, France
prenaud@irit.fr

Robbert Van Renesse
Department of Computer Science, Cornell
University, USA
rvr@cs.cornell.edu

Talal Riaz
Department of Computer Science, University
of Iowa, Iowa City, USA
talal-riaz@uiowa.edu

Thibault Rieutord
Télécom ParisTech, France
thibault.rieutord@telecom-paristech.fr

John Michael Robson
LaBRI, University of Bordeaux, France
robson@labri.fr

Gerhard Schellhorn
Universität Augsburg, Institut für
Informatik, Germany
schellhorn@informatik.uni-augsburg.de

Simon Schubert
IBM Research – Zürich, Switzerland
sis@zurich.ibm.com

Stefan Schmid
Aalborg University, Denmark
schmiste@cs.aau.dk

Devan Sohier
Université de Versailles, LI-PaRAD, France
devan.sohier@uvsq.fr

Alexander Spiegelman
Department of Electrical Engineering,
Technion, Israel
sashas@tx.technion.ac.il

Paul Spirakis
Department of Computer Science, University
of Liverpool, UK
p.spirakis@liverpool.ac.uk

Grzegorz Stachowiak
Instytut Informatyki, Uniwersytet
Wrocławski, Poland
gst@cs.uni.wroc.pl

Sam Toueg
Department of Computer Science, University
of Toronto, Canada
sam@cs.toronto.edu

Philippas Tsigas
Chalmers University of Technology, Sweden
tsigas@chalmers.se

Nitin H. Vaidya
Department of Electrical and Computer
Engineering, University of Illinois at
Urbana-Champaign, USA
nhv@illinois.edu

Marko Vukolić
IBM Research – Zürich, Switzerland
mvu@zurich.ibm.com

Roger Wattenhofer
ETH Zürich, Switzerland
wattenhofer@ethz.ch

Heike Wehrheim
Universität Paderborn, Institut für
Informatik, Germany
wehrheim@upb.de

Yuanhao Wei
Department of Computer Science, University
of Toronto, Canada
yuanhao.wei@mail.utoronto.ca

Zhuolun Xiang
Department of Computer Science, University
of Illinois at Urbana-Champaign, USA
xiangzl@illinois.edu

Bingtian Xue
Aalborg University, Denmark
bingt@cs.aau.dk

Akka Zemmari
LaBRI, University of Bordeaux, France
zemmari@labri.fr