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Coordination Models and Languages

19th IFIP WG 6.1 International Conference, COORDINATION 2017
Held as Part of the 12th International Federated Conference
on Distributed Computing Techniques, DisCoTec 2017
Neuchâtel, Switzerland, June 19–22, 2017
Proceedings

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ISSN 0302-9743 ISSN 1611-3349 (electronic)
Lecture Notes in Computer Science
ISBN 978-3-319-59745-4 ISBN 978-3-319-59746-1 (eBook)
DOI 10.1007/978-3-319-59746-1

Library of Congress Control Number: 2017942989

LNCS Sublibrary: SL2 – Programming and Software Engineering

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Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Foreword

The 12th International Federated Conference on Distributed Computing Techniques (DisCoTec) took place in Neuchâtel, Switzerland, during June 19–22, 2017. It was organized by the Institute of Computer Science of the University of Neuchâtel.

The DisCoTec series is one of the major events sponsored by the International Federation for Information Processing (IFIP). It comprises three conferences:

- COORDINATION, the IFIP WG6.1 International Conference on Coordination Models and Languages
- DAIS, the IFIP WG6.1 International Conference on Distributed Applications and Interoperable Systems
- FORTE, the IFIP WG6.1 International Conference on Formal Techniques for Distributed Objects, Components and Systems

Together, these conferences cover a broad spectrum of distributed computing subjects, ranging from theoretical foundations and formal description techniques to systems research issues.

Each day of the federated event began with a plenary speaker nominated by one of the conferences. The three invited speakers were Prof. Giovanna Di Marzo Seruendo (UniGE, Switzerland), Dr. Marko Vukolić (IBM Research, Switzerland), and Dr. Rupak Majumdar (MPI, Germany).

Associated with the federated event were also three satellite events that took place during June 21–22, 2017:

- The 10th Workshop on Interaction and Concurrency Experience (ICE)
- The 4th Workshop on Security in Highly Connected IT Systems (SHCIS)
- The EBSIS-sponsored session on Dependability and Interoperability with Event-Based Systems (DIEBS)

Sincere thanks go to the chairs and members of the Program and Steering Committees of the aforementioned conferences and workshops for their highly appreciated efforts. The organization of DisCoTec 2017 was only possible thanks to the dedicated work of the Organizing Committee, including Ivan Lanese (publicity chair), Romain Rouvoy (workshop chair), Peter Kropf (finance chair), and Aurélien Havet (webmaster), as well as all the students and colleagues who volunteered their time to help. Finally, many thanks go to IFIP WG6.1 for sponsoring this event, Springer's *Lecture Notes in Computer Science* for their support and sponsorship, and EasyChair for providing the reviewing infrastructure.

April 2017

Pascal Felber
Valerio Schiavoni

Preface

Modern information systems rely increasingly on combining concurrent, distributed, mobile, adaptive, reconfigurable, and heterogeneous components. New models, architectures, languages, and verification techniques are necessary to cope with the complexity induced by these systems. Coordination models and languages have emerged as a successful approach to that end, in that they provide abstractions that cleanly separate behavior from communication, therefore increasing modularity, simplifying reasoning, and ultimately enhancing software development. Building on the success of the previous editions, this volume contains the papers presented at Coordination 2017, the 19th IFIP WG 6.1 International Conference on Coordination Models and Languages held in Neuchâtel, Switzerland, during June 19–22, 2017, as part of the federated DisCoTeC conference. Coordination itself is part of a series whose proceedings have been published since 1996 in Springer’s *Lecture Notes in Computer Science* (LNCS).

The Program Committee (PC) of Coordination 2017 consisted of 33 prominent researchers from 18 different countries. In all, 31 submissions were received out of 37 submitted abstracts. Each submission was reviewed by three independent referees. The review process included an in-depth discussion phase during which the merits of all the papers were discussed. Based on quality, originality, clarity, and relevance criteria, the PC finally selected 13 contributions for presentation and publication in the proceedings. The program was further enhanced by an invited talk by Giovanna Di Marzo Serugendo from the University of Geneva, entitled “Spatial Edge Services,” an extended abstract of which is included in the these proceedings.

Many people contributed to the success of Coordination 2017. We first of all would like to thank the authors for submitting high-quality papers. We also thank the Program Committee members for their effort and time to read and discuss the papers and we equally acknowledge the help of the additional reviewers who evaluated submissions in their area of expertise. Furthermore, we wish to thank the Steering Committee of Coordination and the Steering Board of DisCoTeC for their support and in particular Giovanna Di Marzo Serugendo for her keynote address.

It is also our pleasure to thank Pascal Felber, the general chair of DisCoTeC, Valerio Schiavoni, the organizing chair of DisCoTeC, Ivan Lanese, the publicity chair of DisCoTeC, and Francesco Tiezzi, the publicity chair of Coordination 2017. We would also like to thank the providers of the EasyChair conference management system, whose facilities greatly helped us run the review process and facilitate the preparation of the proceedings. With respect to the latter, we also warmly thank Anna Kramer, from Springer, for her help in producing the proceedings. Finally, we are indebted to the conference attendees for keeping the Coordination research community lively and interactive, and ultimately ensuring the success of this conference series.

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