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Marcello M. Bonsangue (Ed.)

Coalgebraic Methods in Computer Science

12th IFIP WG 1.3 International Workshop, CMCS 2014
Colocated with ETAPS 2014
Grenoble, France, April 5–6, 2014
Revised Selected Papers

Editor
Marcello M. Bonsangue
Leiden Institute of Advanced
Computer Science
Leiden University
Leiden
The Netherlands

ISSN 0302-9743 ISSN 1611-3349 (electronic)
ISBN 978-3-662-44123-7 ISBN 978-3-662-44124-4 (eBook)
DOI 10.1007/978-3-662-44124-4

Library of Congress Control Number: 2014946347

LNCS Sublibrary: SL1 – Theoretical Computer Science and General Issues

Springer Heidelberg New York Dordrecht London

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Preface

The 12th International Workshop on Coalgebraic Methods in Computer Science, CMCS 2014, was held during April 5–6, 2014, in Grenoble, France, as a satellite event of the Joint Conference on Theory and Practice of Software, ETAPS 2014. In more than a decade of research, it has been established that a wide variety of state-based dynamical systems, such as transition systems, automata (including weighted and probabilistic variants), Markov chains, and game-based systems, can be treated uniformly as coalgebras. Coalgebra has developed into a field of its own interest presenting a deep mathematical foundation, a growing field of applications, and interactions with various other fields such as reactive and interactive system theory, object-oriented and concurrent programming, formal system specification, modal and description logics, artificial intelligence, dynamical systems, control systems, category theory, algebra, analysis, etc. The aim of the workshop is to bring together researchers with a common interest in the theory of coalgebras, their logics, and their applications.

Previous workshops of the CMCS series have been organized in Lisbon (1998), Amsterdam (1999), Berlin (2000), Genova (2001), Grenoble (2002), Warsaw (2003), Barcelona (2004), Vienna (2006), Budapest (2008), Paphos (2010), and Tallin (2012). Starting in 2004, CMCS has become a biennial workshop, alternating with the International Conference on Algebra and Coalgebra in Computer Science (CALCO), which, in odd-numbered years, has been formed by the union of CMCS with the International Workshop on Algebraic Development Techniques (WADT).

The CMCS 2014 program featured a keynote talk by Davide Sangiorgi (University of Bologna, Italy), an invited talk by Ichiro Hasuo (University of Tokyo, Japan), and an invited talk by Marina Lenisa (University of Udine, Italy). In addition, a special session on game theory and coalgebras was associated with Marina Lenisa's invited talk and featuring tutorials by Paul-Andre Mellies (Université Paris Denis Diderot, France) and Pierre Lescanne (Ecole Normale Supérieure de Lyon, France).

This volume contains the revised contributions of the regular and invited papers presented at CMCS 2014. A special thanks goes to all the authors for the high quality of their contributions, and to the reviewers and Program Committee members for their help in improving the papers presented at CMCS 2014.

April 2014

Marcello M. Bonsangue

Organization

CMCS 2014 was organized as a satellite event of the Joint Conference on Theory and Practice of Software (ETAPS 2014), in close collaboration with the Leiden Institute of Advanced Computer Science (LIACS), Leiden University, The Netherlands.

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