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Ichiro Hasuo (Ed.)

Coalgebraic Methods in Computer Science

13th IFIP WG 1.3 International Workshop, CMCS 2016
Colocated with ETAPS 2016
Eindhoven, The Netherlands, April 2–3, 2016
Revised Selected Papers

Editor
Ichiro Hasuo
University of Tokyo
Tokyo
Japan

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Preface

The 13th International Workshop on Coalgebraic Methods in Computer Science, CMCS 2016, was held during April 2–3, 2016, in Eindhoven, The Netherlands, as a satellite event of the Joint Conference on Theory and Practice of Software, ETAPS 2016. 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), Genoa (2001), Grenoble (2002), Warsaw (2003), Barcelona (2004), Vienna (2006), Budapest (2008), Paphos (2010), Tallinn (2012), and Grenoble (2014). 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 2016 program featured a keynote talk by Jiří Adámek (Technische Universität Braunschweig, Germany), an invited talk by Andreas Abel (University of Gothenburg, Sweden), and an invited talk by Filippo Bonchi (CNRS/ENS Lyon, France). In addition, a special session on weighted automata and coalgebras was held, featuring invited tutorials by Borja Balle (Lancaster University, UK) and Alexandra Silva (University College London, UK).

This volume contains revised regular contributions (10 accepted out of 13 submissions), an invited paper, and the abstracts of two keynote/invited talks. Special thanks go to all the authors for the high quality of their contributions, to the reviewers and Program Committee members for their help in improving the papers presented at CMCS 2016, and to all the participants for active discussions.

April 2016

Ichiro Hasuo

Organization

CMCS 2016 was organized as a satellite event of the Joint Conference on Theory and Practice of Software (ETAPS 2016).

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