



Contents lists available at ScienceDirect

Theoretical Computer Science

journal homepage: www.elsevier.com/locate/tcs

Preface

This special issue of Theoretical Computer Science is dedicated to Coalgebraic Methods in Computer Science (CMCS). It contains selected papers from the Tenth Workshop on Coalgebraic Methods in Computer Science (CMCS'10). The workshop was held in Paphos, Cyprus from March 26 until March 28, 2010, as a satellite event to the European Joint Conference on Theory and Practice of Software (ETAPS'10). The aim of the CMCS workshop series is to bring together researchers with a common interest in the theory of coalgebras and its applications.

Coalgebras provide a uniform mathematical framework for state-based dynamical systems, such as transition systems, automata, process calculi, and class-based systems. The theory of coalgebras has developed into a field of its own interest, presenting a deep mathematical foundation and a growing domain of applications and interactions with various other fields, such as reactive and interactive systems theory, object oriented and concurrent programming, formal system specification, modal logic, dynamical systems, control systems, category theory, algebra, and analysis.

In 2010, the 10th edition of CMCS was celebrated. For this special occasion all members of previous CMCS program committees have been invited to be a member in 2010. Additionally, four specialists in the field have been invited to present overviews of both obtained results and future challenges in important subareas:

- Venanzio Capretta: Coalgebra in functional programming and type theory
- Bartek Klin: Operational semantics coalgebraically
- Dirk Pattinson: Logic and coalgebra
- Ana Sokolova: Probabilistic systems coalgebraically.

We are very grateful for their efforts and contributions to the workshop.

The proceedings of CMCS'10 were published as volume 264(2) of Electronic Notes in Theoretical Computer Science, and contain 10 accepted publications (out of a total of 16 submissions). Given the high quality of these papers and on the occasion of the 10th anniversary of the workshop, Theoretical Computer Science decided to dedicate a special issue to CMCS'10. The Program Committee invited the four invited speakers and the authors of four of the papers presented at the conference to submit a revised and extended version. Eight contributions were submitted and refereed according to the usual standards of TCS (there were three referees for each paper). The present volume contains the seven papers that, in the end, were accepted for publication.

We wish to thank all the members of the Program Committee of CMCS'10:

Jiří Adámek (Braunschweig),
 Alexandru Baltag (Oxford),
 Luis Barbosa (Braga),
 Marcello Bonsangue (Leiden),
 Corina Cîrstea (Southampton),
 Robin Cockett (Calgary),
 Andrea Corradini (Pisa),
 Neil Ghani (Glasgow),
 Peter Gumm (Marburg),
 Furio Honsell (Udine),
 Bart Jacobs (Nijmegen, co-chair),
 Bartek Klin (Cambridge),
 Clemens Kupke (London),
 Alexander Kurz (Leicester),
 Marina Lenisa (Udine),
 Stefan Milius (Braunschweig),

Ugo Montanari (Pisa),
Larry Moss (Bloomington),
Milad Niqui (Amsterdam),
Dirk Pattinson (London),
Dusko Pavlovic (Oxford),
John Power (Edinburgh),
Horst Reichel (Dresden),
Grigore Rosu (Urbana),
Jan Rutten (Amsterdam, co-chair),
Davide Sangiorgi (Bologna),
Lutz Schroeder (Bremen),
Alexandra Silva (Amsterdam),
Hendrik Tews (Nijmegen),
Tarmo Uustalu (Tallinn),
Yde Venema (Amsterdam),
Hiroshi Watanabe (Osaka),
James Worrell (Oxford)

for their help in selecting the invited papers. We are also very grateful to all the colleagues who reviewed these submissions for their informed, detailed, constructive and timely reports. Finally, we thank all authors for having accepted our invitation.

Bart Jacobs*
Institute for Computing and Information Sciences,
Radboud University Nijmegen,
The Netherlands
E-mail address: bart@cs.ru.nl.

Milad Niqui
Jan Rutten
Alexandra Silva
Foundations of Software Engineering (SEN3),
Centrum Wiskunde & Informatica,
Amsterdam,
The Netherlands
E-mail addresses: M.Niqui@cwi.nl (M. Niqui), janr@cwi.nl (J. Rutten), ams@cwi.nl (A. Silva).

* Corresponding editor.