Preface

This volume contains the proceedings of 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 have been found extremely useful for capturing 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.

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

In 2010, the 10th edition of CMCS is 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

The Programme Committee of CMCS’10 consisted of: Jiří Adámek (Braunschweig), Alexandru Baltag (Oxford), Luis Barbosa (Braga), Marcello Bonsangue
(Leiden), Corina Cirstea (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).

The papers were refereed by the program committee and by several outside referees, whose help is gratefully acknowledged.

The Organising Committee:
Bart Jacobs (PC chair)
Milad Niqui (co-chair)
Jan Rutten (PC chair)
Alexandra Silva (co-chair)