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Formal Modeling and Analysis of Timed Systems

Third International Conference, FORMATS 2005
Uppsala, Sweden, September 26-28, 2005
Proceedings



Springer

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Library of Congress Control Number: 2005937088

CR Subject Classification (1998): F.3, D.2, D.3, C.3, D.2.4

ISSN 0302-9743
ISBN-10 3-540-30946-2 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-30946-8 Springer Berlin Heidelberg New York

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© Springer-Verlag Berlin Heidelberg 2005
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11603009 06/3142 5 4 3 2 1 0

Preface

This volume contains the proceedings of FORMATS 2005, the Third International Conference on Formal Modelling and Analysis of Timed Systems, held in Uppsala, Sweden, September 26–28, 2005, in conjunction with ARTIST2 summer school, September 29–October 2, 2005, on Component Modelling, Testing and Verification, and Static Analysis of Embedded Systems. FORMATS is an annual workshop series initiated in 2003. It is dedicated to the advancement of formal theories, techniques and software tools for modelling and analysis of timed systems. FORMATS 2003 was associated to CONCUR 2003 (International Conference on Concurrency Theory), held in Marseilles, France. FORMATS 2004 was organized in conjunction with FTRTFT (Formal Techniques in Real-Time and Fault Tolerant Systems), Grenoble, France.

This year, FORMATS received 43 submissions out of which 19 papers were selected for presentation by the Program Committee. Each of the submitted papers has been reviewed by at least three PC members and their sub-reviewers. The scientific program of FORMATS 2005 contained three invited talks: Lothar Thiele (Modular Performance Analysis of Distributed Embedded Systems), Karl-Erik Årzén (Timing Analysis and Simulation Tools for Real-Time Control) and Parosh Abdulla (Verification of Parameterised Timed Systems). The 19 selected contributions cover work on semantics and modelling of timed systems, formalisms for modelling and verification including timed automata, hybrid automata, and timed Petri nets, games for verification and synthesis, model-checking, case studies and issues related to implementation, security and performance analysis.

We would like to thank all the PC members for their efforts in the reviewing and selection process. We thank Ulrika Andersson, Anders Hessel, Patrik Johansson, and Leonid Mokrushin for taking care of practical matters in the local organization.

The Program Committee of FORMATS 2005 comprised: Parosh Abdulla (Uppsala Univ., Sweden), Eugene Asarin (LIAFA, France), Patricia Bouyer (LSV, France), Ed Brinksma (Univ. of Twente, Netherlands), Flavio Corradini (Univ. of Camerino, Italy), Joost-Pieter Katoen (Aachen Univ., Germany), Marta Kwiatkowska (Univ. of Birmingham, UK), Yassine Lakhnech (Verimag, France), Kim G. Larsen (Aalborg Univ., Denmark), Insup Lee (Univ. of Pennsylvania, USA), Oded Maler (Verimag, France), Jens Palsberg (UCLA, USA), Paul Pettersson (Co-chair, Uppsala Univ., Sweden), Jean-Francois Raskin (ULB, Belgium), Marille Stoelinga (Univ. of Twente, Netherlands), P.S. Thiagarajan (National Univ. of Singapore), Stavros Tripakis (Verimag, France), Frits Vaandrager (Radboud Univ. Nijmegen, Netherlands), Walter Vogler (Univ. of Augsburg, Germany), and Wang Yi (Co-chair, Uppsala Univ., Sweden).

The Steering Committee of FORMATS consisted of Rajeev Alur (Univ. of Pennsylvania, USA), Flavio Corradini (Univ. of Camerino, Italy), Kim G. Larsen (Aalborg Univ., Denmark), Oded Maler (Verimag, France), Walter Vogler (Univ. Augsburg, Germany), and Wang Yi (Uppsala Univ., Sweden).

We would also like to thank the following sub-reviewers who assisted us in the evaluation of the submitted papers: Yasmina Abdeddaim, Dave Arney, Michael Balser, Elmar Bihler, Benedikt Bollig, Hanifa Boucheneb, Thomas Brihaye, Scott Cotton, Pedro D'Argenio Martin De Wulf, Laurent Doyen, Arvind Easwaran, Marco Faella, Sebastian Fischmeister, Wan Fokkink, Laurent Fribourg, Greg Goessler, Anders Hessel, David Jansen, Victor Khomenko, Jesung Kim, Tomas Krilavicius, Didier Lime, Birgitta Lindstrm, Dejan Nickovic, Thomas Noll, Laurent Mazare, George Pappas, Pierre-Alain Reynier, Olivier H. Roux, Usa Sammapun, Mark Schäfer, Insik Shin, Natalia Sidorova, Volker Stolz, Laurent Van Begin, and Tim Willemse.

September 2005

Paul Pettersson and Wang Yi

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