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Yassine Lakhnech   Sergio Yovine (Eds.)

Formal Techniques, Modelling and Analysis of Timed and Fault-Tolerant Systems

Joint International Conferences
on Formal Modelling and Analysis of Timed Systems, FORMATS 2004
and Formal Techniques in Real-Time and Fault-Tolerant Systems, FTRTFT 2004
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Yassine Lakhnech
Sergio Yovine
Verimag Laboratory
2 av. de Vignate, 38610 Grenoble, France
E-mail:{Yassine.Lakhnech, Sergio.Yovine}@imag.fr

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Preface

This volume contains the proceedings of the joint conference on *Formal Modelling and Analysis of Timed Systems* (FORMATS) and *Formal Techniques in Real-Time and Fault Tolerant Systems* (FTRTFT), held in Grenoble, France, on September 22–24, 2004. The conference united two previously independently organized conferences FORMATS and FTRTFT. FORMATS 2003 was organized as a satellite workshop of CONCUR 2003 and was related to three independently started workshop series: MTCS (held as a satellite event of CONCUR 2000 and CONCUR 2002), RT-TOOLS (held as a satellite event of CONCUR 2001 and FLoC 2002) and TPTS (held at ETAPS 2002). FTRTFT is a symposium that was held seven times before: in Warwick 1988, Nijmegen 1992, Lübeck 1994, Uppsala 1996, Lyngby 1998, Pune 2000 and Oldenburg 2002. The proceedings of these symposia were published as volumes 331, 571, 863, 1135, 1486, 1926, and 2469 in the LNCS series by Springer.

This joint conference is dedicated to the advancement of the theory and practice of the modelling, design and analysis of real-time and fault-tolerant systems. Indeed, computer systems are becoming increasingly widespread in real-time and safety-critical applications such as embedded systems. Such systems are characterized by the crucial need to manage their complexity in order to produce reliable designs and implementations. The importance of timing aspects, performance and fault-tolerance is continuously growing. Formal techniques offer a foundation for systematic design of complex systems. They have beneficial applications throughout the engineering process, from the capture of requirements through specification, design, coding and compilation, down to the hardware that embeds the system into its environment. The joint conference is devoted to considering the problems and the solutions in designing real-time and/or fault-tolerant systems, and to examining how well the use of advanced design techniques and formal methods for design, analysis and verification serves in relating theory to practice.

We received 70 paper submissions out of which 24 were selected for publication. Each submission received an average of 3 referee reviews. The conference program included three invited talks, by Greg Bollella (Sun Microsystems Laboratories), Paul Feautrier (LIP, École Normale Supérieure de Lyon, France) and Peter Ryan (School of Computing Science, University of Newcastle upon Tyne, UK).

We would like to thank all the Program Committee members and the subreferees. Our thanks also go to the Steering Committee members of FORMATS and FTRTFT. We also thank Claudia Laidet who assisted us in organizing the conference.

July 2004

Yassine Lakhnech and Sergio Yovine
Program Chairs
Joint Conference FORMATS 2004 and FTRTFT 2004

Organization

The joint conference FORMATS and FTRTFT 2004 was organized by VERIMAG (http://www-verimag.imag.fr) with the support of: IMAG (Institut d'Informatique et Mathématiques Appliquées de Grenoble), CNRS (Centre National de Recherche Scientifique), Université Joseph Fourier, and INPG (Institut National Polytechnique de Grenoble), as well as the city of Grenoble.

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