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Formal Techniques for Networked and Distributed Systems – FORTE 2006

26th IFIP WG 6.1 International Conference
Paris, France, September 26-29, 2006
Proceedings

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Library of Congress Control Number: 2006933226

CR Subject Classification (1998): C.2.4, D.2.2, C.2, D.2.4-5, D.2, F.3, D.4

LNCS Sublibrary: SL 2 – Programming and Software Engineering

ISSN 0302-9743
ISBN-10 3-540-46219-8 Springer Berlin Heidelberg New York
ISBN-13 978-3-540-46219-4 Springer Berlin Heidelberg New York

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springer.com

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Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper SPIN: 11888116 06/3142 5 4 3 2 1 0

Preface

This volume contains the proceedings of FORTE 2006, the 26th IFIP WG 6.1 International Conference on Formal Methods for Networked and Distributed Systems, which took place in Paris, September 26-29, 2006. FORTE denotes a series of international working conferences on formal description techniques applied to computer networks and distributed systems. The conference series started in 1981 under the name PSTV. In 1988 a second series under the name FORTE was set up. Both series were united to FORTE / PSTV in 1996. Five years ago the conference changed the name to its current form.

FORTE was held in Taiwan in 2005, in Madrid in 2004, in Berlin in 2003, in Houston in 2002, etc. The 2006 edition took place in Paris in the buildings of the CNAM (Conservatoire National des Arts et Métiers), which is a Public Scientific, Cultural and Professional Institution. FORTE 2006 was organized by CEDRIC, the computer science research laboratory of the CNAM, and by the Parisian multi-laboratories research group MeFoSyLoMa (Méthodes Formelles pour les Systèmes Logiciels et Matériels). The conference comprised a three-day technical program, during which papers contained in these proceedings were presented. The technical program was preceded by a tutorial day.

FORTE is dedicated to formal description techniques and their application to distributed systems and cooperating applications. The focus of FORTE 2006 was on the construction of middleware and services using formalized and verified approaches. In addition to the classic protocol specification, verification and testing problems, FORTE 2006 addressed the issues of composition of protocol functions and of algorithms for distributed systems.

In total 99 abstracts and 78 full papers were submitted covering the special focus of FORTE 2006 and also more usual topics such as testing, slicing, and verification techniques; highlighting different formalisms among them one can cite Petri Nets, processes algebra or unified modelling languages. Out of the submissions, 26 full papers and 4 shorts papers were selected by the Program Committee for presentation. We would like to express our deepest appreciation to the authors of all submitted papers, to the Program Committee and to external reviewers who did an outstanding job in selecting the best papers for presentation (more than 300 referee reports were completed before closing the selection phase). In addition to the submitted contributions, there were three invited lectures: one by Daniel KroB (Ecole Polytechnique, France), who gave his vision of complex systems in a talk entitled “Modelling of Complex Software Systems: A Reasoned Overview”; one by Leslie Lamport (Microsoft, USA), who presented a new way to describe algorithms with his talk entitled “The ⁺CAL Algorithm Language”; and one by Martin Wirsing (Institut für Informatik, Ludwig-Maximilians-Universität München, Germany), who presented the SENSORIA project in a talk entitled “Semantic-Based Service-Oriented Software

Development.” We thank them for the quality of their talks and of their papers. Two very interesting tutorials were given on the first day, one by Rüdiger Valk (Univ. Hamburg, Germany) on the use of Petri Nets for modelling and verifying concurrent systems and one by Dominique Méry (Université Henri Poincaré Nancy & LORIA, France) on the event B method. We thank them for their help in disseminating knowledge in formal methods for system design.

We would like to thank the CNAM technical and organizational support, Philippe Auger, Joel Berthelin, Frederic Lemoine, Gilles Lepage and Stephen Robert. Special thanks to Kristina and Gabriele Santini (KSW), who designed the FORTE 2006 Web site (<http://forte2006.cnam.fr>). We are also grateful to Christine Choppy, who organized tutorials, Kirill Bogdanov for his work as Publicity Chair, and to the Steering Committee members for their advice. We thank also Joyce El Haddad, Sami Evangelista, Irfan Hamid, Christophe Pajault, Isabelle Perseil, Pierre Rousseau, and Emmanuel Paviot-Adet for all their work before and during the conference.

Last, but not least, we would like to express our appreciation to speakers and to all the participants who helped in achieving the goal of the conference: providing a forum for researchers and practitioners for the exchange of information and ideas about formal methods for modelling, testing and verifying protocols and distributed systems.

July 2006

Elie Najm
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Table of Contents

Invited Talks

Modelling of Complex Software Systems: A Reasoned Overview	1
<i>Daniel Krob</i>	
The ⁺ CAL Algorithm Language	23
<i>Leslie Lamport</i>	
Semantic-Based Development of Service-Oriented Systems	24
<i>Martin Wirsing, Allan Clark, Stephen Gilmore, Matthias Hözl, Alexander Knapp, Nora Koch, Andreas Schroeder</i>	

Services

J_SCL: A Middleware for Service Coordination	46
<i>Gianluigi Ferrari, Roberto Guanciale, Daniele Stollo</i>	
Analysis of Realizability Conditions for Web Service Choreographies	61
<i>Raman Kazhamiakin, Marco Pistore</i>	
Web Cube	77
<i>I.S.W.B. Prasetya, T.E.J. Vos, S.D. Swierstra</i>	
Presence Interaction Management in SIP SOHO Architecture	93
<i>Zohair Chentouf, Ahmed Khoumsi</i>	

Middleware

Formal Analysis of Dynamic, Distributed File-System Access Controls . . .	99
<i>Avik Chaudhuri, Martín Abadi</i>	
Analysing the MUTE Anonymous File-Sharing System Using the Pi-Calculus	115
<i>Tom Chothia</i>	
Towards Fine-Grained Automated Verification of Publish-Subscribe Architectures	131
<i>Luciano Baresi, Carlo Ghezzi, Luca Mottola</i>	

A LOTOS Framework for Middleware Specification 136
Nelson Souto Rosa, Paulo Roberto Freire Cunha

Composition and Synthesis

Automatic Synthesis of Assumptions for Compositional Model
Checking 143
Bernd Finkbeiner, Sven Schewe, Matthias Brill

Refined Interfaces for Compositional Verification 159
Frédéric Lang

On Distributed Program Specification and Synthesis in Architectures
with Cycles 175
Julien Bernet, David Janin

Generalizing the Submodule Construction Techniques for Extended
State Machine Models 191
Bassel Daou, Gregor v. Bochmann

Logics

Decidable Extensions of Hennessy-Milner Logic 196
Radu Mardare, Corrado Priami

Symbolic Verification – Slicing

Symbolic Verification of Communicating Systems with Probabilistic
Message Losses: Liveness and Fairness 212
C. Baier, Nathalie Bertrand, Philippe Schnoebelen

A New Approach for Concurrent Program Slicing 228
Pierre Rousseau

Reducing Software Architecture Models Complexity: A Slicing
and Abstraction Approach 243
*Daniela Colangelo, Daniele Compare, Paola Inverardi,
Patrizio Pelliccione*

Unified Modeling Languages

Branching Time Semantics for UML 2.0 Sequence Diagrams 259
Youcef Hammal

Formalizing Collaboration Goal Sequences for Service Choreography	275
<i>Humberto Nicolás Castejón, Rolv Bræk</i>	

Composition of Use Cases Using Synchronization and Model Checking . . .	292
<i>R. Mizouni, A. Salah, S. Kolahi, R. Dssouli</i>	

Petri Nets

PN Standardisation: A Survey	307
<i>Lom-Messan Hillah, Fabrice Kordon, Laure Petrucci, Nicolas Trèves</i>	

Resource Allocation Systems: Some Complexity Results on the S^4PR Class	323
<i>Juan-Pablo López-Grao, José-Manuel Colom</i>	

Optimized Colored Nets Unfolding	339
<i>Fabrice Kordon, Alban Linard, Emmanuel Paviot-Adet</i>	

Parameterized Verification

Liveness by Invisible Invariants	356
<i>Yi Fang, Kenneth L. McMillan, Amir Pnueli, Lenore D. Zuck</i>	

Real Time

Extending EFSMs to Specify and Test Timed Systems with Action Durations and Timeouts	372
<i>Mercedes G. Merayo, Manuel Núñez, Ismael Rodríguez</i>	

Scenario-Based Timing Consistency Checking for Time Petri Nets	388
<i>Li Xuandong, Bu Lei, Hu Jun, Zhao Jianhua, Zhang Tao, Zheng Guoliang</i>	

Effective Representation of RT-LOTOS Terms by Finite Time Petri Nets	404
<i>Tarek Sadani, Marc Boyer, Pierre de Saqui-Sannes, Jean-Pierre Courtiat</i>	

Testing

Grey-Box Checking	420
<i>Edith Elkind, Blaise Genest, Doron Peled, Hongyang Qu</i>	

Integration Testing of Distributed Components Based on Learning Parameterized I/O Models	436
<i>Keqin Li, Roland Groz, Muzammil Shahbaz</i>	
Minimizing Coordination Channels in Distributed Testing	451
<i>Guy-Vincent Jourdan, Hasan Ural, Hüsnü Yenigün</i>	
Derivation of a Suitable Finite Test Suite for Customized Probabilistic Systems	467
<i>Luis F. Llana-Díaz, Manuel Núñez, Ismael Rodríguez</i>	
Author Index	485