# Table of Contents

Heavy Tails: The Effect of the Service Discipline ....................... 1

*S.C. Borst (CWI, Eindhoven University of Technology and Bell Laboratories, USA), O.J. Boxma, and R. Núñez-Queija (CWI and Eindhoven University of Technology)*

The Möbius State-Level Abstract Functional Interface ............... 31

*Salem Derisavi (University of Illinois at Urbana-Champaign), Peter Kemper (Universität Dortmund), William H. Sanders, and Tod Courtney (University of Illinois at Urbana-Champaign)*

The ProC/B Toolset for the Modelling and Analysis of Process Chains ... 51

*F. Bause, H. Beilner, M. Fischer, P. Kemper, and M. Völker (Universität Dortmund)*

MRMSolve: Distribution Estimation of Large Markov Reward Models .... 71

*Sándor Rácz, Árpád Tari, and Miklós Telek (Technical University of Budapest)*

PhFit: A General Phase-Type Fitting Tool ............................. 82

*András Horváth and Miklós Telek (Technical University of Budapest)*

Traffic Modeling of IP Networks Using the Batch Markovian Arrival Process ......................... 92

*Alexander Klemm, Christoph Lindemann, and Marco Lohmann (University of Dortmund)*

PEPA Nets: A Structured Performance Modelling Formalism .......... 111

*Stephen Gilmore, Jane Hillston (University of Edinburgh), and Marina Ribaudo (Università di Genova)*

Validation of GSPN and SWN Models through the PROD Tool ........ 131

*Susanna Donatelli and Liliana Ferro (Università di Torino)*

Software Performance Models from System Scenarios in Use Case Maps ... 141

*Dorin C. Petriu and Murray Woodside (Carleton University, Ottawa)*

Applying the UML Performance Profile: Graph Grammar-Based Derivation of LQN Models from UML Specifications ..................... 159

*Dorina C. Petriu and Hui Shen (Carleton University, Ottawa)*

A Passage-Time Preserving Equivalence for Semi-Markov Processes .... 178

*J.T. Bradley (Imperial College, London)*
Table of Contents

Symbolic Methods for the State Space Exploration of GSPN Models

Ian Davies (University of Cape Town), William J. Knottenbelt (Imperial College, London), and Pieter S. Kritzinger (University of Cape Town) ........................................... 188

PRISM: Probabilistic Symbolic Model Checker

Marta Kwiatkowska, Gethin Norman, and David Parker (University of Birmingham) ..................... 200

MAMSolver: A Matrix Analytic Methods Tool

Alma Riska and Evgenia Smirni (College of William and Mary, Williamsburg) .............................. 205

The MOMBASA Software Environment – A Toolkit for Performance Evaluation of Multicast-Based Mobility Support

Andreas Festag, Lars Westerhoff, and Adam Wolisz (Technical University of Berlin) ....................... 212

GILK: A Dynamic Instrumentation Tool for the Linux Kernel

David J. Pearce, Paul H.J. Kelly, Tony Field, and Uli Harder (Imperial College, London) .................. 220

Geist: A Web Traffic Generation Tool

Krishna Kant, Vijay Tewari, and Ravishankar Iyer (Intel Corporation, USA) .................................... 227

DrawNET++: Model Objects to Support Performance Analysis and Simulation of Systems

Giuliana Franceschinis (Univ. del Piemonte Orientale), M. Gribaudo (Univ. di Torino), M. Iacono, N. Mazzocca (Seconda Univ. di Napoli), and V. Vittorini (Univ. degli Studi di Napoli Federico II) ................................................................. 233

A Visual Formalism for the Composition of Stochastic Petri Nets

Richard Hopkins and Peter King (Heriot Watt University) ............................................................. 239

Symbolic Performance Prediction of Data-Dependent Parallel Programs

Hasym Gautama and Arjan J.C. van Gemund (Delft University of Technology) ............................... 259

Analysis of a Transaction System with Checkpointing, Failures, and Rollback

L. Kumar, M. Misra (Indian Institute of Technology, Roorkee), and I. Mitrani (University of Newcastle upon Tyne) ............................................................ 279

Analyzing Voice-over-IP Subjective Quality as a Function of Network QoS: A Simulation-Based Methodology and Tool

Adrian E. Conway (Verizon Laboratories, USA) and Yali Zhu (Worcester Polytechnic Institute, USA) .... 289
Hierarchical Workload Characterization for a Busy Web Server .......... 309
   Adeniyi Oke and Rick Bunt (University of Saskatchewan)

Enabling Network Caching of Dynamic Web Objects ................... 329
   Pankaj K. Garg, Kave Eshghi (HP Labs, USA), Thomas Gschwind
   (Technische Universität Wien), Boudewijn Haverkort (RWTH Aachen),
   and Katinka Wolter (Technische Universität Berlin)

A Tool for Controlling Response Time in Real-Time Systems .......... 339
   Pascal Richard (Laboratory of Applied Computer Science, ENSMA)

Author Index ............................................................ 349
Computer Performance Evaluation: Modelling Techniques and Tools
Field, T.; Harrison, P.G.; Bradley, J.; Harder, U. (Eds.)
2002, XII, 356 p., Softcover
ISBN: 978-3-540-43539-6