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# Computer Performance Evaluation

Modelling Techniques and Tools

13th International Conference, TOOLS 2003  
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# Preface

We are pleased to present the proceedings of Performance TOOLS 2003, the 13th International Conference on Modelling Techniques and Tools for Computer Performance Evaluation.

The series of TOOLS conferences has provided a forum for our community of performance engineers with all their diverse interests. TOOLS 2003, held in Urbana, Illinois during September 2–5, 2003, was the most recent meeting of the series, which in the past has been held in the following cities:

1984 Paris	1992 Edinburgh	2000 Chicago
1985 Sophia-Antipolis	1994 Vienna	2002 London
1987 Paris	1995 Heidelberg	2003 Urbana
1988 Palma	1997 Saint Malo	
1991 Turin	1998 Palma	

The proceedings of the TOOLS conferences have been published by Springer-Verlag in its LNCS series since 1994.

TOOLS 2003 was the second conference in the series to be held in the state of Illinois, USA. It was one of four component conferences that met together under the umbrella of the 2003 Illinois Multiconference on Measurement, Modelling, and Evaluation of Computer-Communication Systems. Other conferences held in conjunction with TOOLS 2003 were the 10th International Workshop on Petri Nets and Performance Models (PNPM 2003), the International Conference on the Numerical Solution of Markov Chains (NSMC 2003), and the 6th International Workshop on Performability Modeling of Computer and Communication Systems (PMCCS-6). The format allowed for a number of joint components in the programs: the three keynote speakers, the tool demonstrations, the tutorials, and the social events were all shared by the participants of the multiconference. Moreover, the PNPM, TOOLS, and NSMC tracks of the multiconference ran concurrently, so that attendees could choose to attend whichever sessions of those component conferences they wished.

For TOOLS 2003, the program committee consisted of 37 members, each of whom reviewed at least four papers to ensure a rigorous and fair selection process. From 37 submissions, 17 high-quality papers were selected as regular papers. The range of topics gave rise to sessions on tools for measuring, benchmarking, and online control, on tools for evaluation of stochastic models, on queueing models, on Markov arrival processes and phase-type distributions, and on tools for supporting model-based design of systems. In addition to the regular paper sessions, the multiconference included a session with brief presentations of tools (which were accepted by the tools chair) and two sessions with demonstrations of the tools. We were pleased to have Prof. David Nicol present his paper, co-authored with Michael Liljenstam and Jason Liu, entitled “Multiscale Modeling and Simulation of Worm Effects on the Internet Routing Infrastructure” as

the TOOLS 2003 keynote address. The three keynote addresses of the multiconference, including Prof. Nicol's talk and the presentations of Valeriy A. Naumov for NSMC 2003 and Jean Peccoud for PNPM 2003, were clearly highlights of the conference.

It is our pleasure to acknowledge the help of the many people who made this conference a successful event. We are grateful to the members of the Program Committee and the outside reviewers who gave in-depth reviews in the short time we all had. In particular, we would like to thank the PC members who actively participated in the PC meeting held at Schloss Dagstuhl in Germany; we believe that many of them will remember the unique atmosphere of the setting, which turned out to make the meeting very productive.

More thanks are due to Tod Courtney, for managing the Web-based review process; to Jenny Applequist, for handling local arrangements; to Falko Bause, for arranging the tool presentations and demonstrations; and to Aad van Moorsel, for assembling a series of four excellent tutorials. Finally, we would like to thank the University of Illinois at Urbana-Champaign and its Coordinated Science Laboratory for hosting the conference and providing technical and financial support.

We are very pleased with the program that resulted from our preparations, and hope that you will find the papers in this volume interesting and thought-provoking.

June 2003

Peter Kemper  
Program Co-chair  
William H. Sanders  
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