

Technical program

Day 1: Wednesday, 11 October 2006					
8:00	Registration				
8:45	Opening Remarks and Best Student Paper Award Imrich Chlamtac (Create-Net), Luciano Lenzini (University of Pisa), Eitan Altman (INRIA), Daniele Miorandi (Create-Net)				
9:00	Keynote: Traffic Modeling and Performance Engineering Peter Glynn (Stanford University)				
10:00	Coffee Break				
10:40	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: left;">Session 1: Queueing Systems I Session Chair: Melike Baykal-Gursoy (Rutgers University)</th> <th style="width: 50%; text-align: left;">Session 2: Tools: Performance Predictions Session Chair: Virgilio Almeida (Federal University of Minas Gerais)</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> <p>Paper: <i>A Two-Class Parallel Queue with Pure Space Sharing among Rigid Jobs and General Service Times</i> Authors: <i>Dimitrios Filippopoulos; Helen Karatza</i></p> <p>Paper: <i>Zero-automatic Networks</i> Author: <i>Dao-Thi Thu-Ha; Jean Mairesse</i></p> <p>Paper: <i>Sojourn Times in (Discrete) Time Shared Systems and Their Continuous Time Limits</i> Author: <i>A. A. Kherani</i></p> </td> <td style="vertical-align: top;"> <p>Paper: <i>Automated Benchmarking and Analysis Tool</i> Authors: <i>Tomas Kalibera; Jakub Lehotsky; David Majda; Branislav Repcek; Michal Tomcanyi; Antonin Tomecek; Petr Tuma; Jaroslav Urban</i></p> <p>Paper: <i>A General Performance Model Interchange Format</i> Authors: <i>Peter G. Harrison; Catalina M. Lladó; Ramon Puigjaner</i></p> <p>Paper: <i>Modeling, Analysis, Measurement and Experimentation with the Tangram-II Integrated Environment</i> Authors: <i>Edmundo de S. e Silva; Ana P. C. da Silva; Antonio A. de A. Rocha; Rosa M. M. Leão; Flávio P. Duarte; Fernando J. S. Filho; Guilherme D. G. Jaime; Richard R. Muntz</i></p> </td> </tr> </tbody> </table>	Session 1: Queueing Systems I Session Chair: Melike Baykal-Gursoy (Rutgers University)	Session 2: Tools: Performance Predictions Session Chair: Virgilio Almeida (Federal University of Minas Gerais)	<p>Paper: <i>A Two-Class Parallel Queue with Pure Space Sharing among Rigid Jobs and General Service Times</i> Authors: <i>Dimitrios Filippopoulos; Helen Karatza</i></p> <p>Paper: <i>Zero-automatic Networks</i> Author: <i>Dao-Thi Thu-Ha; Jean Mairesse</i></p> <p>Paper: <i>Sojourn Times in (Discrete) Time Shared Systems and Their Continuous Time Limits</i> Author: <i>A. A. Kherani</i></p>	<p>Paper: <i>Automated Benchmarking and Analysis Tool</i> Authors: <i>Tomas Kalibera; Jakub Lehotsky; David Majda; Branislav Repcek; Michal Tomcanyi; Antonin Tomecek; Petr Tuma; Jaroslav Urban</i></p> <p>Paper: <i>A General Performance Model Interchange Format</i> Authors: <i>Peter G. Harrison; Catalina M. Lladó; Ramon Puigjaner</i></p> <p>Paper: <i>Modeling, Analysis, Measurement and Experimentation with the Tangram-II Integrated Environment</i> Authors: <i>Edmundo de S. e Silva; Ana P. C. da Silva; Antonio A. de A. Rocha; Rosa M. M. Leão; Flávio P. Duarte; Fernando J. S. Filho; Guilherme D. G. Jaime; Richard R. Muntz</i></p>
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12:10	Lunch				

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	<p>Session 3: Network Calculus Session Chair: Enzo Mingozzi (University of Pisa)</p>	<p>Session 4: Numerical Methods Session Chair: Vaidyanathan Ramaswami (AT&T Labs)</p>
13:40	<p>Paper: <i>The DISCO Network Calculator - A Toolbox for Worst Case Analysis</i> Authors: Jens B. Schmit; Frank A. Zdarsky</p> <p>Paper: <i>A Novel Approach to Scalable CAC for Real-time Traffic in Sink-Tree Networks with Aggregate Scheduling</i> Authors: Luciano Lenzini; Linda Martorini; Enzo Mingozzi; Giovanni Stea</p> <p>Paper: <i>Worst Case Burstiness Increase due to Arbitrary Aggregate</i> Authors: Juan Echagüe; Vicent Cholvi</p>	<p>Paper: <i>Solving the Single Server Semi-Markov Queue with Matrix Exponential Kernel Matrices for Interarrivals and Services</i> Authors: Nail Akar; Khosrow Sohraby</p> <p>Paper: <i>How to solve large scale deterministic games with mean payoff by policy iteration</i> Authors: Vishesh Dhingra; Stéphane Gaubert</p> <p>Paper: <i>Fast Solvers for Queueing Systems with Negative Customers</i> Authors: You-Wei Wen; Wai-Ki Ching; Michael K. Ng</p>
15:10	<p>Coffee Break</p>	
	<p>Session 5: Queueing Systems II Session Chair: Stijn De Vuyst (Ghent University)</p>	<p>Session 6 (Invited): Simulation I Proposed by: Ioannis Kontoyiannis (Athens University of Economics and Business) and Sean P. Meyn (University of Illinois at Urbana-Champaign) Session Chair: Sean P. Meyn</p>
15:40	<p>Invited Paper: <i>Matrix-geometric algorithms for stochastic fluid flows</i> Authors: Soohan Ahn; V. Ramaswami</p> <p>Paper: <i>Stability of Multi-Class Queueing Systems with State-Dependent Service Rates</i> Authors: Matthieu Jonckheere; Sem Borst</p> <p>Paper: <i>Analysis and optimal Control of a Discrete-time Queueing System Under the (m,N)-Policy</i> Authors: Alfredo G. Hernández-Díaz; Pilar Moreno</p> <p>Paper: <i>Performance of the MAP/G/1 Queue under the Dyadic Control of Workload and Server Idleness</i> Authors: Ho Woo Lee; Sahng Hoon Cheon; Se Won Lee</p>	<p>Paper: <i>Strongly Efficient Estimators for Light-tailed Sums</i> Authors: J. Blanchet; P. Glynn</p> <p>Paper: <i>Efficient Heuristics for the Simulation of Population Overflow in Series and Parallel Queues</i> Authors: V. Nicola; T. S. Zaburnenko</p> <p>Paper: <i>Importance Sampling and Efficient Counting of 0-1 Contingency Tables</i> Author: J. Blanchet</p> <p>Paper: <i>Splitting with Weight Windows to Control the Likelihood Ratio in Importance Sampling</i> Authors: P. L'Ecuyer; B. Tuffin</p>
17:45 18:45	<p>Panel discussion on theory and practice of simulation and learning Peter Glynn (Stanford University)</p>	

Technical program

Day 2: Thursday, 12 October 2006		
	Session 7: Application to Communication systems Session Chair: Leonardo Badia (IMT Lucca)	Session 8 (Invited): Web System-Oriented Performance Proposed by: Michele Colajanni (Modena University) Session Chair: Michele Colajanni
8:40	Paper: <i>Optimizing an OBS Scheduler Buffer</i> Author: <i>Andrew Zalesky</i> Paper: <i>Stability-Constrained Optimization for Energy Efficiency in Polling-Based Wireless Networks</i> Authors: <i>Yi Xie; Rocky K. C. Chang</i> Paper: <i>An Erlang-like Law for GPRS/EDGE Engineering and Its First Validation on Live Traffic</i> Authors: <i>Georges Nogueira; Bruno Baynat; Ahmed Ziram</i>	Paper: <i>Capacity Planning for Web and Grid Environments</i> Authors: <i>Sugato Bagchi; Eugene Hung; Arun Iyengar; Norbert Vogl; Noshir Wadia</i> Paper: <i>Dynamic Estimation of CPU Demand of Web Traffic</i> Authors: <i>Giovanni Pacifici; Wolfgang Segmuller; Mike Spreitzer; Asser Tantawi</i> Paper: <i>Load Prediction Models in Web-based Systems</i> Authors: <i>Mauro Andreolini; Sara Casolari</i>
10:10	Coffee Break	
	Session 9: Tools - Simulation Session Chair: Tania Jimenez (INRIA Sophia Antipolis)	Session 10: Petri Nets – Theory and Application Session Chair: Melike Baykal-Gursoy (Rutgers University)
10:40	Paper: <i>A Realistic Simulation of Internet-Scale Events</i> Authors: <i>Songjie Wei; Jelena Mirkovic</i> Paper: <i>A Monte Carlo Simulator for Evaluating Server Placement within Network Topology Designs</i> Author: <i>Sami J. Habib</i> Paper: <i>StarBED and SpringOS: Large-scale General Purpose Network Testbed and Supporting Software</i> Authors: <i>Toshiyuki Miyachi; Ken-ichi Chinen; Yoichi Shinoda</i> Paper: <i>Challenges and Benefits of Time-parallel Simulation of Wireless Ad Hoc Networks</i> Authors: <i>Ladislau Bölöni; Damla Turgut; Guoqiang Wang; Dan C. Marinescu</i>	Paper: <i>Approximate Closed-Form Aggregation of a Fork-Join Structure in Generalised Stochastic Petri Nets</i> Authors: <i>Nimrod Lilith; Jonathan Billington; Jörn Freiheit</i> Paper: <i>Backward Coupling in Petri nets</i> Authors: <i>Anne Bouillard; Bruno Gaujal</i> Paper: <i>Using UML State Machines and Petri Nets for the Quantitative Investigation of ETCS</i> Authors: <i>J. Trowitzsch; A. Zimmerman</i> Paper: <i>Analysis of Markov Reward Models using Zero-suppressed Multi-terminal BDDs</i> Authors: <i>Kai Lampka; Markus Siegle</i>
12:40	Lunch	

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	Session 11: Queueing Systems III Session Chair: Ahmad Al Hanbali (INRIA Sophia Antipolis)	Session 12: Scheduling Algorithms Session Chair: Enrico Gregori (IIT CNR Pisa)
14:10	<p>Paper: <i>Tail Asymptotics for Discrete Event Systems</i> Author: <i>Marc Lelarge</i></p> <p>Paper: <i>Tail Equivalence for Some TimeShared Systems</i> Authors: <i>Smruti Padhy; Arzad Kherani</i></p> <p>Paper: <i>M/M/C Queues with Markov modulated service</i> Authors: <i>Melike Baykal-Gursoy, Zhe Duan</i></p>	<p>Paper: <i>Fairness Considerations of Scheduling in Multi-Server and Multi-Queue Systems</i> Authors: <i>David Raz; Benjamin Avi-Itzhak; Hanoch Levy</i></p> <p>Paper: <i>Parametric Delay Differentiation Between Packet Flows Using Multiple Reserved Spaces</i> Authors: <i>Stijn De Vuyst; Sabine Wittevrongel; Herwig Bruneel</i></p> <p>Paper: <i>Bandwidth and Latency Analysis of Modified Deficit Round Robin Scheduling Algorithms</i> Authors: <i>Luciano Lenzini; Enzo Mingozzi; Giovanni Stea</i></p>
15:40	Coffee Break	
	Session 13 (Invited): Simulation II Proposed by: Ioannis Kontoyiannis (Athens University of Economics and Business) and Sean P. Meyn (University of Illinois at Urbana-Champaign) Session Chair: Ioannis Kontoyiannis	Session 14: Approximation Methods I Session Chair: Edmundo de Souza e Silva (Federal University of Rio de Janeiro)
16:10	<p>Paper: <i>ODE methods for Markov chain stability with applications to MCMC</i> Authors: <i>G. Fort; E. Moulines; S. P. Meyn</i></p> <p>Paper: <i>On the efficiency of adaptive MCMC algorithms</i> Authors: <i>C. Andrieu; Y. F. Atchade</i></p> <p>Paper: <i>Monte Carlo Simulation of Killed Diffusion with a Single Barrier</i> Authors: <i>B. Casella; G. O. Roberts</i></p> <p>Paper: <i>Exponential Bounds and Stopping Rules for MCMC and General Markov Chains</i> Authors: <i>I. Kontoyannis; L.A. Lastras-Montano; S.P. Meyn</i></p>	<p>Paper: <i>Heavy-Traffic Approximations for Linear Networks Operating under Alpha-Fair Bandwidth-Sharing Policies</i> Authors: <i>P. Lieshout; S. Borst; M. Mandjes</i></p> <p>Paper: <i>Mean value analysis for polling systems in heavy traffic</i> Authors: <i>R.D. van der Mei; Erik M. M. Winands</i></p> <p>Paper: <i>Reduced Load Approximations for Large-Scale Optical WDM Networks Offering Multiclass Services</i> Authors: <i>Kalyan Kuppuswamy; Daniel C. Lee</i></p>
20:00	Social Dinner	

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Day 3: Friday, 13 October 2006		
	Session 15: Routing and Spreading Session Chair: Marc Lelarge (École Normale Supérieure Paris)	Session 16: Models/Measurements of Traffic/Web Systems Session Chair: Luiz A. DaSilva (Virginia Tech)
9:00	<p>Paper: <i>Performance of Ad Hoc Networks with TwoHop Relay Routing and Limited Packet Lifetime</i> Authors: <i>Ahmad Al Hanbali; Philippe Nain; Eitan Altman</i></p> <p>Paper: <i>Performance Evaluation of Advanced Routing Algorithms for Unstructured Peer-to-Peer Networks</i> Authors: <i>Michele Amoretti; Francesco Zanichelli; Gianni Conte</i></p> <p>Paper: <i>Thresholds for Virus Spread on Networks</i> Authors: <i>Moez Draief; Ayalvadi Ganesh; Laurent Massoulié</i></p>	<p>Paper: <i>Analysis of traffic flow measurements by rate-interval curves</i> Authors: <i>Giada Giorgi; Claudio Narduzzi</i></p> <p>Paper: <i>A Unified Load Generator Based on Formal Load Specification and Load Transformation</i> Authors: <i>Jing Cong; Bernd E. Wolfinger</i></p> <p>Paper: <i>Web Graph Analyzer Tool</i> Authors: <i>Konstantin Avrachenkov; Danil Nemirovsky; Natalia Osipova</i></p>
10:30	Coffee Break	
	Session 17 (Invited): Control and Analysis of Communication Networks Proposed by: Maury Bramson (University of Minnesota) and Ruth Williams (University of California at San Diego) Session Chair: Eitan Altman (INRIA Sophia Antipolis)	Session 18: Work in Progress Session: Tools Session Chair: Luciano Lenzini (University of Pisa)
11:00	<p>Paper: <i>TCP-Illinois: A Loss and Delay-Based Congestion Control Algorithm for High-Speed Networks</i> Authors: <i>Shao Liu; Tamer Başar; R. Srikant</i></p> <p>Paper: <i>Stability of Multi-Path Dual Congestion Control Algorithms</i> Author: <i>Thomas Voice</i></p> <p>Paper: <i>Insensitive Queueing Models for Communication Networks</i> Author: <i>Thomas Bonald</i></p> <p>Paper: <i>A Stochastic Model for the Rate of Non-Persistent TCP Flows</i> Authors: <i>F. Baccelli; D. R. McDonald</i></p>	<p>Paper: <i>Performance Analysis using CPN Tools</i> Author: <i>L. Wells</i></p> <p>Paper: <i>A Tool for Packaging and Exchanging Simulation Results</i> Authors: <i>D. Savić; M. Pustišek; F. Potortì</i></p> <p>Paper: <i>OPEDo: a Tool Framework for Modeling and Optimization of Stochastic Models</i> Authors: <i>P. Buchholz; P. Kemper; D. Müller; A. Thümmler</i></p> <p>Paper: <i>Detailed Cache Simulation for Detecting Bottleneck, Miss Reason and Optimization Potentialities</i> Authors: <i>J. Tao; W. Karl</i></p>

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13:00	Lunch	
14:30	Session 19: Control of Queues Session Chair: Daniele Miorandi (Create-Net)	Session 20: Approximation Methods II Session Chair: Erik M. M. Winands (Eindhoven University of Technology)
	Paper: <i>Optimal Control of Admission to a Station in a Closed Two Queue System</i> Authors: <i>Taposh Banerjee; Arzad A. Kherani</i> Paper: <i>Performance measures of a Call Admission Control in mobile networks using SWN</i> Authors: <i>Lynda Mokdad; Mbaye Sene</i> Paper: <i>Relative Stability Analysis of Multiple Queues</i> Authors: <i>Lam Sum; Rocky K. C. Chang; Yi Xie</i>	Paper: <i>Predicting Queueing Delays for Multiclass Call Centers</i> Authors: <i>Oualid Jouini; Yves Dallery</i> Paper: <i>An Approximative Method for Calculating Performance Measures of Markov Processes</i> Authors: <i>Juha Leino; Jorma Virtamo</i> Paper: <i>Loss Ratio Approximations in Buffered Systems with Regulated Inputs</i> Author: <i>József Biró</i>