

IEEE / ACM MASCOTS 2003

11th ACM / IEEE International Symposium
on Modeling, Analysis and Simulation
of Computer and Telecommunication Systems

October 12-15, 2003
Venue: Orlando Airport Marriott
7499 Augusta National Drive
Orlando, FL 32822

Conference Program

SUNDAY, OCTOBER 12, 2003

Full Day Workshop

Mobility Management and Wireless Access (MobiWac)

Organiser: Azzedine Boukerche

Tutorials

The tutorials papers will be published as a volume of the series LNCS Tutorials by Springer. The volume will be available in December 2003.

Track 1

Track 2

09:00-12:00

IP-Oriented QoS in the Next Generation Networks: Application to Wireless Networks

Pascal Lorenz, University of Haute-Alsace

Simulation with Augmented Reality

Erol Gelenbe, Khaled Hussain, and Varol Kaptan, Imperial College and University of Central Florida

12:00-14:00

Lunch Break

14:00-17:00

CPN and QoS Driven Smart Routing in Wired and Wireless Networks

Erol Gelenbe, Ricardo Lent, Michael Gellman, Peixiang Liu, and Pu Su, Imperial College and University of Central Florida

Introduction to Simulation Modeling and Analysis: Concepts and Applications in Manufacturing and Service Industries

Mansoor Mollaghasemi, University of Central Florida

MONDAY, OCTOBER 13, 2003

- 09:15-09:45 Opening Session
- 09:45-10:30 Keynote Speech
Perf: An Ongoing Research Project on Performance Evaluation
M. Calzarossa
- 10:30-11:00 Break
- 11:00-12:30 Session 1 Workload Characterisation
Synthesizing Representative I/O Workloads using Iterative Distillation
Z. Kurmas, K. Keeton, K. Mackenzie
Tracking the Evolution of Web Traffic: 1995-2003
F. Hernandez-Campos, K. Jeffay, F. Smith
Using Linear Regression to Characterize Data Coherency Traffic
J.-T. Acquaviva, F. Quessette
- 12:30-13:30 Lunch Break
- 13:30-15:00 Session 2 Mobile Devices and Optical Networks
Considering the Energy Consumption of Mobile Storage Alternatives
F. Zheng, N. Garg, S. Sobti, C. Zhang, R. Joseph, A. Krishnamurthy, R. Wang
Using User Interface Event Information in Dynamic Voltage Scaling Algorithms
J. Lorch, A. Smith
k-Weighted Minimum Dominating Sets for Sparse Wavelength Converters Placement under Non-uniform Traffic
M. Houmaidi, M. Bassiouni
- 15:00-15:30 Break
- 15:30-17:00 Session 3 Network Simulation I
Creating Realistic BGP Models
X. Dimitropoulos, G. Riley
Mapping Peer Behavior to Packet-level Details: A Framework for Packet-level Simulation of Peer-to-Peer Systems
Q. He, M. Ammar, G. Riley, H. Raj, R. Fujimoto
Minimizing Packet Loss by Optimizing OSPF Weights Using Online Simulation
H. Kaur, T. Ye, S. Kalyanaraman, K. Vastola

TUESDAY, OCTOBER 14, 2003

- 09:00-10:30 Session 4 Storage Systems I
It's Not Fair - Evaluating Efficient Disk Scheduling
A. Riska, E. Riedel
A Lightweight, Temporary File System for Large-scale Web Servers
J. Wang, D. Li
Zone-Based Shortest Positioning Time First Scheduling for MEMS-Based Storage Devices
B. Hong, S. Brandt, D. Long, E. Miller, K. Glocer, Z. Peterson
- 10:30-11:00 Break
- 11:00-11:45 Keynote Speech
Large-Scale Network Simulation: How Big? How Fast?
R. Fujimoto
- 11:45-12:45 Session 5 Web Server Performance
Quantifying the Properties of SRPT Scheduling
M. Gong, C. Williamson
NAM: A Network Adaptable Middleware to Enhance Response Time of Web Services
S. Ghandeharizadeh, C. Papadopoulos, P. Pol, R. Zhou
- 12:45-13:45 Lunch Break
- 13:45-14:30 Keynote Speech
DEVS Today: Recent Advances in Discrete Event-Based Information Technology
B. Zeigler
- 14:30-15:30 Session 6 Wireless and Mobile Networks
Modelling Differentiated Services in UMTS Networks
K. Al-Begain, I. Awan
Media Synchronization and Packet Scheduling Algorithms for Wireless Systems
A. Boukerche, H. Owens II
- 15:30-16:00 Break

16:00-18:15 Parallel Session

Tool Demonstrations

On Modeling and Analyzing Cache Hierarchies using CASPER

R. Iyer

TwoTowers 3.0: Enhancing Usability

M. Bernardo

MQNA - Markovian Queueing Networks Analyser

L. Brenner, P. Fernandes, A. Sales

An Evaluation Framework for Active Queue Management Schemes

A. Bitorika, M. Robin, M. Huggard

System-Level Simulation Modeling with MLDesigner

G. Schorcht, I. Troxel, K. Farhangian, P. Unger, D. Zinn, C. Mick, A. George, and H. Salzwedel

p-sim: A Simulator for Peer-to-Peer Networks

S. Merugu, S. Srinivasan, E. Zegura

An Open Tool to Compute Stochastic Bounds on Steady-state Distribution and Rewards

J.M. Fourneau, M. Le Coz, N. Pekergin, F. Quessette

Short Papers

Quantifying the Effect of Recent Protocol Improvements to Standards-Track TCP

M. Weigle, K. Jeffay, F. Smith

Profit-driven Service Differentiation in Transient Environments

Q. Zhang, E. Smirni, G. Ciardo

Optimal Mobility-Aware Admission Control in Content Delivery Networks

N. Bartolini, E. Casalicchio, S. Tucci

An Active Traffic Splitter Architecture for Intrusion Detection

I. Charitakis, K. Anagnostakis, E. Markatos

Toward Scaling Network Emulation Using Topology Partitioning

K. Yocum, E. Eade, J. Degeysys, D. Becker, J. Chase, A. Vahdat

Call Admission Control for QoS provisioning in Multimedia Wireless and Mobile Networks

K. Dias, S. Fernandes, D. Sadok

Managing of Flash Crowds on the Internet

I. Ari, B. Hong, E. Miller, S. Brandt, D. Long

Performance Benchmarking of Dynamic Web Technologies

L. Titchkosky, M. Arlitt, C. Williamson

Markovian Performance Analysis of a Synchronous Optical Packet Switch

J. Tomasik, I. Kotuliak, T. Atmaca

WEDNESDAY, OCTOBER 15, 2003

- 09:00-10:30 Session 7 Internet Performance
- Small-World Characteristics of the Internet and Multicast Scaling**
S. Jin, A. Bestavros
- A Unified Framework for Modeling TCP-Vegas, TCP-SACK, and TCP-Reno**
A. Wierman, T. Osogami, J. Olsen
- Bottleneck Estimation for Load Control Gateways**
K. Pandit, J. Schmitt, M. Karsten, R. Steinmetz
- 10:30-11:00 Break
- 11:00-12:30 Session 8 Storage Systems II
- SPEK: A Storage Performance Evaluation Kernel Module for Block Level Storage System**
M. Zhang, Q. Yang, X. He
- An Integrated Performance Model of Disk Arrays**
E. Varki, A. Merchant, J. Xu, X. Qiu
- Disk Built-in Caches: Evaluation on System Performance**
Y. Zhu, Y. Hu
- 12:30-13:30 Lunch Break
- 13:30-14:30 Session 9 Web Proxies
- Analysis of Design Alternatives for Reverse Proxy Cache Providers**
B. Ciciani, F. Quaglia, P. Romano, D. Dias
- A Packet-Level Simulation Study of Optimal Web Proxy Cache Placement**
G. Houtzager, C. Williamson
- 14:30-15:00 Break
- 15:00-16:00 Session 10 Distributed and Cluster Computing
- Scheduling Parallel Jobs with CPU and I/O Resource Requirements in Cluster Computing Systems**
J. Abawajy, S. Dandamudi
- Derivation of Passage-time Densities in PEPA Models Using ipc: The Imperial PEPA Compiler**
J. Bradley, N. Dingle, S. Gilmore, and W. Knottenbelt
- 16:00-16:30 Closing