37th Annual Simulation Symposium

Hyatt Regency Crystal City
Arlington, VA
April 18 - 22, 2004

General Chair
Taieb Znati
University of Pittsburgh

Program Chair
Helen Karatza
Aristotle University of Thessaloniki

Preliminary Program

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Symposium Keynote

Session 1: Network Modeling and Simulation I

Session 2: Network Modeling and Simulation II

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Session 6: Web-based Modeling and Simulation

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Session 8: VLSI Circuit Simulation

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Session 11: Network Modeling and Simulation IV
Monday, April 19

10:30-11:30: Keynote Address: How to Share a Bag of Tasks Optimally in a Heterogeneous Cluster--Three Models, Three Answers
Professor Arnold Rosenberg, University of Massachusetts, USA

11:30-12:30: Session 1: Network Modeling and Simulation I
Session Chair: Taieb Znati, University of Pittsburgh, USA

End-host multicasting in support of distributed real-time simulation systems
Woan Sun Chang, Robert Simon, George Mason University

Energy Efficient Protocols for Sensing Multiple Events in Smart Dust Networks
S. Nikoletseas, I.Chatzigiannakis, H.Euthimiou, A. Kinalis, A. Antoniou,
G. Mylonas
Computer Technology Institute, Patras, Greece

1:30-03:00: Session 2: Network Modeling and Simulation II
Session Chair: Robert Simon, George Mason University, USA

On the implementation and performance of the (a,t) protocol on Linux
Anandha Gopalan, Taieb Znati, University of Pittsburgh
Sanjeev Dwivedi, Georgia Institute of Technology, Atlanta
Bruce McDonald, Northeastern University

A Spatial Analysis of Mobility Models: Application to Wireless Ad Hoc Network Simulation
D. Charles Engelhart, Anand Sivasubramaniam, Penn. State University
Christopher L. Barrett, Madhav V. Marathe, James P. Smith, Los Alamos National Laboratory, NM
Monique Morin, University of New Mexico

A New Energy Efficient and Fault-tolerant Protocol for Data Propagation in Smart Dust Networks using Varying Transmission Range
Thanasis Antoniou, Ioannis Chatzigiannakis, George Mylonas, Sotiris Nikoletseas
Computer Technology Institute, Patras, Greece
Azzedine Boukerche, SITE, University of Ottawa, Canada
03:30-05:30 Session 3: Advances in Simulation Methodology and Practices
Session Chair: S. Nikoletseas, Computer Technology Institute, Patras, Greece

Investigating Ontologies for Simulation Modeling: An Experiment with Generalized Semi-Markov Processes
John A. Miller, Gregory Baramidze, Amit P. Sheth, University of Georgia
Paul A. Fishwick, CISE, University of Florida

Solemn: Solaris Emulation Mode for Sparc Sulima
Bill Clarke, Australian National University, Acton, Australia

Integrating Metadata Tools with the Data Services Archive to Provide Web-based Management of Large-Scale Scientific Simulation Data
Victor P. Holmes, Wilbur R. Johnson, David J. Miller
Sandia National Laboratories, NM

Integrated System Design, Analysis and Database-Driven Simulation Model Generation
Ki-Young Jeong and David Allan
United Technologies Research Center, East Hartford

Tuesday, April 20

08:30-10:00: Session 4: Simulation based Performance Analysis
Session Chair: Helen Karatza

A Service Scheduler in a Trustworthy System
Yinong Chen, Arizona State University

Cache Simulation Based on Runtime Instrumentation for OpenMP Applications
Jie Tao, Josef Weidendorfer
Technische Universitat Munchen, Germany

Accelerating Web Page Retrieval Through Object Usage Declaration
Chi-Hung Chi, Xiang Li, Hongguang Wang
National University of Singapore
10:30-12:00: Session 5: Network and Distributed Systems Modeling and Simulation
Session Chair: Yinong Chen, Arizona State University, USA

The Benefits of Load Sharing when Dimensioning Networks
S Lincke-Salecker, University of Wisconsin-Parkside

A Simulation Study of An Energy Efficient Routing Protocol for Mobile Ad Hoc Networks
Xiao-Jiang Du, Indiana University - Purdue University, Fort Wayne

PI-PD-controller for robust and adaptive queue management for supporting TCP congestion Control
Seungwan Ryu and Chulhyoe Cho
Mobile Telecommunication Research Laboratory, ETRI, Taejon, Korea.

01:30-03:00: Session 6: Web-based Modeling and Simulation
Session Chair: John A. Miller, University of Georgia

Computational Science and Engineering On-line: An Integrated Web-based Simulation Environment for Computational Science and Engineering
Thanh N. Truong, University of Utah

A self-manageable infrastructure for supporting Web-based simulations
Yingping Huang, Xiaorong Xiang, Gregory Madey, University of Notre Dame

Translating Activity Cycle Diagrams to Java Programs
Wladimir L. Araujo Filho and Celso M. Hirata
Dept of Computer Science, Instituto Tecnologico de Aeronautica, CTA-ITA-IEC, Brazil

03:30-05:30 Session 7: Simulation Languages, Tools, and Environments
Session Chair: Shambhu J. Upadhyaya, State University of New York at Buffalo

DAP: A Generic Platform for the Simulation of Distributed Algorithms
Ioannis Chatzigiannakis, Athanasios Kinalis, Grigorios Prasinos, Christos Zaroliagis, University of Patras, Greece
Athanasiou Poulakidas, Research Academic Computer Technology Institute, Patras, Greece

Object-Oriented SIMSCRIPT
Steve Rice, University of Mississippi
Ana Marjanski, Harry M. Markowitz, and Stephen M. Bailey, CACI Products Company

A C++ Pooled, Shared Memory Allocator for Simulator Development
Marc D. Ronell, University of Massachusetts

SMS - Tool for Development and Performance Analysis of Parallel Applications
Andre L. Sandri, Ronaldo A. L. Goncalves, Joao A. Martini
Universidade Estadual de Maringa, Brazil

Wednesday, April 21

08:30-10:00: Session 8: VLSI Circuit Simulation
Session Chair: Philip A. Wilsey, Clifton Labs, Cincinnati

Modelling SAMIPS: A Synthesisable Asynchronous MIPS Processor
Qianyi Zhang, Georgios Theodoropoulos
University of Birmingham, UK

RABIT: A New Framework for Runtime Emulation and Binary Translation
Suranjan Pramanik and Shambhu J. Upadhyaya
State University of New York at Buffalo

SENS: A Sensor, Environment and Network Simulator
Sameer Sundresh, Wooyoung Kim and Gul Agha
University of Illinois at Urbana-Champaign

10:30-12:00 Session 9: Parallel and Distributed Simulation
Session Chair: Georgios Theodoropoulos, University of Birmingham, UK

Scheduling Optimization on the Simbus Backplane
Dale E. Martin, Philip A. Wilsey, Clifton Labs, Cincinnati,
Robert J. Hoekstra, Eric R. Keiter, Scott A. Hutchinson,
Thomas V. Russo, and Lon J. Waters
Sandia National Labs, Albuquerque, NM

Scalability and Performance of Aggregation/Dissaggregation with Data Distribution Management in a Large Scale Distributed Simulation
Azzedine Boukerche, C. Dzermajko
University of Ottawa, Canada

Using the High Level Architecture to Implement Selective-Fidelity
Bradley C. Schricker, Sonia R. von der Lippe
AT&T Government Solutions, Inc., Orlando

01:30-03:00 Session 10: Network Modeling and Simulation III
Session Chair: Azzedine Boukerche, University of Ottawa, Canada

Adaptive Energy Conservation Model Using Dynamic Caching in Wireless Devices
C. Mavromoustakis, H. Karatza
Aristotle University of Thessaloniki, Greece

Optimized Dissemination of Highly Anticipated Content over an Itinerary Based P2P Network
K. Zerfridis, H. Karatza
Aristotle University of Thessaloniki, Greece

Modeling and Simulation of ATM Traffic Management
Antonio Marcos Alberti, National Institute of Telecommunications, Santa Rita do Sapucai, Brazil
Mauricio Luis Bottoli, Gean Davis Breda, and Leonardo de Souza Mendes, University of Campinas, Brazil

03:30-5:00: Session 11: Network Modeling and Simulation IV
Session Chair: Helen Karatza, Aristotle University of Thessaloniki, Greece

Markov Model Based Congestion Control for TCP
Shan Suthaharan
University of North Carolina at Greensboro

Normalizing Traffic Pattern with Anonymity for Mission Critical Applications
Chi-Hung Chi, Dongxi Liu, Ming Li
National University of Singapore

Simulation-based Approach to Study the Coexistence Issues of WCDMA and Other Cellular Networks in Adjacent Bands
Jiang Wu, Shuangchun Liang, Kai Niu and Weiling Wu
Beijing University of Posts and Telecommunications