

PRELIMINARY PROGRAM

2005 WESTERN SIMULATION MULTICONFERENCE

January 23–27, 2005 • New Orleans, Louisiana, USA



WMC '05



Western Simulation Multiconference

International Conference on Simulation in Education (ICSiE'05)

General Chair

Hamid Vakilzadian
University of Nebraska-Lincoln, USA

Communication Networks and Distributed Systems Modeling and Simulation Conference

International Conference on Health Sciences Simulation

Program Chair

William McQuay
Air Force Research Laboratory

ICBGM'05 International Conference on Bond Graph Modeling and Simulation

International Conference on Fossil Simulation and Training

SIMCHI '05 Human-Computer Interface Advances for Modeling and Simulation

International Conference on Simulation Technology for Nuclear Power Plants and Systems

Exhibit Chair

John Shriver
Monticello Plant, USA

2005 Western Multiconference on Modeling and Simulation (WMC'05)

Where:

New Orleans, Louisiana, USA

Wyndham New Orleans at Canal Place Hotel

<http://www.wyndham.com/hotels/MSYCP/main.wnt>

When:

January 23-27, 2005

Sponsor:

The Society for Modeling and Simulation International (SCS)

<http://www.scs.org/>

Conference Topics:

- **Simulation in Education**
- **Health Sciences Simulation**
- **Human-Computer Interface Advances**
- **Bond Graph Modeling and Simulation**
- **Fossil Power Plant Simulation and Training**
- **Simulation Technology for Nuclear Power Plants**
- **Communication Networks and Distributed Systems**

Early registration closes December 27, 2004

<https://www.scs.org/conference/wmc05/>

Hotel conference rates available through December 31 . See FAX form in this program or online at <http://www.scs.org/confernc/westernsim/wmc05hotelform.pdf>

To reserve exhibit space <http://www.scs.org/conference/exhibitcontract.pdf>

Please forward this message to any colleagues you feel would be interested to learn about the modeling and simulation professionals, applications and presentations participating in this program.

15th Annual International Conference on Health Sciences Simulation

General Co-Chair
James G. Anderson
Purdue University, USA

General Co-Chair
Meyer Katzper
FDA/CDER, USA

Modeling a Hospital Medical Error Reporting System

James G. Anderson, Ranga Ramanujam, Marilyn M. Anderson,
Devon Hensel
Purdue University, USA

Lean manufacturing: One Alternative in Controlling Medical Costs

Maruf Rahman, Bernard J. Schroer
University of Alabama in Huntsville, USA

Is Technology Driving the Health Care System?

George Pasdirtz, *University of Wisconsin, USA*

Improving Mass Vaccination Clinic Operations

Kay Aaby, Jeffrey W. Herrmann, Carol Jordan, Mark Treadwell,
Kathy Wood
University of Maryland, USA

Applying Computer Simulation to the Method of Target Costing

J.J.W. Molema, S. Groothuis, M. Kleinschiphorst,
M.I. Pavlova & G.G. van Merode
University of Maastricht, The Netherlands

Analysis of the Effects of Different Planning Strategies at the Operation Room on the Length of the Working Day

Siebre Groothuis, Marieke Kleinschiphorst, J.J.W. Molema,
Godefridus G. van Merode,
University of Maastricht, The Netherlands

Modeling Methodologies

The Medical Modeling and Simulation Database

C. Donald Combs, Kara Friend
National Center for Collaboration in Medical Modeling and Simulation, Virginia Medical School, USA

Design Patterns for Developing Discrete-Event Simulation Models of Patient Flow

Sergiy Boyko, Christos Vasilakis
University of British Columbia, Vancouver, Canada

A New Multivariate Distribution Statistic Applied to Health Care Research

William Conley
University of Wisconsin – Green Bay

Modeling Epidemics

MicroPox: A Large-Scale and Spatially Explicit Micro-Simulation Model for Smallpox Planning

Lisa Brouwers, *Stockholm University*

Using the CAMIM Small-World Epidemic Model to Analyze Public Health Politics

Ji-Lung Hsieh, Chung –Yuan Huang, Chuen-Tsai Sun
National Chiao Tung Univeristry, Taiwan

Agent-Based Modeling: A Case Study in HIV Epidemic

Teweldemedhim Eyob Tsegay, Daniel-Barth Jones
University of Witwatersrand, South Africa

Pharmacometric Applications

In vivo Studies on Glucose and Fatty Acids Dynamics in Cats with Model-Based Population Kinetics Data Analysis

Karl Thomaseth, Juliano Brandao, Duncan C. Ferguson,
Margarethe Hoenig
Institute of Biomedical Engineering, National Research Council, Padua, Italy

Modeling Pain States

Meyer Katzper, Joe Hutter, *FDA, USA*

Molecular Biological Processes

Event-based Simulation Conceptual Modeling of Molecular Biology Processes

Joe W. Yoel, I. Barjis, Y. S. Ru
Polytechnic University and City University of New York, College of Technology, Brooklyn, NY

Modeling and Simulation of Premeiotic Clusters of Mutation in Single-Gene Speciation

Sheng GU, Hassan Rajaei
Bowling Green State University

Biomedical Applications

Simulation of Human Lung Respiration Process Using 3-D CFD with Macro Air Sac System Model

Hui Ding, *CFD Research Corporation, USA*

Optimal Screening Policies for Diabetic Retinopathy Using a Combined Discrete Event Simulation and Ant Colony Optimization Approach

Marion S. Rauner, Walter J. Gutjahr, Sally C. Brailsford, Wolfgang
Zeppelzauer

University of Vienna, Austria , University of Southampton, UK

International Conference on Simulation in Education (ICSIE '05)

General Chair
Arnold Pears, *University of Uppsala, Sweden*

Program Chair
Chell Roberts, *Arizona State University, USA*

Devs as part of and Integrating Tool in a Course on System Dynamics

Ernesto Kofman

Cim++: An Object-Oriented Design and Simulation Framework for Education of Hardware/Software Codesign

Zain Navabi

Blood Circulation simulation using a distributed decentralized-control design

Alfredo Cristobal-Salas

Artificial Intelligence in Computer Wargames with Applications to Professional Military Education

John Tiller

An "Introduction to Calculus" Course Based on DEVS: Implications of a Discrete Reformulation of Mathematical Continuity

Bernard Zeigler

Engineering Cadets Using Full-Scope Simulator and Multimedia Tools: A Case Study

Amier Al-Ali

On the Potential of DEVS in Teaching Engineering of Quality into Simulation Models

Levent Yilmaz

Simulation as Educational Vehicle in Science and Engineering: When, Why, and How?

Arnold Pears

Roles and Responsibility in Safety Management

Hassan Badkoobehi

Communication Networks and Distributed Systems Modeling and Simulation (CNDS)

General Chair
Taieb Znati, *University of Pittsburgh, USA*

Program Chair
A. Bruce McDonald, *Northeastern University, USA*

Multi-rate Congestion Control using Packet-pair Bandwidth Detection with Session and Layer Changing Manager

Yuliang Li

A Spare Part Ordering and Tracking Information System for the Machine Tools Manufacturer

Jenteng Tsai

Prioritized Optical Buffering for QoS Support in Optical Switched Networks

Mohammad Obaidat

Multi-Domain Collaborative Simulation: An Integrative Framework for Complex Products Design

Keming Wang

Performance Evaluation of an Internet Friendly Transport Protocol over Networks with Lossy Links

Hala ElAarag

Replica Voting Mechanisms for Secure Real-time Embedded Systems

Kaliappa Ravindran

Simulation and Analysis of the Effects of Collisions on Message Broadcast in Highly Mobile Ad Hoc Networks

Michael Kirkpatrick

DSSimulator: Achieving Million Node Simulation of Distributed Systems

Jawwad Shamsi

On Determining Optimal Receiver Buffer Size In Adaptive Internet Video Streaming

Emrullah Tunali

Simulation of Load Balancing via Ad hoc Relay in 3G System

Jiang Han

Improving Performance of the Storage System in Proxy Caches

Abdolreza Abhari

Performance Evaluation of a BACnet-based Fire Detection and Monitoring System in Buildings

Won Seok Song

International Conference on Simulation Technology for Nuclear Power Plants and Systems

General Chair
Scott M. Halverson
AmerenUE, USA

NUCS

Laguna Verde Simulator : A New TRAC-RT Based Application

Agustin Tanarro

Modelling of Core Protection Calculator Based on Structured Analysis for Korean Standard Nuclear Power Plant Simulator

Dong-Wook Kim

Securing Budget for and Implementing Your Significant Simulator Upgrade: The Fermi Experience

Bryan Crone

International Conference on Fossil Simulation and Training

General Chair
Scott M. Halverson
AmerenUE, USA

FOSSIL

A Development of the Windows based Real-Time Simulation Tool for Power Plant

Dong-Wook Kim

Implementation of Thermal-Hydraulic Models into a Windows-Based Power Plant Simulation Tool

Dong-Wook Kim

A Simulator Test to Clarify Internal Features of Fossil Power Plant Simulator

Vladimir Rubashkin

International Conference on Bond Graph Modeling and Simulation

General Chair
Jose J. Granda
Department of Mechanical Engineering
California State University, USA

Program Chair
François Cellier
Department of Electrical and Computer Engineering
University of Arizona, USA

Traffic Modeling by Applying the Bond Graph Technique

Jesus Felez

Thermal Model for Lead-Acid Batteries using the Bond Graph Technique

Jesus Felez

Simulation of High Velocity Turbomachines

Jean Thoma

Optimal Controller Gain Selection using the Power Flow Information of Bond Graph Modeling

Francois Cellier

System Efficiency Measurement through Bond Graph Modeling

Francois Cellier

Elimination of time derivatives of source inputs

Peter Breedvald

Bond Graph Modelling of Marine Seismic Cables

Tom Pedersen

Study of the Inter-axis Coupling in Space Robot with Three Reaction Wheels as Attitude Controllers

Pushparaj Pathak

Next-Generation Transformation Tools for Scalable Integrated System Modelling

Dominic Diston

Model Transformation Tools (MTT): The Open Source Bond Graph Project

Geraint Bevan

PACTE, a bond graph simulator for electrical and multi-physical systems.

Hervé Morel

A 4 Wheel Vehicle Bond Graph Model Including Uncertainties on the Car Mass and the Centre of Mass Position

Genevieve Dauphin-Tanguy

Finite Element local structure assembly and shape function influence on bond graph modelling

Abdechafik Derkaoui

Bond Graphs for Convective Heat Transfer Elements

Jan Rietman

A bond graph representation of an optimal control problem: the example of the DC motor

Wilfrid Marquis-Favre

BG-Supported Synthesis of Speed- and Position-Tracking Controllers for Brushless DC-Motor Drives

Sergio Junco

A Bond Graph Approach to Modelling of Spatial Flexible Multibody Systems Based on Co-rotational Formulation

Vjekoslav Damic

Automatic Generation of all Bond Graph Structures Matching a Given Transfer Function

Genevieve Dauphin-Tanguy

Modelling for transient torsional vibration analysis in marine power train systems

Kristine Bruun

Symbolic Determination of the Steady State due to Gravity Effects on Mechanical Systems Modelled by Bond Graphs

Genevieve Dauphin-Tanguy

Study of the cardiac muscle dynamics utilising Bond Graph methodology

Abdennasser Fakri

Non commutative ring bond graphs: application to flatness

Ali Achir

Exchange and Reuse of Bond Graph Models based on XML

Wolfgang Borutzky

Bond Graph Model of a Multi-Plate Clutch in a Vehicle System Using Fixed Causality Slip-Stick Friction

Donald Margolis

Improvements to Single Fault Isolation using Estimated Parameters

Sanjoy Ghoshal

Bond Graph Modeling of Stick-Slip Behavior in Friction Belt Drives

Dean Karnopp

Hybrid Lumped-and Delay-bond Modeling and Simulation

Forbes Brown

Probabilistic strategy based dynamic system design Using Bond graph and Genetic Algorithm

Benito Fernandez

Bond Graph Modeling of Current Diffusion in Magnetic Cores

Hervé Morel

Modeling and Simulation of Multi-Discipline Systems Using Bond Graphs and VHDL-AMS

Francois Pecheux

Diagnostic Bond Graphs for Direct Residual Evaluation

Kamal Medjaher

Bond Graph Modeling of Rail Wheelset on Curved Track

Banerjee, Nilotpal

On The Role of Power Lines and Casual Paths in Bond Graph-Based Model Inversion

Ngwompo, Roger

A Procedure for finding Invariants of Motions for General Class of Unsymmetric Systems with Gauge-variant Umbra Lagrangian Generated by Bond Graphs

Amalendu Mukherjee

Optimised Procedures for Obtaining the Symbolic Equations of a Dynamic System by Using the Bond Graph Technique

Jesus Felez

Virtual Actuator Control of Mechanical Systems

Peter Gawthrop

International Conference on Human-Computer Interface Advances for Modeling and Simulation (SIMCHI'05)

General Chair
Paul Fishwick, *University of Florida, USA*

Program Chair
Benjamin Lok, *University of Florida, USA*

Authoring and Delivering Mixed Reality Experiences

Charles Hughes

The Modeling by Speech Approach to Develop Simulation Models

Isaías Torres

Simulation Based Knowledge Elicitation

Stewart Robinson

A Testing Methodology for Augmented Reality Interfaces to Simulation Systems

J. Swan

Evaluating a Script-Based Approach for Simulating Patient-Doctor Interaction

Robert Dickerson

Multi-agent Modeling and Simulation Approach for Design and Analysis of MER Mission Operations

Chin Seah

Combining Intelligent Tutoring and Simulation Systems

Alke Martens

Quality Principles for the Ergonomics of Human-Computer Interfaces of Modeling and Simulation Software

Levent Yilmaz

Designing a System for Effective Use of Immersive Audio in Mixed Reality

Charles Hughes

Conveying Policy Risks from an Advanced Simulation Model in a Decision Making Context

Mona Pählman



The Society for Modeling and Simulation International
2005 WESTERN SIMULATION MULTICONFERENCE
January 23 - 27, 2005 • Wyndham New Orleans at Canal Place Hotel
New Orleans, Louisiana, USA

HOTEL RESERVATION FORM

Reservations must be received by December 31, 2004 to qualify for the conference rate,
 which is subject to group block availability.

Those received after this date will be provided on a space available basis at prevailing rates.

Arrival Date: ____/____/____

Departure Date: ____/____/____

Please reserve accommodations for:

Name: _____

Sharing room with: _____

Company: _____

Address: _____

City: _____ State: _____ ZIP: _____

Phone Number: _____ Fax Number: _____

Credit Card Number: _____

Cardholder's Name: _____

Room Preference: Smoking Non-Smoking
 King 2 Double Beds

Room Rate: \$ 140.00 US Single Double (\$25 charge for each additional person)

Number of Adults _____

Add 13% Hotel Tax

(All guest rooms are subject to a \$2.00 (per room per night) occupancy fee).

Hotel check-in is 4:00 p.m. and check-out is 12:00 noon.

* Reservations must be guaranteed by credit card at the time of booking, or advance deposit received within 10 days of booking. Individual reservations will automatically be billed for one night unless canceled 72 hours prior to arrival.

Please return this reservation request to:
Hotel Reservations
100 Rue Iberville
New Orleans, Louisiana 70130
United States
Phone: 504-566-7006
Fax: 504-553-5085



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CONFERENCE REGISTRATION FORM

Reservations must be received by December 23, 2004 to qualify for conference rate.
 Those received after this date will be accepted on a space available basis only.

This registration form must be completed and returned to the SCS office. Registration is not refundable. Full registration fee includes attendance at the conference, CD-ROM, and conference luncheon. Additional printed proceedings, tutorials, tours, and social events subject to additional fees (see comprehensive registration for best value).

Name: (for badge) _____ Position: _____

Organization: (for badge) _____

Mailing Address: _____

City: _____ State/Country: _____ ZIP: _____

Business Phone: _____ Home: _____ Fax: _____ Email: _____

Primary topic of interest: (Please circle one of the following tracks, or choose "all")

CNDS ICBGM SIMCHI ICSIE HSS FOSSIL NUCS ALL(General Interest)

CONFERENCE REGISTRATION OPTIONS

(Conference registration fees payable to SCS in U.S. dollars only)

Member #: _____

Full Conference Registration:	Early (30 days or more before conference):	Late (within 30 days of the conference):
SCS Members	\$450.00	\$550.00
Non-Members	\$550.00	\$650.00
One-Day (Non-Authors)	\$195.00	\$225.00
Group of four or more, per person (one Proceedings per group)	\$290.00	\$320.00
Student Member (Author**)	\$250.00	\$335.00
Student Non-Member (Author**)	\$350.00	\$435.00
Student (Attendance Only**)	\$ 55.00	\$ 55.00

Miscellaneous:

Additional Proceedings \$ 35.00 \$ 45.00

TOTAL \$ _____ \$ _____

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Card Number: _____ Exp. Date: _____

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* All Checks must be made payable to SCS and drawn on US banks or International Money Orders in US funds

** Must provide proof of current student status; all authors must be students