

# 2003 ADVANCED SIMULATION TECHNOLOGIES CONFERENCE OFFICIAL CALL FOR PAPERS

## BUSINESS AND INDUSTRY SYMPOSIUM

The Business and Industry Symposium is devoted to encourage international collaborative research, development, and innovation in numerical simulation and optimization as applied to Business and Industry. The goal is to stimulate the development and use of simulation technologies in specific areas of Computer Modeling and Simulation. This goal will promote the exchange of ideas and information between academia, government, and industry, thereby supporting the development of simulation and its applications to meet current scientific and technical challenges. Abstracts for original papers are solicited in the following areas:

### Business Track:

- Economic Systems
- Financial Systems
- Management Systems
- Marketing Systems
- Operations Research
- Intelligent Management Systems
- Dynamic Business Process Optimization
- Decision Analysis
- Regulatory Simulation

### Industry Track:

- Manufacturing Plants and Systems
- Environmental sciences and Applications
- Genetic Programming
- Industrial Engineering
- Systems Optimization
- Neural Networks / Fuzzy Logic
- Systems and Process Simulation
- Nuclear and Chemical Waste Management

- Power Plant Simulators
- Transportation
- Human Factor Engineering
- Theory and Methodology for Simulation Practice
- Knowledge and Data Systems
- Complexity Theory
- Mathematical Modeling and Simulation
- Statistical Modeling

### Virtual Reality Track:

- Virtual Reality
- Augmented Reality
- Motion Capture
- Real-Time Computer Simulation and Realistic Sensation
- Tactile Displays and Haptic Interfaces in VR
- Interaction and Navigation in Industrial VR
- Intelligent CAD
- Modeling VR Systems
- Distributed VR Systems
- Evaluation of VR Devices, Techniques, and Systems

**Abstract/Draft Paper Submittal is November 8, 2002**

Please submit abstracts/papers for consideration to Dr. Maurice J. Ades.  
More Information is available at: <http://www.scs.org>

### General Chair

**Dr. Maurice J. Ades**  
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### Program Chair:

**Larry M. Deschaine, PE**  
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## 36TH ANNUAL SIMULATION SYMPOSIUM

The Annual Simulation Symposium is a forum for the exchange of ideas, techniques, and applications among practitioners of simulation in industry, government, and academia. This international Symposium is the oldest continuously operating conference/symposium dedicated to simulation. The paper sessions are designed to promote discussion of concepts, tools, methodologies, and results between authors and the audience. The structure of the Symposium also provides for a degree of collegiality and continuity in the discussions of the various topics presented during the week. This year's Symposium is particularly seeking papers in the following topical areas:

- Object-Oriented Simulation
- Simulation Languages, Tools, and Environments
- VLSI Circuit Simulators
- Simulation of Multiprocessor Architectures
- Simulation of Distributed Systems and Databases
- Simulation of Parallel Processing Systems
- Simulation based Performance Analysis
- Network Modeling and Simulation
- Simulation of Sensor Networks
- Simulation of Wireless and Mobile Networking and Computing
- Simulation of Large Scale Systems
- Simulation of Clusters and Grids
- Simulation of Client-Server Systems
- Simulation of Wireless Systems
- Simulation of Real-time Systems

- Parallel and Distributed Simulation
- Simulation of Agent Systems
- Simulation based Software Performance
- Reliability and Maintenance Models
- Simulation of Multimedia Applications and Systems
- Artificial Intelligence in Simulation
- Neural Network Models and Simulation
- Web-based Modeling and Simulation
- Animations/Virtual Reality
- Advances in Simulation Methodology and Practices
- Experimental design
- Meta-modeling
- Statistical Analysis and Inference
- Verification and Validation
- Selection and comparison procedures

**Paper Submission Deadline is October 15, 2002**

It is strongly recommended that papers be submitted to the Program Chair by electronic mail. Papers can also be submitted electronically via anonymous ftp to [agent.csd.auth.gr/ANNSS36](mailto:agent.csd.auth.gr/ANNSS36). Those unable to use electronic means should mail five (5) complete copies of the paper to Professor Helen Karatza.

All submissions will be fully refereed for accuracy, technical content, and relevance. Papers should be NO longer than 20 double-spaced pages. Please include full name, affiliation, address, phone number, and email address of each author and designate the author who is to be contacted. Authors will receive the reviewers' comments and will be given a chance to respond to these reviews. Authors' replies will be taken into consideration in the final paper selection decision. Accepted papers will appear in the Symposium's Proceedings which will be published by the IEEE Computer Society. Authors of top papers will also be encouraged to submit a follow-on paper for publication in the SCS Journals.

For additional information, please contact or send mail to Prof. Helen Karatza ([karatza@csd.auth.gr](mailto:karatza@csd.auth.gr)). Updated conference announcement and information are accessible at the symposium home page at <http://agent.csd.auth.gr/~karatza/ANNSS36>.

### General Chair

**Taieb Znati**  
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### Program Co-Chair

**Helen Karatza**  
*Aristotle University of Thessaloniki*  
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## MILITARY, GOVERNMENT AND AEROSPACE SIMULATION

Next year's symposium on military, government and aerospace simulation will continue a series of annual spring symposiums devoted to the full breadth of simulation in the arenas of military, government and aerospace. This symposium, like the others in the Advanced Simulation Technologies Conference, is a place for networking, discussions and exchange of information with colleagues in your field and in other related fields. It also provides an international forum for acquiring unpublished public information on the latest technologies. Topic areas include (but are not limited to)

- Homeland Defense
  - Force Protection
  - Consequence Management
  - Counterforce Operations
- Intelligent Agents
- Human Performance Modeling
- Visualization & Virtual Reality
- C4I Simulation
- Embedded Training
- Avionics/Flight Control Simulation & Visualization
- Battle Field / Battle Theater Simulation
- DIS/DIS++/SISO
- High-Level Architecture (HLA)
- Ballistics & Propellant Simulation
- Impact and Penetration Modeling

- Computational Fluid Dynamics (CFD)
- Molecular Dynamics Modeling
- Structural Mechanics Modeling
- Solid Mechanics Modeling
- Flight Simulation & Methodologies
- Lethality, Vulnerability & Survivability
- Mission Planning & Rehearsal
- Simulation & Control of Spacecraft
- Intelligent Systems Simulation
- Computer Generated Forces
- Synthetic Natural Environment
- Agent-Based Combat Modeling
- Information Warfare Modeling
- Simulation Based Acquisition
- Grand Challenge Problems

**Abstract/Draft Paper Submittal Deadline is November 30, 2002**

Please submit abstracts/papers online to: <http://scs.proceedingscentral.com>  
Upload instructions can be found in the Author Center.

### General Chair

**Michael J. Chinni**  
*U.S. Army-TACOM-ARDEC*  
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## APPLIED TELECOMMUNICATION SYMPOSIUM (ATS)

The Applied Telecommunication Symposium (ATS) is an international forum to exchange technical knowledge and present original papers on analysis of telecommunication systems and technologies. It is intended for professionals, engineers, software developers, managers, and others interested in cellular and packet traffic characteristics, analysis of telecommunication networks, and practitioners operating telecommunication networks. We are looking for innovative technical papers describing projects, applications, and research and development work pertinent to telecommunication. The following tracks will be held; the topics are representative of the track, but are not necessarily exclusive to that track:

### WIRELESS

Chairs: Dr. Hassan Rajeei, *Perfosim AB*  
Dr. Mohsen Guizani, *University of Western Florida*

- CDMA/TDMA
- GSM
- Third Generation Wireless
- Wireless Data
- Cell Traffic
- MSC Performance and Engineering

### TELECOMMUNICATIONS BUSINESS AND REGULATION

Chairs: Dr. George Kraft, *Illinois Inst. of Technology*  
Mr. Howard Bernett, *Mitretek Corporation*

- Cost Modeling
- Call Center Operations
- Billing Models
- E-commerce

### MEASUREMENTS

Chair: TBA

- Measured Internet Traffic Characteristics
- Wireless Traffic Characteristics
- Observed Problems with Current Packet Switching Protocols

### NETWORK MANAGEMENT AND SECURITY

Chair: Mr. Keith Stanley, *Lucent Technologies, Inc.*

- Operations, Administration, Maintenance
- Overload Control
- Load Balancing
- Influence of Security Measures on Network Performance

### NETWORKS AND MULTIMEDIA

Chairs: Mr. Howard Bernett, *Mitretek Corporation*  
Dr. Kevin Ryan, *Lucent Technologies, Inc.*

- Internet
- Network Performance
- Traffic Characterization
- Packet Switch Architecture Evaluation

### MODELING TECHNIQUES

Chairs: Ms. Kamala Murthi, *Lucent Technologies*  
Dr. R. Radhakrishna Pillai, *Kent Ridge Digital Labs*

- Simulation Techniques
- Acceleration Methods
- Traffic Synthesis
- Combined Simulation/Analytic Procedures

**Abstract/Draft Paper Submittal Deadline is October 31, 2002**

Please submit all abstracts to Dr. Bohdan Bodnar, Motorola, Inc., 1475 Shure Drive, Arlington Heights, Illinois 60004, [BBODNAR1@motorola.com](mailto:BBODNAR1@motorola.com) or Dr. Ariel Sharon, Lucent Technologies, Inc., E-mail: [asharon@lucent.com](mailto:asharon@lucent.com). Further information is available at: <http://www.scs.org>

## HIGH PERFORMANCE COMPUTING SYMPOSIUM 2003

### Grand Challenges in Computer Simulation

The 2003 Advanced Simulation Technologies Conference (ASTC 2003) will feature the Eleventh Special Symposium devoted to the impact of High Performance Computing and Communications on Computer Simulations. Topics of interest include:

- High Performance Computing Applications
- Parallel Algorithms and Numerical Methods
- High Performance Visualization and Virtual Environments
- HPC Architectures and Performance Analysis, Evaluation, and Prediction
- Problem Solving Environments for Cluster Computing and Metacomputing

Prospective authors are invited to submit full papers or abstracts describing their work in these areas. Only previously unpublished work will be considered. The full papers will be peer reviewed and, if accepted, will be published in the High Performance Computing 2003 Proceedings. The abstracts will be accepted based on their originality, significance and relevance to the symposium, and will be allocated a limited amount of pages in the proceedings.

The goal of the Symposium is to encourage innovation in high performance computing and communication technologies and to stimulate the use of these technologies in key areas of computer simulation. It will promote the exchange of ideas and information between universities, industry, and national laboratories through the development of high performance computing and communication applications which, in turn, can provide solutions to current scientific and technical challenges.

Contributions to this symposium will create an opportunity for exchanging of ideas and information among universities, industry and national laboratories to discuss new models, algorithms, techniques towards finding best solutions, as well as various implementation approaches.

All prospective authors must indicate whether their submission is to be considered a full paper or an abstract. Prospective authors of full papers are invited to submit their papers of up to 10 pages (single spaced, 12 pt, including figures, tables, and references) describing their (previously unpublished) work and achievements related to HPC 2003. All full papers submitted will be subject to a peer-reviewing process by program committee members. All accepted full papers will be published in the proceedings as regular papers, while all accepted abstracts will be published in the proceedings as short (4 printed 2 column pages) papers. All papers must be submitted in PDF or PostScript format with the authors' complete addresses, phone, fax, and e-mail for consideration. It is expected that accepted papers will be presented at the conference by one of the authors.

**Full Papers or Abstract (minimum 500 words) Deadline is October 18, 2002**

Full papers and abstracts should be submitted on-line at: <http://scs.proceedingscentral.com>. Upload instructions are located in the Author Center. More info can be found at <http://www.cs.msstate.edu/~graphics/hpc2003>

### Program Chairs:

**Dr. Craig Lee, The Aerospace Corporation**  
**Prof. Joerg Meyer, University of California at Irvine**  
**Prof. Thomas Rauber, Martin-Luther University Halle-Wittenberg**  
**Prof. Gudula Ruenger, Technische Universität Chemnitz**  
**Prof. Oliver Staadt, University of California at Davis**

### General Chair

**Prof. Ioana Banicescu**  
*Mississippi State University*  
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## DESIGN, ANALYSIS, AND SIMULATION OF DISTRIBUTED SYSTEMS

Design, Analysis and Simulation of Distributed Systems is devoted to all kinds of distributed and Internet-based systems. The main topics include, but are not limited to:

- Web Computing and Informational Retrieval
- Efficient Distributed Simulation
- Distributed Systems
- Performance Evaluation
- Petri Nets and other models
- Self-Organization and Adaption
- User Interfaces and Cooperative Systems

The goal of the conference is to encourage innovation in design, analysis and simulation of distributed systems. This includes new technologies as well as new methodologies, new concepts and experience reports. DADS 2003 will promote a high quality exchange of ideas and information between universities, industry and national laboratories supporting the development in the design, analysis and simulation area of next generation distributed systems which can provide solutions to current scientific and technological challenges.

All prospective authors are invited to submit full papers of up to 10 pages (single spaced, 12pt) describing their (previously unpublished) work and achievements to DADS 2003. All submitted papers will be subject to a peer- reviewing process by 3 program committee members.

Please submit papers in PDF or PostScript with the authors' complete addresses, phone, fax, and e-mail for consideration. Papers should be submitted electronically to [dasd@informatik.uni-rostock.de](mailto:dasd@informatik.uni-rostock.de). Anticipated conference fees will be US\$ 435.00 (for SCS members). It is expected that accepted papers will be presented at the conference by one of the authors.

**Full Paper Submission Deadline is October 18, 2002**

### General Chair:

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