The First International Conference on Advances in System Simulation

SIMUL 2009

September 20-25, 2009 - Porto, Portugal

SIMUL 2009 initiates a series of events focusing on advances in simulation techniques and systems providing new simulation capabilities. While different simulation events are already scheduled for years, SIMUL 2009 identifies specific needs for ontology of models, mechanisms, and methodologies in order to make easy an appropriate tool selection. With the advent of Web Services and WEB 3.0 social simulation and human-in simulations bring new challenging situations along with more classical process simulations and distributed and parallel simulations. An update on the simulation tool considering these new simulation flavors is aimed at too.

The conference will provide a forum where researchers shall be able to present recent research results and new research problems and directions related to them. The conference seeks contributions to stress-out large changels in scale system simulation, and advanced mechanisms and methodologies to deal with them.

The topics suggested by the conference can be discussed in term of concepts, state of the art, standards, implementations, running experiments and applications. Authors are invited to submit complete unpublished papers, which are not under review in any other conference or journal in the following, but not limited to, topic areas:

Simulation models
Monte Carlo simulation
Statistical analysis of simulation output
Analytical simulation modeling
Discrete event simulation models
Credible simulation models
Multi-objective simulation models
Multisimulation with multiresolution, multistage multimodels
Verification and validation of simulation models
Simulation metamodels
Executable simulation models
Emulation models
Regression models and experimental designs

Simulation methodologies
Rare-event simulation methodology
Agent-based modeling and simulation
Regenerative steady-state simulation
Simulation-based ordinal optimization

Ontology-based simulation methodology
Simulation component reuse methodology
Two-level simulation methodology
System adaptation simulation
Simulation methodologies for autonomic and autonomous systems
Virtual reality simulation methodologies
Virtualization simulation
Construction simulation methodologies

Simulation mechanisms
Composing simulation models
Reusable simulation model
Uncertainty simulation
Continuous-variable simulation optimization
Approximate zero-variance simulation
Probabilistic processes for simulation
Progressive model fitting
Steady-state simulations with initial transients
Merging simulation and optimization
Simulation optimization, stochastic programming and robust optimization
Overlapping variance estimators

Human-in simulation
User-in-the-middle simulations
User-feedback in simulations
User-adaptive simulations
Bioterrorism preparedness simulation
Probabilistic risk assessment
Measurement of situation awareness

Distributed simulation
Large-scale simulation experiments
Industrial scale simulation
Time aspects in distributed simulation
Resource constraints in distributed simulation
Distributed disaster decision simulation
Simulation for rapid assessment of distributed impacts
Parallel and distributed simulation

Practical applications on process simulations
Simulation for business planning
Logistics simulation
Supply chain simulation
Software reliability simulation
Simulation in vehicular systems /avionics, satellites, terrestrial/
Simulation models for manufacturing

Climate and weather-related simulations
Biological system simulation
Chemical system simulation
Commercial simulation environments
Healthcare simulation
Hospital planning
Simulation-based scheduling
Simulation in warehouse operations
Manufacturing simulation interoperability
Telecommunications simulations /reliability, queuing, fault spreading, virus contamination/
Cyber-attack modeling and simulation
Sensor fusion simulation

Case studies on social simulation
Group-work interaction simulation
Behavior analysis in simulations
Social need simulations
Simulating urban open spaces
Social decision simulation
Real-time decision making simulation
e-Polling simulation
Validation of simulated real-world
Simulation to predict market behavior
Predictions via similarity-based data-mining
Simulation of groups in e-Government systems

Simulation tools and platforms
Discrete-event simulation software
Commercial off-the-shelf simulation package interoperability
Ontology-based tools for simulation integration
Simulation frameworks for energy-efficient systems
Public system applications
Simulators for business planning
Simulation tools for systems biology
Simulation tools for constructions /bridges, railways, industrial buildings, subways/

Experience report on ready-to-use tools
ShowFlow and XJ technologies
Rockwell Automation and Frontline Systems
SIMULE-Planner, AutoMOD
PMC-Kanban Simulator, Program Portfolio Simulator and Asprova Scheduler
3D simulator tool-kits
Wolverine Software-SLX
OPNET
OMNET

NIIST
NS-2
NS-3
ATDI ICS
Qualnet
Dymola
Matlab/Simulink
Open source tools

INSTRUCTION FOR THE AUTHORS

The SIMUL 2009 Proceedings will be published by IEEE Computer Society Press and on-line via IEEE XPlore Digital Library. IEEE will index the papers with major indexes. Authors of selected papers will be invited to submit extended versions to one of the IARIA Journals.

Important deadlines:

Submission (full paper)	April 20, 2009
Notification	May 25, 2009
Registration	June 12, 2009
Camera ready	June 15, 2009

Only .pdf or .doc files will be accepted for paper submission. All received papers will be acknowledged via an automated system.

Final author manuscripts will be 8.5" x 11" (two columns IEEE format), not exceeding 6 pages; max 4 extra pages allowed at additional cost. The formatting instructions can be found on the Instructions page. Helpful information for paper formatting can be found on the here.

Once you receive the notification of paper acceptance, you will be provided by the IEEE CS Press an online author kit with all the steps an author needs to follow to submit the final version. The author kits URL will be included in the letter of acceptance.

Poster Forum

Posters are welcome. Please submit the contributions following the instructions for the regular submissions using the "Submit a Paper" button and selecting the track/workshop preference as "POSTER : Poster Forum". Submissions are expected to be 6-8 slide deck. Posters will not be published in the Proceedings. One poster with all the slides together should be used for discussions. Presenters will be allocated a space where they can display the slides and discuss in an informal manner.

Work in Progress

Work-in-progress contributions are welcome. Please submit the contributions following the instructions for the regular submissions using the "Submit a Paper" button and selecting the track/workshop preference as "WIP: Work in Progress". Authors should submit a four-page (maximum) text manuscript in IEEE double-column format including the authors' names, affiliations, email contacts. Contributors must follow the conference deadlines, describing early research and novel skeleton ideas in the areas of the conference topics. The work will be published in the conference proceedings.

Technical marketing/business/positioning presentations

The conference initiates a series of business, technical marketing, and positioning presentations on the same topics. Speakers must submit a 10-12 slide deck presentations with substantial notes accompanying the slides, in the .ppt format (.pdf-ed). The slide deck will not be published in the conference's CD collection. Please send your presentations to petre@iaria.org.

Tutorials

Tutorials provide overviews of current high interest topics. They should be about three hours long. One page with the title, tutorial summary, and a short bio are expected. Please send your proposals to petre@iaria.org

Panel proposals:

The organizers encourage scientists and industry leaders to organize dedicated panels dealing with controversial and challenging topics and paradigms. Panel moderators are asked to identify their guests and manage that their appropriate talk supports timely reach our deadlines. Moderators must specifically submit an official proposal, indicating their background, panelist names, their affiliation, the topic of the panel, as well as short biographies.

For more information, petre@iaria.org

Workshop proposals

We welcome workshop proposals on issues complementary to the topics of this conference. Your requests should be forwarded to petre@iaria.org.