Mod4Sim'17

Symposium on Model-driven Approaches
for Simulation Engineering
www.sel.uniroma2.it/mod4sim17

Spring Simulation Multi-conference 2017

APRIL 23 - 26, 2017
Virginia Beach, VA

Organizing Committee

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Mod4Sim 2017 aims to bring together experts in model-based, model-driven software and systems engineering from embedded, cyber-physical and software-intensive systems domains with simulation experts, with the objective to advance the state of the art in model-driven simulation engineering and simulation-based systems engineering.

System architecture models describe the structure of system components, relationships and rules governing their design and evolution over time. Model-driven approaches allow to increase the abstraction in model specifications and automate the generation of models and executable software artefacts through model transformations, so as to lead to more productive modeling activities. *Simulation-based systems engineering* exploits simulation to execute system architecture models and generate the system behaviour. It promotes simulation experimentation for design space exploration, performance and behaviour prediction, evaluation of alternatives or sensitivity analysis. *Model-driven simulation engineering* recognizes that simulation systems, as other software systems, can benefit from model-driven approaches. It thus endorses the utilization of metamodeling and model transformations in the simulation life cycle to enhance simulation quality, and reduce costs, development effort and time-to-market.

We would like to invite and encourage researchers and practitioners of model-driven simulation engineering and simulation-based systems engineering to publish and share their contributions in **Mod4Sim 2017.**

Topics

- model-driven approaches in simulation engineering
- requirements modeling for simulation
- domain specific languages for modeling and simulation
- model transformations for simulation model building
- model transformations for simulation model implementation
- model-based engineering of distributed simulation systems

- relationship between metamodeling standards (e.g., MOF, Ecore) and distributed simulation standards (e.g., HLA, DIS)
- metamodels for simulation reuse and interoperability
- simulation ontologies for metamodeling
- model-driven technologies for different simulation paradigms (discrete event simulation, multi agent simulation, sketch-based simulation, etc.)
- model-driven methods and tools for performance engineering of simulation systems
- model-driven technologies for simulation modernization
- model-driven technologies for data collection and analysis
- model-driven technologies for simulation visualization
- model-driven technologies for simulation verification and validation
- model continuity
- executable UML
- executable architectures
- SysML/Modelica integration
- simulation model portability and reuse
- model-based systems verification and validation
- simulation for model-based systems engineering
- model engineering for simulation-based systems engineering

To stimulate creativity, however, the symposium maintains a wider scope and welcomes all contributions offering original perspectives on model-driven simulation engineering and simulation-based systems engineering.

Submission Guidelines

Contributed papers are maximum of 12 pages long, with a minimum of 6 pages, with single column format. If accepted and presented at the conference papers will be submitted to the ACM Digital Library. Papers must not have appeared before or be pending in a journal or conference with published proceedings, nor may they be under review or submitted to another forum during SpringSim'17 review process. It is also possible to submit to the Work in Progress (WIP) or Posters tracks; more details will be announced on the website (http://www.scs.org/springsim). A submission may be rejected for paper presentation, but it may be suggested for submission and presentation as a work in progress or poster. At least one author must register and present the paper/WIP/poster at the symposium. All submissions will be peer reviewed and feedback will be provided.

Please use the paper template provided in the conference website. The use of the template will facilitate the prompt proceedings compilation and submission to the ACM Digital Library.

Important Dates

Workshop Proposal: September 30, 2016
Abstract Submission: October 15, 2016
Abstract Feedback: October 30, 2016
Full paper Submission: December 15, 2016
Notification of Acceptance: January 31, 2017
Camera-ready Paper: February 20, 2017