CALL FOR PAPERS

2018 Spring Simulation Multi-Conference

MOD4SIM 2018

Model-driven Approaches for Simulation Engineering Symposium

April 15-18, 2018

Baltimore, Maryland

Organizing Committee

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MOD4SIM 2018 aims to bring together experts in model-based, model-driven software and systems engineering from embedded, cyber-physical and software intensive systems domains with experts in simulation, with the objective to advance the state of the art in Model-Based Simulation Engineering and Modelling and Simulation-Based Systems Engineering.

System architecture models describe the structure of a system by specifying its components and their relations. Model-driven approaches allows for a higher abstraction in model specifications and the automated generation of models and executable software artefacts, through meta-models and model transformations, respectively. **Modelling and simulation-based systems engineering** redefines simulation as execution of system architecture models for generating the system behaviour. It promotes simulation experimentation for design space exploration, performance and behaviour prediction, evaluation of alternatives, or sensitivity analysis. It encourages model continuity and apprises model transformations and code generation as the development practice. **Model-based simulation engineering** claims that simulations, just as other software systems, can similarly benefit from model-driven approaches. It 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 invite and encourage researchers and practitioners of model-based simulation engineering and of modelling and simulation-based systems engineering to publish and share their contributions at **MOD4SIM 2018.**

Topics

A non-exhaustive list of topics of interest includes:

- model-driven approaches in simulation engineering
- model-based design
- x-in-the-loop testing
- model-based testing
- rapid control prototyping
- functional mockup interface (FMI) and co-simulation for systems development
- executable UML
- SysML and executable architectures
- requirements modeling and simulation
- domain specific languages
- metamodeling
- model transformations
- code generation for emerging target platforms
- modelling and simulation based engineering of IoT and CPS
- modelling and simulation based engineering of Smart Cities
- modelling and simulation based engineering for Industry 4.0
- modelling and simulation based design of autonomy features
- model-based engineering of distributed simulation systems
- 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

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

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Submission Guidelines

Original, high-quality technical papers are solicited for review, possible presentation, and subsequent publication in the conference proceedings. For further instructions, please refer to the Submission Guidelines in the Spring Simulation Multi-Conference website (www.scs.org/springsim). Contributed papers are at most 12 pages in length, in single column format. They will be peer reviewed and – if accepted and presented at the conference – submitted to the ACM Digital Library. Papers must not have appeared before (or be pending) in a journal or a conference with published proceedings, nor may they be under review or submitted to another forum during SpringSim'18 review process. At least one author of an accepted paper must register for the symposium and must present the paper at the symposium.

Important Dates

Full Paper submission: Nov 23, 2017
Notification of Acceptance: Jan 12, 2018
Camera-ready Paper: Feb 23, 2018

Additional Information

For additional information please visit the MOD4SIM 2018 website (http://www.sel.uniroma2.it/mod4sim18).

For questions, please contact: scs@scs.org | (858) 277-3888

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