



# Symposium on Theory of Modeling and Simulation (TMS/DEVS 2015)



April 12-15, 2015 | Alexandria, VA, USA |

<http://www.tms-devs.org>

## Preliminary Call for Papers

### SPONSORED BY

[The Society for Modeling and Simulation International](http://www.scs.org)



P.O. Box 17900  
San Diego, CA 92177-7900, USA  
Tel: +1 858-277-3888  
Fax: +1 858-277-3930  
E-mail: [scs@scs.org](mailto:scs@scs.org)  
<http://www.scs.org/>

TECHNICALLY CO-SPONSORED BY  
[IEEE Computer Society](http://www.ieee.org)



IN COOPERATION WITH  
[ACM/SIGSIM](http://www.acm.org)



The purpose of this symposium is to provide a forum to discuss recent advancements in M&S theory. The main focus is on modeling, methodology, practice and software to cope with the challenges arising out of these, as well as lessons learned and challenges. The Symposium bridges different areas in the field of theory of M&S, including formal modeling, model-checking, graph transformation, modeling methodologies. Topics of interest include (but are not limited to):

- **Theory**
  - DEVS, Petri-nets, Finite State Machines, Timed Automata, Process Algebras, Queuing Networks, etc.
  - Formalism Integration
  - Modular Formalisms for Hybrid Systems
  - Formal analysis and symbolic reasoning
  - Model checking
  - Behavior Abstraction and Model Reduction
  - Graph and model transformations
  - Activity paradigm: complex adaptive systems, tracking, awareness
- **M&S Software**
  - M&S Software, including frameworks and libraries
  - Education aspects of Theory of M&S
- **Methodology**
  - Parallel & distributed simulations
  - Interoperability of simulators (grid, cloud, web services, etc.)
  - M&S-based development methods
  - M&S-based optimization
  - M&S of gene regulatory networks
  - M&S of spatially distributed systems
- **Practice and Lessons Learned**
  - Real-time and embedded systems
  - High performance computing
  - Cloud and service-oriented computing
  - Transportation and traffic systems
  - Ecological and environmental systems
  - Systems-of-systems and ultra large scale systems
  - M&S standards

### IMPORTANT DATES

**Abstract Submission:** Oct. 18, 2014 (optional)  
**Notification:** Jan. 9, 2015

**Paper Submission:** Dec. 6, 2014 (extended)  
**Camera-ready version:** Feb. 10, 2015

### Submission Procedures:

The conference committee accepts two types of papers submitted as a PDF file to the conference website (<http://www.softconf.com/scs/DEVS15/>) as listed below. The final version of all the papers must comply with the [SCS conference format](#). All papers must be original and not submitted to other venues (please refer to plagiarism and self-plagiarism policies of [ACM](#) and [IEEE](#)); they will be peer reviewed with respect to their quality, originality and relevance.

1. **Full manuscript:** Contributed papers are 8 pages long.
2. **Short papers:** Short papers are 5-6 pages long.

At least one author of each paper accepted for presentation and publication must register and present the paper. Papers registered but not presented at conference time will not be included in the [ACM Digital Library](#).

### DEVS PHD DISSERTATION AWARD

*(Chairs: Bernard P. Zeigler, Claudia Frydman)*

The Symposium will hold the 4th DEVS M&S PhD Award, to recognize and reward the best PhD thesis related to the DEVS M&S formalism.

### TMS/DEVS 2015 ORGANIZING COMMITTEE

#### General Chairs:

Fernando Barros, University of Coimbra, Portugal  
Moon Ho Hwang, Dassault Systemès, USA

#### Program Chairs:

Herbert Prähofer, Johannes Kepler University Linz, Austria  
Xiaolin Hu, Georgia State University, USA

#### Advisory Board:

Bernard P. Zeigler (FIEEE, FSCS, LAA-SCS), Univ. Arizona, USA (Chair)  
Christos Cassandras (FIEEE, FIFAC), Boston University, USA  
François Cellier (FSCS), ETH Zürich, Switzerland  
Kishor Trivedi (FIEEE, GCM IEEE CS), Duke University, USA  
Mo Jamshidi (FIEEE, FASME, FAAA), Univ. Texas at San Antonio, USA

#### Steering Committee:

Gabriel A. Wainer, Carleton University, Canada (Chair)  
Andrea D'Ambrogio, University of Rome «Tor Vergata», Italy  
Gregory Zacharewicz, University of Bordeaux, France

## **TMS/DEVS 2015 – TECHNICAL PROGRAM COMMITTEE (PRELIMINARY)**

- **Track Coordination Chair: Joachim Denil, University of Antwerp, Belgium**
- **Theory**
  - Rodrigo Castro, Departamento de Computación, FCEyN, Universidad de Buenos Aires, Argentina
  - Norbert Giambiasi, LSIS, Marseille, France
  - Ernesto Kofman, Universidad Nacional de Rosario, Argentina
  - Mamadou Seck, Delft University of Technology, The Netherlands
  - Enrico Tronci, Università di Roma “La Sapienza”, Italy
  - Adelinde Uhrmacher, Universität Rostock, Germany
  - Hans Vangheluwe, University of Antwerp, Belgium and McGill University, Canada
  - Verena Wolf, Saarland University, Germany
  - Francesco Zanichelli, Università di Parma, Italy
- **Methodology**
  - Paolo Bocciarelli, University of Rome Tor Vergata, Dipartimento di Ingegneria dell'Impresa, Italy
  - Maximiliano Cristia, CIFASIS and UNR, Argentina
  - Olivier Dalle, INRIA Sophia-Antipolis and Université de Nice, France
  - Raphael Duboz, Asian Institute of Technology, Thailand
  - Feng Gu, The College of Staten Island, New York, USA
  - Mark Minas, Universität der Bundeswehr, Germany
  - Lisandru Muzy, Université de Corse, France
  - Libero Nigro, Università della Calabria, Italy
  - James Nutaro, Oak Ridge National Laboratory, USA
  - Saurabh Mittal, Duniip Technologies, USA
  - Halit Oguztuzun, Middle East Technical University, Turkey
  - Francesco Quaglia, Università di Roma “La Sapienza”, Italy
  - Hessam Sarjoughian, Arizona State University, USA
  - Andreas Tolk, Old Dominion University, USA
  - Javier Troya, Universidad de Málaga, Spain
  - Alfonso Urquia, UNED, Spain
  - Levent Yilmaz, Auburn University, USA
- **Practice and Lessons Learned**
  - Dave Cavalcanti, Philips Research, USA
  - Pau Fonseca, Polytechnic University of Catalonia, Spain
  - Olaf Hagendorf, Hochschule Wismar, Germany
  - Moath Jarrah, Jordan University of Science and Technology, Jordan
  - Xin Jin, Pennsylvania State University, USA
  - Yonglin Lei, National University of Defense Technology, China
  - Xiabo Li, University of Antwerp, Belgium
  - Il-Chul Moon, KAIST, Korea
  - Lewis Ntaimo, Texas A&M, USA
  - Thorsten Pawletta, Universität Wismar, Germany
  - Sabri Pllana, University of Vienna, Austria
  - Haidong Xue, Georgia State University, USA
- **M&S Software**
  - Michele Amoretti, Università di Parma, Italy
  - Gabriele D'Angelo, University of Bologna, Italy
  - Jean-Baptiste Filippi, Université de Corse
  - Claudia Frydman, LSIS, Marseille, France
  - Shafagh Jafer, University of Virginia, USA
  - Mohammad Moallemi, Carleton University, Canada
  - Chris Myers, The University of Utah, USA
  - Judicael Ribault, Université de Bordeaux 1, France
  - Klaus Schneider, Technical University Kaiserslautern, Germany
  - Alexander Verbraeck, TU Delft, Netherlands
  - Yiping Yao, National University of Defense Technology, China
  - Justyna Zander, The MathWorks, USA