

Call for Papers

Scope

During the past decade, integrated model-based design of complex cyber-physical systems (which mix physical dynamics with software and networks) has gained significant attention. Hybrid modeling languages based on equations, supporting both continuous-time and event-based aspects (e.g. Modelica, SysML, VHDL-AMS, and Simulink/ Simscape) enable high-level reuse and integrated modeling capabilities of both the physically surrounding system and software for embedded systems. The EOOLT workshop addresses the current state of the art of such equation-based object-oriented (EOO) modeling languages, as well as open issues that currently still limit their expressiveness, correctness, and usefulness. Moreover, integration of and comparison with related approaches and languages, such as actor-oriented, synchronous, and domain specific languages, are of particular interest. Specific topics of interest include (but are not limited to):

- Acausality and its role in model reusability.
- Component systems for EOO languages.
- Discrete-event and hybrid modeling.
- Embedded systems and efficient code generation.
- Modeling language constructs in support of simulation, optimization, diagnostics, and system identification.
- EOO mathematical modeling vs. UML software modeling.
- Integrated hardware / software modeling of cyber-physical systems.
- Requirement to model traceability, translation, and integration.
- Formal semantics of EOO related languages.
- Multi-resolution / multi-scale modeling using EOO languages.
- Model-driven development related to EOO languages.
- Numerical coupling of EOO simulators and other simulation tools.
- Parallel execution of EOO models.
- Programming / modeling environments.
- Real-time simulation using EOO languages.
- Reflection and meta-programming.
- Verification, type systems, and early static checking.
- Relation to functional reactive programming (FRP) and synchronous languages.

Submission

Researchers and practitioners are invited to submit full-length papers (up to 10 pages, EOOLT style, written in English) for consideration by the program committee. Papers must be original, and not submitted for simultaneous publication in any other forum. EOOLT welcomes original research contributions as well as contributions with a focus on practice, such as experience reports and comparisons of existing languages and tools. Each contributions will be judged according to criteria appropriate for its kind. For submission details, see the EOOLT 2013 website (link below).

Other Contributions

To allow for a more dynamic workshop format, the EOOLT PC will, subject to space in the program, consider proposals for other kinds of program points, such as tool demonstrations or discussion sessions on some timely topics in the scope of EOOLT. Such proposals will be judged by the PC as a whole on the grounds of how much interest they add to the workshop, and they should thus not

be confused with formally peer-reviewed contributions. That said, if considered appropriate and useful, the PC may invite a short (1–2 pages) written outline for inclusion in the workshop proceedings (clearly labeled to distinguish it from regular papers). For further details, see the EOOLT 2013 website (link below).

Important Dates

- Abstract Submission Deadline: **8 February**
- Other Contributions (such as tool demos): **8 February**
- Full Paper Submission Deadline: **18 February**
- Author Notification: **8 March**
- Camera Ready: **22 March**
- Workshop: **19 April**

Publication

Accepted papers will be published electronically by [Linköping University Electronic Press](#). Authors of accepted papers should present their paper at the workshop

Program Committee

Henrik Nilsson (chair), University of Nottingham
Bernhard Bachmann, University of Applied Sciences, Bielefeld
Bert van Beek, Eindhoven University of Technology
David Broman, U.C. Berkeley and Linköping University
Francesco Casella, Politecnico di Milano
François Cellier, ETH Zürich
Olaf Enge-Rosenblatt, Fraunhofer Institute, Dresden
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Michaela Huhn, Clausthal University of Technology
Edward A. Lee, U.C. Berkeley
Pieter Mosterman, MathWorks
Ramine Nikoukhah, INRIA Rocquencourt and Altair
Chris Paredis, Georgia Institute of Technology
Peter Pepper, TU Berlin
Walid Taha, Halmstad University and Rice University
Alfonso Urquía, UNED, Madrid
Hans Vangheluwe, McGill University and University of Antwerp
Justyna Zander, MathWorks and Gdansk University of Technology
Dirk Zimmer, DLR Oberpfaffenhofen

Steering Committee

David Broman, U.C. Berkeley and Linköping University
François Cellier, ETH Zürich
Peter Fritzson, Linköping University, Sweden
Edward A. Lee, U.C. Berkeley

Local Organisation

John Capper, University of Nottingham
Henrik Nilsson, University of Nottingham

Workshop Website

For further details, including on submission, see the EOOLT 2013 website:
<http://www.eoolt.org/2013>