

2nd International Workshop on Equation-Based Object-Oriented Languages and Tools

Part of ECOOP'08

EOOLT

2008

Paphos, Cyprus, July 8, 2008

www.eoolt.org/2008/

Important Dates

- Submission deadline: **April 30**
- Author notification: **May 26**
- Camera-ready: **June 9**
- Workshop: **July 8**

Organizing Committee

- **Peter Fritzson** (Chair), Linköping University
- **François Cellier** (Co-Chair), ETH Zurich
- **David Broman** (Co-Chair), Linköping University
- **Loucas Louca** (Local Organizer), University of Cyprus

Program Committee

Bernhard Bachmann - University of Applied Sciences, Germany
Bert van Beek - Eindhoven University of Technology, Netherlands
Gilad Bracha - Cadence Design Systems, USA
Felix Breitenacker - Technical University of Vienna, Austria
Jan Broenink - University of Twente, Netherlands
David Broman - Linköping University, Sweden
Peter Bunus - Linköping University, Sweden
François Cellier - ETH Zurich, Switzerland
Ernst Christen - Lynguent, Inc., Portland, OR, USA
Sebastián Dormido - National University for Distance Education, Spain
Olaf Enge-Rosenblatt - Fraunhofer, Dresden, Germany
Peter Feiler - SEI, Carnegie-Mellon University, USA
Peter Fritzson - Linköping University, Sweden
Stefan Jähnichen - Fraunhofer FIRST and TU Berlin, Germany
Petter Krus - Linköping University, Sweden
Loucas Louca - University of Cyprus, Cyprus
Jakob Mauss - QTronic GmbH, Berlin, Germany
Pieter Mosterman - MathWorks, Inc., Natick, MA, USA
Ramine Nikoukhah - INRIA Rocquencourt, France
Henrik Nilsson - University of Nottingham, United Kingdom
Martin Otter - DLR Oberpfaffenhofen, Germany
Chris Paredis - Georgia Institute of Technology, Atlanta, Georgia, USA
César de Prada - University of Valladolid, Spain
Juan José Ramos - Autonomous University of Barcelona, Spain
Peter Schwarz - Fraunhofer, Dresden, Germany
Paul Strooper - University of Queensland, Brisbane, Australia
Michael Tiller - Emmeskay, Inc., Plymouth, MI, USA
Martin Törngren - KTH, Stockholm, Sweden
Alfonso Urquía - UNED, Madrid, Spain

Scope

Computer aided modeling and simulation of complex systems, using components from multiple application domains, such as electrical, mechanical, hydraulic, control, etc., have in recent years witnessed a significant growth of interest. In the last decade, novel modeling and simulation languages, (e.g. Modelica, gPROMS, Chi, Verilog-AMS, and VHDL-AMS) based on acausal modeling using differential algebraic equations (DAEs) have appeared. Using such languages, it has become possible to model complex systems covering multiple application domains at a high level of abstraction through reusable model components. In the last couple of years the name equation-based object-oriented (EEO) language has been introduced to denote modeling languages within this category.

The EOOLT Workshop addresses the current state of the art of EEO modeling languages as well as open issues that currently still limit the expression power, correctness, and usefulness of such languages through a set of full-length presentations and forum discussions.

The workshop is concerned with, but not limited to, the following themes:

- Acausality and its role in model reusability.
- Component systems for EEO languages.
- Database lookup and knowledge invocation.
- Discrete-event and hybrid modeling using EEO languages.
- Embedded systems.
- EEO language constructs in support of simulation, optimization, diagnostics, and system identification.
- EEO mathematical modeling vs. UML modeling.
- Equation-based languages supporting DAEs and/or PDEs.
- Formal semantics of EEO related languages.
- Multi-resolution / multi-scale modeling using EEO languages.
- Numerical coupling of EEO simulators and other simulation tools.
- Parallel execution of EEO models.
- Performance issues.
- Programming / modeling environments.
- Real-time simulation using EEO languages.
- Reflection and meta-programming.
- Reuse of models in EEO languages.
- Table lookup and interpolation.
- Type systems and early static checking.
- Verification.
- Model-driven development.