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**

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- **François Cellier** (Co-Chair), ETH Zurich
- **David Broman** (Co-Chair), Linköping University
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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 (EOO) language has been introduced to denote modeling languages within this category.

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