

Preliminary Program

7th MODPROD Workshop on Model-Based Product Development

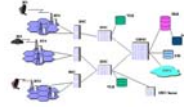
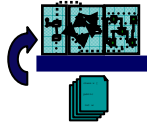
Linköping University – www.modprod.liu.se – February 5-6, 2013

Organizers: Peter Fritzson, Petter Krus, Kristian Sandahl

Note: public versions of the presentations will be put on-line on the web

MODPROD Program Tuesday February 5, Tutorials and Workshop

08.30-09.00	Registration and coffee outside room A2, in Building A, Linköping University
09.00-10.45	<p>Tutorials in Parallel, Length 3:15h</p> <p>Tutorial 1: Peter Fritzson, Linköping University. “<i>Introduction to Object Oriented Modeling and Simulation with Modelica using OpenModelica</i>”. Hands-on Exercises, bring your laptop.</p> <p>Tutorial 2: Wladimir Schamai, EADS, and Adrian Pop, Linköping University, “<i>Model-based Development using ModelicaML Value Bindings for Model Composition and Requirements Traceability, and the Modelica MDT Eclipse Plugin with Run-Time Debugging</i>”, hands-on exercises, bring your laptop.</p> <p>Tutorial 3: Peter Ylén, VTT and Teemu Lempinen, Semantum; both in Espoo, Finland, “<i>Simantics System Dynamics for Business Process Modeling; also Simupedia Concept</i>”. Hands-on Exercises, bring your laptop.</p> <p>Tutorial 4: Moritz Diehl – University of Leuven, Belgium, Leader of OPTEC Center, “<i>Numerical Methods for Optimization of Dynamic Systems</i>”. Hands-on Exercises, bring your laptop.</p> <p>Tutorial 5: Petter Krus, Linköping University, “<i>System simulation with HOPSAN NG</i>”. Hands-on Exercises, bring your laptop.</p>
10.45-11.00	Coffee break outside room A2
11.00-12.30	Tutorial 1, 2, 3, 4, 5 in parallel, continued , same rooms as above
12.30-13.30	Lunch at Kårallen, Linköping University
13.30-15.00	MODPROD Introduction, Plenary Session 1 , room: A2, Session Chair: Peter Fritzson
13.30-14.30	Keynote , Stefan-Alexander Schneider, Technical Specialist, BMW, Berlin, Germany, “ <i>Virtual System Prototyping in Automotive Industry and the role of FMF</i> ”
14.30-15.00	Peter Fritzson and Petter Krus, Linköping University, “ <i>Presentation of Research at the Centre for Model based Product Development, MODPROD</i> ”
15.00-15.50	Coffee break + Poster Session and exhibition outside room A2, see poster presentation program
15.50-17.30	<p>Session 2a, Model-Based Systems Engineering, room A2, Session Chair: Kristian Sandahl</p> <p>Peter Aronsson, Wolfram MathCore AB, Linköping, Sweden ” <i>A Collaborative Platform for Systems Engineering Tools over the Internet with Connections to Wolfram Systemmodeler</i>”,</p> <p>Roland Almgren, KnowIT AB, Sweden, “<i>Integrated Product Models</i>”</p> <p>Östen Frånberg, Engineering Academy of Science, Stockholm, Sweden. “<i>Model-Based Development for Internet of Things</i>”</p> <p>Alfredo Garro, Andrea Tundis, University of Calabria, Italy, “<i>Enhancing the RAMSAS method for Systems Reliability Analysis through Modelica</i>”</p>
15.50-17.30	<p>Session 2b, Model-Based Engineering, room ACAS, Session Chair: Petter Krus</p> <p>Juha Kortelainen, VTT, Espoo, Finland, “<i>Simantics Mechanics: 3D modelling and simulation tool for multibody system simulation</i>”</p> <p>George Provan, Cork University, Ireland, “<i>A Modelica-Based Framework for Thermo-Fluid System Diagnostics</i>”.</p> <p>Wei Li, Tetiana Bogodorova, Luigi Vanfretti, KTH, Stockholm, “<i>Unambiguous Power System Modeling and Simulation using Modelica Tools</i>”</p> <p>Polaiah Bojja, Rominus Valsalam, Abhir Metkar. CDAC, Trivandrum, India, “<i>Evaluation and Self-Tuning of Robust Adaptive PID Controller & Fuzzy Logic Controller for Non-Linear System-Simulation Study</i>”</p>
17.40	Bus to Norrköping Visualization Center and later to main hotels
19.00	Workshop Dinner at the Norrköping Visualization Center



MODPROD Program for Wednesday February 6

- 07.50-08.15** Bus passing main hotels, arriving Linköping University at 08.15
- 08.00-08.30** **Registration** outside room A2, Building A, Linköping university
- 08.30-08.40** **Workshop 2nd Day, Introduction, Plenary Session (Chair: Peter Fritzon),** room A2
- 08.40-09.40** **Keynote,** Moritz Diehl, Principal investigator at OPTEC Center and Professor at University of Leuven, Belgium, *“Modelling Tools for Optimal Control and Embedded Optimization”*
- 09.40-10.40** **Keynote,** Jon Whittle, Professor and Chair of Software Engineering in the Department of Computing at Lancaster University, UK, *“Model-Driven Development: Does Anyone in Industry Really Use It?”*
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- 10.40-11.30** **Coffee, Posters and Exhibition outside room A2, see separate poster presentation program**
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- 11.30-12.30** **Parallel Session 1a, Model-Based Design and Engineering.** Session Chair: Kristian Sandahl, room A2
Niclas Wiberg, Ericsson, Sweden *“Modeling Telecommunication Applications for Efficient Mapping to Heterogeneous Processing Architectures”*
Andreas Pfeiffer, DLR, Munich, Germany, *“System Analysis and Applications with PySimulator”*
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- 11.30-12.20** **Session 1b, Model-Based Engineering.** Session Chair: Petter Krus, room ACAS
Daniel Bouskela, EADS, Paris, France, *“Modeling Power Plants with ThermoSysPro and OpenModelica”*
Kenneth Bodin, Algoryx, Umeå, *“Large-Scale Real-Time Physics Simulation in Industrial Vehicle Simulators”*
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- 12.20-13.20** **Lunch at Kårallen, Linköping University. Posters and Exhibition outside room A2**
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- 13.20-14.55** **Parallel Session 2a, Model-Based Engineering and Applications.** Session Chair: Petter Krus, room A2
Anna Sjunnesson, Siemens Industrial Turbomachinery AB, Finspong, *“Modelica Modeling and Real-Time Simulation of Gas Turbines”*
Nils Menager, Lars Mikelsons, Bosch-Rexroth GmbH, Germany, *“An Approach for the Automated Design of Mechatronic Systems Using an Object-Oriented Simulation Environment”*
Edmund Widl and Wolfgang Müller, AIT, Vienna, *“Linking FMI-based Components with the Ptolemy Discrete Event System”*
Robert Braun, Linköping University, Sweden, *“Functional Mock-Up Interface (FMI) for Tool-Independent Parallel Distributed Simulations”*
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- 13.30-14.55** **Parallel Session 2b, Model-Based Systems Engineering.** Session Chair: Kristian Sandahl, room ACAS
Peter Ylen, VTT, Espoo, Finland, *“System Dynamic Modeling and Simulation of Business Processes”*
Erik Billing and Martin Servin, Umeå Univ, *“Composer - A Prototype Multilingual Model Composition Tool”*
Magnus Carlsson, Saab Aeronautics, Linköping, Sweden, *“Managing Multipurpose Models in Aerospace M&S - Challenges and Experience”*
Wladimir Schamai, EADS Germany & Linköping University, Sweden, *“Industrial Use Cases for Requirements Verification and Model Composition in ModelicaML”*
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- 14.55-15.15** **Coffee, Posters and Exhibition outside room A2**
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- 15.15-16.30** **Parallel Session 3a, Model-Based Design and Development.** Session Chair: Petter Krus, room:A2
Adrian Rutle, Hans Georg Schaathun, Høgskolen i Ålesund, Norway, *“Model-Driven Engineering: Combining Structure and Behavior of Simulation System”*
Maria Pettersson, Atlas Copco, Sweden, *“Modeling and Simulation in an Industrial Design Process”*
Martin Törngren, ACES, KTH, Stockholm, *“Integration of Multiple Views Across People, Models and Tools”*
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- 15.15-16.30** **Parallel Session 3b, UML-Based Software Engineering.** Session Chair: Kristian Sandahl, room ACAS
Thomas Arts, Quviq AB, *“Model Based Testing of AUTOSAR components”*
Anders Eriksson, Saab Aeronautics, *“Model Transformation Impact on Test Artifacts”*
Pär Hammarström, Knowit AB, Linköping, Sweden, *“When MBSE and Agile Cultures Collide: Fusion or Fission”*
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- 16.30-16.40** **Break**
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- 16.40-17.10** **Panel Discussion, (plenary session),** room A2