

Sunday 06-09-03	17:00-20:00	Registration & Reception		
Monday 06-09-04	07:30-12:00	Registration		
	08:15-11:00	Tutorial 1	Peter Fritzon, Peter Bunus University Linköping, Sweden	Introduction to Object-Oriented Modelling and Simulation with OpenModelica
		Tutorial 2	Bernhard Bachmann University of Applied Sciences Bielefeld, Germany	Mathematical Aspects of Modeling and Simulation with Modelica
		Tutorial 3	Johannes Gragger, Harald Giuliani, Hansjoerg Kapeller, Thomas Baeuml Arsenal Research, Vienna, Austria	Simulation of Electric Machines and Drives using the Machines and the SmartElectricDrives Libraries
		Tutorial 4	Mike Dempsey et al Claytex Services, UK	Vehicle system modelling using the new, free VehicleInterfaces package
		Tutorial 5	Hubertus Tummescheit, Jonas Eborn Modelon AB, Lund, Sweden	Modeling of Thermodynamic Systems using Modelica_Fluid and Modelica.Media
	11:00-11:30	Break		
	11:30-11:35	Welcome & Opening of the Conference		
	11:35-12:05	Keynote Anton Piimon, CEO Arsenal Research The Importance of Modelling and Simulation in different stages of Engineering processes		
	12:05-12:35	Keynote Dominique Florack, Executive Vice President R&D of Dassault Systemes About the strategic decision of Dassault Systemes to select Modelica to be at the core of Dassault Systemes' open strategy for CATIA Systems		
12:35-12:50	Keynote Martin Otter, Chairman of the Modelica Association Future directions of Modelica and of the Modelica Association			
12:50-13:50	Lunch			

		Session 1a Thermodynamic Systems for Power Plant Applications 1 Session Chair: Katrin Proelss Technical University Hamburg-Harburg, Germany	Session 1b Automotive Applications 1 Session Chair: Dirk Limperich DaimlerChrysler AG, Sindelfingen, Germany	Session 1c Language, Tools and Algorithms 1 Session Chair: Prof. Peter Fritzson Linköping University, Sweden	Session 1d Mechanical Systems and Applications 1 Session Chair: Markus Plainer arsenal research, Vienna, Austria
Monday 06-09-04	13:50-15:05	Fast Start-up of a Combined-Cycle Power Plant: A Simulation Study with Modelica F. Casella ^[1] , F. Pretolani ^[2] ^[1] Politecnico di Milano, Italy, ^[2] CESI S.p.A., Italy	Simulation of Hybrid Electric Vehicles D. Simic, H. Giuliani, C. Kral, J.V. Gragger Arsenal Research, Austria	Modelica CVD - A Tool for Visualizing the Structure of Modelica Libraries M. Loeffler ^[1] , M. Huhn ^[1] , C.C. Richter ^[1] , R. Kossel ^[2] ^[1] TU Braunschweig, Germany, ^[2] TLK-Thermo GmbH, Germany	The DLR FlexibleBodies Library to Model Large Motions of Beams and of Flexible Bodies Exported from Finite Element Programs A. Heckmann ^[1] , M. Otter ^[1] , S. Dietz ^[2] , J.D. Lopez ^[3] ^[1] German Aerospace Center (DLR), Germany, ^[2] INTEC GmbH, Germany, ^[3] Dynasim AB, Sweden
		Modelling of a Water/Steam Cycle of the Combined Cycle Power Plant "Rio Bravo 2" with Modelica B. El Hefni, D. Bouskela EDF R&D, France	Coordinated Automotive Libraries for Vehicle System Modelling M. Dempsey ^[1] , M. Gäfvert ^[2] , P. Harman ^[3] , C. Kral ^[4] , M. Otter ^[5] , P. Treffinger ^[6] ^[1] Claytex Services Ltd., UK, ^[2] Modelon AB, Sweden, ^[3] Ricardo UK Ltd., UK, ^[4] arsenal research, Austria, ^[5] DLR Oberpfaffenhofen, Germany, ^[6] DLR Stuttgart, Germany	Advanced Modeling and Simulation Techniques in MOSILAB: A System Development Case Study C. Nytsch-Geusen ^[1] , T. Ernst ^[1] , A. Nordwig ^[1] , P. Schwarz ^[2] , P. Schneider ^[2] , M. Vetter ^[3] , C. Wittwer ^[3] , A. Holm ^[4] , T. Nouidui ^[4] , J. Leopold ^[5] , G. Schmidt ^[5] , A. Mattes ^[6] ^[1] Fraunhofer FIRST, Germany, ^[2] Fraunhofer IIS/EAS, Germany, ^[3] Fraunhofer ISE, Germany, ^[4] Fraunhofer IBP, Germany, ^[5] Fraunhofer IWU, Germany, ^[6] Fraunhofer IPK, Germany	3D Flexible Multibody Thin Beams Simulation in Modelica with the Finite Element Method X. Murua, F. Martinez, A. Pujana, J. Basurko, J.M. Pagalday IKERLAN Research Centre, Spain
		Modeling and Dynamic Analysis of CO2-Emission Free Power Processes in Modelica using the CombiPlant Library J. Eborn ^[1] , F. Selimovic ^[2] , B. Sundén ^[2] ^[1] Modelon AB, Sweden, ^[2] Lund Institute of Technology, Sweden	The VehicleDynamics Library - Overview and Applications J. Andreasson, M. Gäfvert MODELON AB, Sweden	Quantised State System Simulation in Dymola/Modelica Using the DEVS Formalism T. Beltrame ^[1] , F.E. Cellier ^[2] ^[1] VTT, Finland, ^[2] ETH Zurich, Switzerland	A Modelica Library for Space Flight Dynamics T. Pulecchi, F. Casella, M. Lovera Politecnico di Milano, Italy
15:05-15:35		Break			

Monday 06-09-04	15:35-16:50	<p>Session 2a Thermodynamic Systems for Power Plant Applications 2 Session Chair: Dr. Francesco Casella Politecnico di Milano, Cremona, Italy</p> <p>Simulation of Components of a Thermal Power Plant</p> <p>R. Schimon, D. Simic, A. Haumer, C. Kral, M. Plainer</p> <p>Arsenal Research, Austria</p>	<p>Session 2b Automotive Applications 2 Session Chair: Jonas Eborn Modelon AB, Lund, Sweden</p> <p>Modeling the Dynamics of Vehicle Fuel Systems</p> <p>J.J. Batteh, P.J. Kenny</p> <p>Ford Motor Company, USA</p>	<p>Session 2c Language, Tools and Algorithms 2 Session Chair: Dr. Hilding Elmqvist Dynasim AB, Lund, Sweden</p> <p>Modeling and Simulation of Differential Equations in Scicos</p> <p>M. Najafi, R. Nikoukhah</p> <p>INRIA-Rocquencourt, France</p>	<p>Session 2d Mechanical Systems and Applications 2 Session Chair: Prof. Martin Otter DLR, Oberpfaffenhofen, Germany</p> <p>Leaf Spring Modeling</p> <p>N. Philipson</p> <p>Modelon, Sweden</p>
		<p>Pressurized Water Reactor Modelling with Modelica</p> <p>A. Souyri^[1], D. Bouskela^[1], B. Pentori^[2], N. Kerkar^[2]</p> <p>^[1]Electricité de France EDF/R&D, France, ^[2]Electricité de France EDF/SEPTEN, France</p>	<p>Motorcycle Dynamics Library in Modelica</p> <p>F. Donida , G. Ferretti, S.M. Savaresi, F. Schiavo, M. Tanelli</p> <p>Politecnico di Milano, Italy</p>	<p>How to Dissolve Complex Dynamic Systems for Wanted Unknowns with Dymola / Modelica</p> <p>J. Koehler</p> <p>ZF Friedrichshafen AG, Germany</p>	<p>Multibody Systems Dynamics: Modelica Implementation and Bond Graph Representation</p> <p>I.I. Kosenko^[1], M.S. Loginova^[2], YA.P. Obraztsov^[2], M.S. Stavrovskaya^[1]</p> <p>^[1]Moscow State University of Service, Russia, ^[2]Moscow State Academy of Instrument Making and Computer Science, Russia</p>
		<p>Simulation of the Start-Up Procedure of a Parabolic Trough Collector Field with Direct Solar Steam Generation</p> <p>T. Hirsch, M. Eck</p> <p>German Aerospace Center, Institute of Technical Thermodynamics, Germany</p>	<p>Development and Verification of a Series Car Modelica/Dymola Multi-body Model to Investigate Vehicle Dynamics Systems</p> <p>C. Knobel^[1], G. Janin^[2], A. Woodruff^[3]</p> <p>^[1]BMW Group Research and Technology, Germany, ^[2]Ecole Nationale Supérieure de Techniques Avancées, France, ^[3]Modelon AB, Sweden</p>	<p>Using Modelica Models for Complex Virtual Experimentation with the Tornado Kernel</p> <p>F.H.A. Claeys^[1], P. Fritzson^[2], P.A. Vanrolleghem^[3]</p> <p>^[1]BIOMATH, Ghent University, Belgium, ^[2]PELAB, Linköping University, Sweden, ^[3]modelEAU, Université Laval, Canada</p>	<p>NowaitTransit Concept Assessment. Modeling of Trains on Complex Track Geometry</p> <p>J. Tuszynski^[1], N. Philipson^[2], J. Andreasson^[2], M. Gäfvert^[2]</p> <p>^[1]Nowaittransit AB, Sweden, ^[2]Modelon AB, Sweden</p>
	16:50-17:00	Break			
17:00-18:00	Vendor Sessions & Users Group Meetings				
	<p>Dymola Users Group Meeting</p> <p>Perspectives of the aquisition of Dynasim by Dassault Systemes New and coming features of Dymola Dynasim library partner presentations</p>	<p>Free Modelica environments</p> <p>OpenModelica MathModelica Lite Simpa2 project</p>	<p>Modelica tool vendor session 1</p> <p>MathCore Engineering AB Equa Simulation AB Modelon AB Schlegel Simulation</p>	<p>Modelica tool vendor session 2</p> <p>ITI GmbH Maplesoft</p>	
18:00-20:00	Bus Transfer to hotels, then Townhall				
20:00-23:00	Conference Dinner				

		Session 3a Thermodynamic Systems for Energy Storage and Conversion Session Chair: Dr. Hubertus Tummescheit Modelon AB, Lund, Sweden	Session 3b Hardware in the Loop Session Chair: Franz Pirker arsenal research, Vienna, Austria	Session 3c Language, Tools and Algorithms 3 Session Chair: Dr. Jakob Mauss DaimlerChrysler AG Research and Technology, Berlin	Session 3d Electric Systems and Applications 1 Session Chair: Gert Pascoli arsenal research, Vienna, Austria
Tuesday 06-09-05	08:30-09:45	Analysis of Steam Storage Systems using Modelica J. Buschle, W.D. Steinmann, R. Tamme German Aerospace Center (DLR), Germany	Interacting Modelica using a Named Pipe for Hardware-in-the-loop Simulation A. Ebner, A. Haumer, D. Simic, F. Pirker Arsenal Research, Austria	A Numeric Library for Use in Modelica Simulations with Lapack, SuperLU, Interpolation, and MatrixIO A. Sandholm ^[1,2] , P. Bunus ^[1] , P. Fritzson ^[1] ^[1] Linköping University, Sweden, ^[2] Kalmar University, Sweden	Modeling and Simulation of Generator Circuit Breaker Performance O. Fritz ^[1] , M. Lakner ^[2] ^[1] ABB Switzerland Ltd., Corporate Research, Switzerland, ^[2] ABB Switzerland Ltd., High-Current Systems, Switzerland
		An Enhanced Discretisation Method for Storage Tank Models within Energy Systems S. Wischhusen XRG Simulation GmbH, Germany	Parameterisation of Modelica Models on PC and Real Time Platforms M. Kellner ^[1] , M. Neumann ^[1] , A. Banerjee ^[1] , P. Doshi ^[2] ^[1] ZF Friedrichshafen AG, Germany, ^[2] Universität Duisburg-Essen, Germany	Online Application of Modelica Models in the Industrial IT Extended Automation System 800xA R. Franke ^[1] , J. Doppelhamer ^[2] ^[1] ABB AG, Power Technology Systems, Germany, ^[2] ABB Corporate Research, Germany	Parallel Simulation with Transmission Lines in Modelica K. Nyström, P. Fritzson Linköping University, Sweden
		HydroPlant – a Modelica Library for Dynamic Simulation of Hydro Power Plants K. Tuszynski ^[1] , J. Tuszynski ^[2] , K. Slättorp ^[3] ^[1] Modelon AB, Sweden, ^[2] Datavoice HB, Sweden, ^[3] Tactel AB, Sweden	Synchronising a Modelica Real-Time Simulation Model with a Highly Dynamic Engine Test-Bench System D. Winkler, C. Gühmann Technische Universität Berlin, Germany	Types in the Modelica Language D. Broman ^[1] , P. Fritzson ^[1] , S. Furic ^[2] ^[1] Linköping University, Sweden, ^[2] Imagine, France	
09:45-09:55		Break			

Session 4: Poster Session					
Tuesday 06-09-05	09:55-10:55	GAPILib - A Modelica Library for Model Parameter Identification Using Genetic Algorithms M.A. Rubio ^[1] , A. Urquia ^[2] , L. González ^[1] , D. Guinéa ^[1] , S. Dormido ^[2] ^[1] Instituto de Automática Industrial (IAI), CSIC, Spain, ^[2] ETS de Ingeniería Informática, UNED, Spain	On the Noise Modelling and Simulation D. Aiordachioaie, V. Nicolau, M. Munteanu, G. Sirbu Dunarea de Jos Galati University, Romania	Modelling Automotive Hydraulic Systems using the Modelica ActuationHydraulics Library P. Harman Ricardo UK Ltd., UK	Multizone Airflow Model in Modelica M. Wetter United Technologies Research Center, USA
		Ascola: A Tool for Importing Dymola Code into Ascet C. Schlegel ^[1] , R. Finsterwalder ^[2] ^[1] Schlegel Simulation GmbH, Germany, ^[2] University of the FederalArmed Forces Munich, Germany	Acausal Modelling of Helicopter Dynamics for Automatic Flight Control Applications L. Viganò, G. Magnani Politecnico di Milano, Italy	Vehicle Model for Transient Simulation of a Waste-Heat-Utilisation-Unit Containing Extended PowerTrain and Fluid Library Components M. Eschenbach, J. Ungethüm, P. Treffinger German Aerospace Center, Germany	Modelling of a Solar Thermal Reactor for Hydrogen Generation J. Dersch, A. Mathijssen, M. Roeb, C. Sattler Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany
		An Analyzer for Declarative Equation Based Models J.-W. Ding ^[1] , L.-P. Chen ^[1] , F.-L. Zhou ^[1] , Y.-Z. Wu ^[1] , G.B. Wang ^[2] ^[1] Huazhong University of Science and Technology, China, ^[2] National Natural Science Foundation of China, China	Dynamic Modeling and Control of a 6 DOF Parallel Kinematics M. Krabbes, Ch. Meissner Leipzig University of Applied Sciences, Germany	Modeling, Calibration and Control of a Paper Machine Dryer Section J. Åkesson ^[1] , O. Slättke ^[2] ^[1] Lund University, Sweden, ^[2] ABB Ltd., Ireland	Object Oriented Modelling of DISS Solar Thermal Power Plant L.J. Yebra ^[1] , M. Berenguel ^[2] , E. Zarza ^[1] , S. Dormido ^[3] ^[1] C.I.E.M.A.T., Spain, ^[2] Universidad de Almeria, Spain, ^[3] U.N.E.D., Spain
		Engineering Design Tool Standards and Interfacing Possibilities to Modelica Simulation Tools O. Johansson, A. Pop, P. Fritzon Linköping University, Sweden	Modelling of Alternative Propulsion Concepts of Railway Vehicles H. Dittus, J. Ungethüm German Aerospace Center, Institute of Vehicle Concepts, Germany	System and Component Design of Directly Driven Reciprocating Compressors with Modelica T. Bödrich Dresden University of Technology, Germany	
	10:55-11:25	Break			

		Session 5a Language, Tools and Algorithms 4 Session Chair: Prof. Bernhard Bachmann University of Applied Sciences Bielefeld, Germany	Session 5b Thermodynamic Systems for Cooling Applications Session Chair: Dr. Ruediger Franke ABB, Mannheim, Germany	Session 5c Free and Commercial Libraries 1 Session Chair: Dr. Michael Tiller Emmeskay Inc., Michigan, USA	Session 5d Electric Systems and Applications 2 Session Chair: Ludwig Marvan DRIVEScom, Vienna, Austria
Tuesday 06-09-05	11:25-13:05	OpenModelica Development Environment with Eclipse Integration for Browsing, Modeling, and Debugging A. Pop, P. Fritzson, A. Remar, E. Jagudin, D. Akhvediani Linköping University, Sweden	Optimization of a Cooling Circuit with a Parameterized Water Pump Model D. Simic, C. Kral, H. Lacher Arsenal Research, Austria	The LinearSystems Library for Continuous and Discrete Control Systems M. Otter German Aerospace Center (DLR), Germany	The SmartElectricDrives Library - Powerful Models for Fast Simulations of Electric Drives J.V. Gragger, H. Giuliani, C. Kral, T. Bäuml, H. Kapeller, F. Pirker Arsenal Research, Austria
		A Modelica Based Format for Flexible Modelica Code Generation and Causal Model Transformations J. Larsson, P. Fritzson Linköping University, Sweden	Using Modelica as a Design Tool for an Ejector Test Bench C.C. Richter, C. Tischendorf, R. Fiorenzani, P. Cavalcante, W. Tegethoff, J. Köhler TU Braunschweig, Germany	ARENALib: A Modelica Library for Discrete-Event System Simulation V.S. Prat, A. Urquia, S. Dormido ETS de Ingeniería Informática, UNED, Spain	Quasi-stationary AC Analysis Using Phasor Description With Modelica O. Enge ^[1] , C. Clauß ^[1] , P. Schneider ^[1] , P. Schwarz ^[1] , M. Vetter ^[2] , S. Schwunk ^[2] ^[1] Fraunhofer Institute Integrated Circuits, Germany, ^[2] Fraunhofer Institute Solar Energy Systems, Germany
		Dymola interface to Java - A Case Study: Distributed Simulations J.D. Lopez, H. Olsson Dynamis AB, Sweden	Modeling of Frost Growth on Heat Exchanger Surfaces K. Proelss, G. Schmitz Hamburg University of Technology, Germany	Neural Network Library in Modelica F. Codecà, F. Casella Politecnico di Milano, Italy	Identification and Controls of Electrically Excited Synchronous Machines H. Kapeller, A. Haumer, C. Kral, F. Pirker, G. Pascoli Arsenal Research, Austria
		Simulation of Complex Systems using Modelica and Tool Coupling R. Kossel, W. Tegethoff, M. Bodmann, N. Lemke TLK-Thermo GmbH, Germany	Multizone Building Model for Thermal Building Simulation in Modelica M. Wetter United Technologies Research Center, USA	The Modelica Multi-bond Graph Library D. Zimmer, F.E. Cellier ETH Zürich, Switzerland	
	13:05-14:05	Lunch			

		Session 6a Language, Tools and Algorithms 5 Session Chair: Dr. Ingrid Bausch-Gall Bausch-Gall GmbH, Munich, Germany	Session 6b Thermodynamic Systems and Applications Session Chair: Prof. Gerhard Schmitz Technical University Hamburg-Harburg, Germany	Session 6c Free and Commercial Libraries 2 Session Chair: Daniel Bouskela Electricite de France, Chatou Cedex, France	Session 6d Multidomain Systems Session Chair: Marco Bross BMW, Munich, Germany
Tuesday 06-09-05	14:05-15:45	Dynamic Optimization of Energy Supply Systems with Modelica Models C. Hoffmann, H. Puta Technische Universitaet Ilmenau, Germany	The Modelica Fluid and Media Library for Modeling of Incompressible and Compressible Thermo-Fluid Pipe Networks F. Casella ^[1] , M. Otter ^[2] , K. Proelss ^[3] , C. Richter ^[4] , H. Tummescheit ^[5] ^[1] Politecnico di Milano, Italy, ^[2] (DLR, Germany, ^[3] Technical University Hamburg-Harburg, Germany, ^[4] Technical University Braunschweig, Germany, ^[5] Modelon AB, Sweden	Integration of CATIA with Modelica P. Bhattacharya ^[1] , N. Suyam Welakwe ^[2] , R. Makanaboyina ^[1] , A. Chimalakonda ^[1] ^[1] DaimlerChrysler Research and Technology, India, ^[2] DaimlerChrysler Research and Technology, Germany	If We Only had Used XML... U. Reisenbichler, H. Kapeller, A. Haumer, C. Kral, F. Pirker, G. Pascoli Arsenal Research, Austria
		Robust Initialization of Differential Algebraic Equations B. Bachmann ^[1] , P. Aronsson ^[2] , P. Fritzson ^[2] ^[1] University of Applied Sciences, Germany, ^[2] Linköping University, Sweden	Shock Wave Modeling for Modelica.Fluid Library using Oscillation-free Logarithmic Reconstruction J.D. Lopez Dynasim AB, Sweden	A Modelica Library for Simulation of Household Refrigeration Appliances Features and Experiences C. Heinrich, K. Berthold Institute for Air Conditioning and Refrigeration, Germany	Coupled Simulation of Building Structure and Building Services Installations with Modelica P. Matthes, T. Haase, A. Hoh, T. Tschirner, D. Müller TU Berlin, Germany
		Calibration of Static Models using Dymola H. Olsson ^[1] , J. Eborn ^[2] , S.E. Mattsson ^[1] , H. Elmqvist ^[1] ^[1] Dynasim, Sweden, ^[2] Modelon, Sweden	Modelling of an Experimental Batch Plant with Modelica K. Poschlad ^[1] , M.A.P. Remelhe ^[1] , M. Otter ^[2] ^[1] University of Dortmund, Germany, ^[2] German Aerospace Center (DLR), Germany	A New Energy Building Simulation Library J.I. Videla, B. Lie Telemark University College, Norway	MWorks: a Modern IDE for Modeling and Simulation of Multi-domain Physical Systems Based on Modelica F.-L. Zhou, L.-P. Chen, Y.-Z. Wu, J.-W. Ding, J.-J. Zhao, Y.-Q. Zhang Huazhong University of Science and Technology, China
		Automatic Fixed-point Code Generation for Modelica using Dymola U. Nordstrom ^[1,2] , J.D. Lopez ^[1] , H. Elmqvist ^[1] ^[1] Dynasim AB, Sweden, ^[2] Lund Institute of Technology, Sweden	Integral Analysis for Thermo-Fluid Applications with Modelica J.J. Batteh Ford Motor Company, Research and Advanced Engineering, USA	UnitTesting: A Library for Modelica Unit Testing M.M. Tiller, B. Kittirungsri Emmesky, Inc., USA	Domain Library Preprocessing in MWorks - A Platform for Modeling and Simulation of Multi-domain Physical Systems Based on Modelica Y.-Z. Wu, F.-L. Zhou, L.-P. Chen, J.-W. Ding, J.-J. Zhao Huazhong University of Science and Technology, China
15:45-15:55		Break			
15:55-16:10		Modelica Library Award & Closing the Conference			
16:10-16:15		Break			
16:15-18:00		Technical Tour through arsenal's laboratories			
The exhibition is open on both days of the conference.					
50 th Modelica design Meeting: Wednesday, 2006-09-06 - Friday 2006-09-08					