

8th Vienna International Conference on Mathematical Modelling (MATHMOD 2015)

IFAC PapersOnline Volume 48, Issue 1

Vienna, Austria
18-20 February 2015

Editors:

**Felix Breitenecker
Inge Troch**

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ISBN: 978-1-5108-0573-6

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Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



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Technical Program for Wednesday February 18, 2015

WeBPL1 FH HS 5
Model-Based Approaches for the Future Sustainable Aircraft: The EU ADDSAFE Project (Plenary Session)

10:00-10:40 WeBPL1.1
Model-Based Approaches for the Future Sustainable Aircraft: The EU ADDSAFE Project, pp. 1-2.
 Goupil, Philippe AIRBUS Operations S.A.S

WeC01 FH HS 8
MS: Model Reduction 1 (Minisymposium)

Chair: Saak, Jens Max Planck Inst. for Dynamics of Complex Tech. Systems
 Co-Chair: Lohmann, Boris Tech. Univ. München

11:00-11:20 WeC01.1
Data-Driven Model Reduction for Weakly Nonlinear Systems: A Summary, pp. 3-4.
 Antoulas, Athanasios C. Rice Univ

11:20-11:40 WeC01.2
Quadrature-Based IRKA for Optimal H_2 Model Reduction, pp. N/A.
 Beattie, Christopher A. Virginia Tech
 Drmac, Zlatko Univ. of Zagreb
 Gugercin, Serkan Virginia Tech

11:40-12:00 WeC01.3
Towards Practical Implementations of Balanced Truncation for LTV Systems, pp. 7-8.
 Lang, Norman Tech. Univ. Chemnitz, Max Planck Inst. for Dynam
 Saak, Jens Max Planck Inst. for Dynamics of Complex Tech. Systems,
 Stykel, Tatjana Univ. Augsburg

12:00-12:20 WeC01.4
A New Error Estimation for Model Order Reduction of Parametrized Evolution Equations, pp. 9-10.
 Zhang, Yongjin Max Planck Inst. for Dynamics of Complex Tech. Systems
 Feng, Lihong Max Planck Inst. for Dynamics of Complex Tech. Systems
 Li, Suzhou Max Planck Inst. for Dynamics of Complex Tech. Systems
 Benner, Peter Max Planck Inst. for Dynamics of Complex Tech. Systems

12:20-12:40 WeC01.5
Automatic Model Reduction of Linear Population Balance Models by Proper Orthogonal Decomposition, pp. 11-16.
 Khlopov, Dmytro Max Planck Inst. for Dynamics of Complex Tech. Systems
 Mangold, Michael Max Planck Inst

WeC02 FH HS 7
Biological and Chemical Systems (Regular Session)

Chair: Rabenstein, Rudolf Univ. Erlangen-Nürnberg
 Co-Chair: Kramer, Bernhard Max Planck Inst. for Dynamics of Complex Tech. Systems

11:00-11:20 WeC02.1
Influence of an Asymptotic Pressure Level on the Windkessel Models of the Arterial System, pp. 17-22.
 Parragh, Stephanie AIT Austrian Inst. of Tech. GmbH
 Hametner, Bernhard AIT Austrian Inst. of Tech. GmbH
 Wassertheurer, Siegfried AIT Austrian Inst. of Tech. GmbH, Health & Environment

11:20-11:40 WeC02.2
A Compact Mathematical Model of Mandelate Racemase Production and Chaperone Overexpression in E. Coli, pp. 23-28.
 Kramer, Bernhard Max Planck Inst. for Dynamics of Complex Tech. Systems
 Tüngler, Ralf Max Planck Inst. for Dynamics of

Complex Tech. Systems
 Bettenbrock, Katja Max Planck Inst. for Dynamics of Complex Tech. Systems
 Conradi, Carsten MaxPlanck-Inst. Dynamics of Complex Tech. Systems

11:40-12:00 WeC02.3
Efficient DQMOM for Multivariate Population Balance Equations and Application to Virus Replication in Cell Cultures, pp. 29-34.
 Dürr, Robert Otto-Von-Guericke Univ. Magdeburg
 Müller, Thomas Otto-Von-Guericke-Univ. Magdeburg
 Kienle, Achim Univ. Magdeburg

12:00-12:20 WeC02.4
Design of a Molecular Communication Channel by Modelling Enzyme Kinetics, pp. 35-40.
 Rabenstein, Rudolf Univ. Erlangen-Nürnberg

12:20-12:40 WeC02.5
Mathematical Modelling of Molecular Adsorption in Zeolite Coated Frequency Domain Sensors, pp. 41-46.
 Murrieta-Rico, Fabian N. Univ. Nacional Autonoma De Mexico
 Mercorelli, Paolo Leuphana Univ. of Lueneburg
 Sergiyenko, Oleg Autonomous Univ. of Baja California
 Petranovskii, Vitalii Univ. Nacional Autonoma De Mexico
 Hernandez-Balbuena, Daniel Univ. Autonoma De Baja California
 Tyrsa, Vera Pol. of Baja California

12:40-13:00 WeC02.6
Modeling Chemical Reaction Networks on the Pontryagin Bundle with the Hamilton-Pontryagin Approach, pp. 47-52.
 Lindhorst, Henning Otto-Von-Guericke-Univ. Magdeburg
 Waldherr, Steffen Otto-Von-Guericke-Univ. Magdeburg

WeC03 FH HS 3
MS: Dynamics of Machines and Structures (Minisymposium)

Chair: Ecker, Horst Vienna Univ. of Tech.
 Co-Chair: Pumhössel, Thomas Johannes Kepler Univ. Linz

11:00-11:20 WeC03.1
Optimal Deployment of a Tethered Satellite Using Tension Control, pp. 53-54.
 Steindl, Alois Vienna Univ. of Tech

11:20-11:40 WeC03.2
Bicycle Rider Control Modelling for Path Tracking, pp. 55-60.
 Edelmann, Johannes Vienna Univ. of Tech
 Haudum, Martin Vienna Univ. of Tech
 Plöchl, Manfred Vienna Univ. of Tech

11:40-12:00 WeC03.3
Efficient Simulation of Railway Pantograph/ Catenary Interaction Using Pantograph-Fixed Coordinates, pp. 61-66.
 Ritzberger, Daniel Vienna Univ. of Tech
 Talic, Emir Vienna Univ. of Tech
 Schirrer, Alexander Vienna Univ. of Tech

12:00-12:20 WeC03.4
Co-Simulation of Matlab and FlightGear for Identification and Control of Aircraft, pp. 67-72.
 Aschauer, Guilherme Vienna Univ. of Tech
 Schirrer, Alexander Vienna Univ. of Tech
 Kozek, Martin Vienna Univ. of Tech

12:20-12:40 WeC03.5
Data-Based and Analytic Modelling for Model-Based Control of a Flexible Beam, pp. 73-74.
 Dullinger, Christian Vienna Univ. of Tech
 Schirrer, Alexander Vienna Univ. of Tech
 Kozek, Martin Vienna Univ. of Tech

12:40-13:00 WeC03.6
Analysis of Time-Varying Mechanical Systems Using the Method of Impulsive Parametric Excitation, pp. 75-80.
 Pumhössel, Thomas Johannes Kepler Univ. Linz
 Hehenberger, Peter Johannes Kepler Univ. Linz

WeC04	FH HS 2
Discrete Systems and Manufacturing Applications (Regular Session)	
Chair: Moeller, Dietmar	Clausthal Univ. of Tech. (TUC)
Co-Chair: Söffker, Dirk	Univ. of Duisburg-Essen
11:00-11:20	WeC04.1
<i>Case Indexing in Case-Based Reasoning by Applying Situation-Operator Model As Knowledge Representation Model</i> , pp. 81-86.	
Sarkheyli, Arezoo	Chair of Dynamics and Control, Univ. of Duisburg-Essen, Ger
Söffker, Dirk	Chair of Dynamics and Control, Univ. of Duisburg-Essen, Ger
11:20-11:40	WeC04.2
<i>Integrating Situated Human Interaction Modeling and Stochastic State Automata for Improved Technical Situation Awareness</i> , pp. 87-92.	
Muthig, Olga	Univ. Duisburg-Essen
Wang, Jiao	Chair of Dynamics and Control, Univ. of Duisburg-Essen
Deng, Qi	Univ. Duisburg-Essen, Chair of Dynamics and Control
Söffker, Dirk	Univ. of Duisburg-Essen
11:40-12:00	WeC04.3
<i>Modeling and Simulation Dry Port Development in Metropolitan Hamburg with ProModel*</i> .	
Moeller, Dietmar	Clausthal Univ. of Tech. (TUC)
12:00-12:20	WeC04.4
<i>Adaptive Neuro-Fuzzy Approach to Predict Tool Wear Accurately in Turning Operations for Maximum Cutting Tool Utilization</i> , pp. 93-98.	
Sarhan, Ahmed A.D.	Department of Mechanical Engineering, Univ. of Malaya
12:20-12:40	WeC04.5
<i>Modeling of Layering Growth Processes Using a Monte Carlo Approach</i> , pp. 99-104.	
Rieck, Christian	Otto Von Guericke Univ. Magdeburg
Bück, Andreas	Otto Von Guericke Univ. Magdeburg
Tsotsas, Evangelos	Otto Von Guericke Univ
12:40-13:00	WeC04.6
<i>Improve Wire EDM Performance at Different Machining Parameters – ANFIS Modeling</i> , pp. 105-110.	
Maher, Ibrahim	Department of Mechanical Engineering, Faculty of Engineering, Ka
Hui Ling, Liew	Department of Mechanical Engineering, Faculty of Engineering, Un
Sarhan, Ahmed A.D.	Department of Mechanical Engineering, Faculty of Engineering, As
Hamdi, M.	Centre of Advanced Manufacturing and Material Processing, Univ
WeC05	FH HS 4
MS: Interdisciplinary Data Based Modelling and Simulation in Health Systems Research (Minisymposium)	
Chair: Popper, Nikolas	dwh GmbH
Co-Chair: Hametner, Bernhard	AIT Austrian Inst. of Tech. GmbH
11:00-11:20	WeC05.1
<i>Data Wrangling: Making Data Useful Again</i> , pp. 111-112.	
Endel, Florian	Univ. of Tech. Vienna
Piringer, Harald	VRVis Res. Center, Vienna, Austria
11:20-11:40	WeC05.2
<i>Reproducible Database Queries in Privacy Sensitive Applications</i> , pp. 113-114.	
Proell, Stefan	SBA Res
Mayer, Rudolf	SBA Res
Rauber, Andreas	Vienna Univ. of Tech
11:40-12:00	WeC05.3
<i>Identifying Structural Changes in Austrian Social Insurance Data</i> , pp. 115-	

120.	Ortner, Thomas	Vienna Univ. of Tech. Austria
	Filzmoser, Peter	Vienna Univ. of Tech
	Endel, Gottfried	Hvb
12:00-12:20		WeC05.4
<i>Visual Analysis of Disease Prevalence Based on Health Accounting Data</i> , pp. 121-122.		
	Piringer, Harald	VRVis Res. Center, Vienna, Austria
12:20-12:40		WeC05.5
<i>Simulation of Physiologic Ectopic Beats in Heartbeat Intervals to Validate Algorithms</i> , pp. 123-128.		
	Bachler, Martin	AIT Austrian Inst. of Tech. GmbH
	Hörtenhuber, Matthias	Vienna Univ. of Tech. Inst. for Analysis and Scie
	Frank, Martin	Vienna Univ. of Tech. Inst. for Analysis and Scie
	Wassertheurer, Siegfried	AIT Austrian Inst. of Tech. GmbH, Health & Environment
	Mayer, Christopher	AIT Austrian Inst. of Tech. GmbH, Health & Environment
12:40-13:00		WeC05.6
<i>Modeling Methods Development for Routine Data Based Screening Evaluation: Decision Making for Organized Abdominal Aortic Aneurysm Screening</i> , pp. 129-134.		
	Zauner, Günther	Dwh GmbH, Simulation Services
	Urach, Christoph	Vienna UT
	Wilbacher, Ingrid	Main Association of Austrian Health Security Inst
	Endel, Gottfried	Main Association of Austrian Health Security Inst
WeC06		SEM 101A
Theoretical Aspects (Regular Session)		
	Chair: Lebacque, Jean-Patrick	IFSTTAR
	Co-Chair: Kemmetmueller, Wolfgang	Vienna Univ. of Tech.
11:00-11:20		WeC06.1
<i>Faster Structural Analysis of Differential-Algebraic Equations by Graph Compression</i> , pp. 135-140.		
	Höger, Christoph	TU Berlin
11:20-11:40		WeC06.2
<i>Methods for Cellular Automata and Evolution Systems in Modelling and Simulation</i> , pp. 141-146.		
	Schneckenreither, Günter	Dwh GmbH
	Popper, Nikolas	Dwh GmbH
	Breitenecker, Felix	Vienna Univ. of Tech
11:40-12:00		WeC06.3
<i>Lagrangian GSOM Traffic Flow Models on Junctions</i> , pp. 147-152.		
	Costeseque, Guillaume	Inria Sophia-Antipolis Méditerranée
	Lebacque, Jean-Patrick	Ifsttar
	Khelifi, Asma	Inst. Français Des Sciences Et Tech. Des Transports, D
12:00-12:20		WeC06.4
<i>Spatial Effects in Stochastic Microscopic Models - Case Study and Analysis</i> , pp. 153-158.		
	Bicher, MartinmbH, Institute of Analysis and Scientific Computing Vienna	Dwh Simulation Services GmbH, Inst. of Analysis and Scientific Computing Vienna
	Popper, Nikolas	Dwh Simulation Services GmbH
12:20-12:40		WeC06.5
<i>On the Simulation of Sub-Fractional Brownian Motion*</i> .		
	El-Nouty, Charles	Paris-13
	Filatova, Darya	UJK
12:40-13:00		WeC06.6
<i>Alternative Approaches for Groundwater Pollution</i> , pp. 159-164.		
	Winkler, Stefanie	Vienna Univ. of Tech
	Bicher, Martin	Dwh Simulation Services GmbH, Inst. of Analysis and Scientific Computing Vienna

WeDPL1	FH HS 8
Iterative Schemes for Coupled Multiphysical Problems in Electrical Engineering (Plenary Session)	

14:00-14:40	WeDPL1.1
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Iterative Schemes for Coupled Multiphysical Problems in Electrical Engineering, pp. 165-167.

Schöps, Sebastian	Tech. Univ. Darmstadt
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WeE01	FH HS 8
MS: Model Reduction 2 (Minisymposium)	

Chair: Lohmann, Boris	Tech. Univ. München
Co-Chair: Saak, Jens	Max Planck Inst. for Dynamics of Complex Tech. Systems

14:40-15:00	WeE01.1
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A Black-Box Method for Parametric Model Order Reduction, pp. 168-169.

Geuss, Matthias	Tech. Univ. München
Lohmann, Boris	Tech. Univ. München
Peherstorfer, Benjamin	Massachusetts Inst. of Tech
Willcox, Karen Elizabeth	Massachusetts Inst. of Tech

15:00-15:20	WeE01.2
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Order-Reduction of Fields-Level Models with Affine and Non-Affine Parameters by Interpolation of Subspaces, pp. 170-175.

Burgard, Stefan	Saarland Univ
Farle, Ortwin	Saarland Univ
Klis, Daniel	Saarland Univ
Dyczij-Edlinger, Romanus	Saarland Univ

15:20-15:40	WeE01.3
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Non-Modal Based Model Reduction for Explicit Crash Codes, pp. 176-177.

Fehr, Joerg	Univ. of Stuttgart
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15:40-16:00	WeE01.4
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Improvement of Krylov-Subspace-Reduced Models by Iterative Mode-Truncation, pp. 178-183.

Lein, Claudius	Tech. Univ. Dresden, Inst. Für Festkörpermechanik
Beitelschmidt, Michael	Tech. Univ. Dresden
Bernstein, David	Tech. Univ. Dresden, Chair of Dynamics and Mechanism

WeE02	FH HS 7
MS: Biomathematics: What's New? (Minisymposium)	

Chair: Mangold, Michael	Max Planck Inst.
Co-Chair: Pinto, Carla	Center of Mathematics, Univ. of Porto

14:40-15:00	WeE02.1
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Stochastic Model for HIV Dynamics in HIV Specific Helper Cells, pp. 184-185.

Carla, Pinto	School of Engineering of Pol. of Porto
Carvalho, Ana	Faculty of Sciences, Univ. of Porto

15:00-15:20	WeE02.2
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The Effect of Noise Intensity in a Stochastic Model for HIV-Specific Helper Cells, pp. 186-187.

Carvalho, Ana	Faculty of Sciences, Univ. of Porto
Carla, Pinto	Inst. of Engineering of Pol. of Porto

15:20-15:40	WeE02.3
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Effect of Drug-Resistance in a Fractional Complex-Order Model for HIV Infection, pp. 188-189.

Carla, Pinto	School of Engineering of Pol. of Porto
Carvalho, Ana	Faculty of Sciences, Univ. of Porto

15:40-16:00	WeE02.4
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Modeling HIV Dynamics in the Three Stages of Infection, pp. 190-191.

Carvalho, Ana	Faculty of Sciences, Univ. of Porto
Carla, Pinto	Inst. of Engineering of Pol. of Porto

WeE03	FH HS 3
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Numerical and Computer Modeling (Regular Session)	
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Chair: Günther, Michael	Bergische Univ. Wuppertal
Co-Chair: Cafferkey, Neil	Univ. Coll. Cork

14:40-15:00	WeE03.1
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A Volume Conserving Discrete Formulation of Aggregation Population Balance Equations on Non-Uniform Meshes, pp. 192-197.

Mehakpreet, Singh	Department of Mathematics, Indian Inst. of Tech. Kharag
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Kumar, Jitendra	Department of Mathematics, Indian Inst. of Tech. Kharag
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Bück, Andreas	Thermal Process Engineering/NaWiTec, Otto Von Guericke Univ
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15:00-15:20	WeE03.2
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Alternating Order Algorithm Based on Stages of the Ceschino Method, pp. 198-203.

Novikov, Anton	Siberian Federal Univ
Novikov, Eugeny	Inst. of Computational Modeling of SB RAS

15:20-15:40	WeE03.3
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Optimal Startup Control of a Steam Power Plant Using the JModelica Platform, pp. 204-209.

Fethi, Belkhir	Saarland Univ
Daniel, Kraus Cabo	Pol. Univ. of Catalonia
Felix, Felgner	Saarland Univ
Georg, Frey	Saarland Univ

15:40-16:00	WeE03.4
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An Analysis of Performance-Critical Properties of Modelica Models, pp. 210-215.

Cafferkey, Neil	Univ. Coll. Cork
Provan, Gregory	Univ. Coll. Cork

WeE04	FH HS 2
Environmental Systems (Regular Session)	

Chair: Körner, Andreas	Vienna Univ. of Tech. Inst. for Analysis and Scientific Computing
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Co-Chair: Pecha, Petr	Inst. of Information Theory and Automation
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14:40-15:00	WeE04.1
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Further Developments in Dynamic Modelling of CO2 Capture from Flue Gas, pp. 216-221.

Dickinson, Jillian L	Monash Univ
Puxty, Graeme	CSIRO Energy Tech
Percy, Andrew	Federation Univ
Verheyen, T. Vincent	Federation Univ

15:00-15:20	WeE04.2
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Pitfalls Associated with Estimation of Radiological Burden of Population Caused by Radiation Accident, pp. 222-227.

Pecha, Petr	Inst. of Information Theory and Automation
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15:20-15:40	WeE04.3
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Modelling the Effect of Temperature on Phytoplankton Growth across the Global Ocean, pp. 228-233.

Grimaud, Ghjuvan Micaelu	Inria
Le Guennec, Valérie	Inria
Ayata, Sakina-Dorothee	Upmc
Mairet, Francis	Inria
Sciandra, Antoine	Upmc
Bernard, Olivier	Inria

15:40-16:00	WeE04.4
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A General Analytical Capture Zone Model: A Tool for Groundwater Remediation, pp. 234-239.

Samani, Nozar	Shiraz Univ
Zarei-Doudeji, Somayeh	Shiraz Univ

WeF01	FH HS 8
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MS: Model Reduction 3 (Minisymposium)	
Chair: Lohmann, Boris	Tech. Univ. München
Co-Chair: Saak, Jens	Max Planck Inst. for Dynamics of Complex Tech. Systems
16:20-16:40	WeF01.1
<i>Model Order Reduction for Magneto-Quasistatic Equations</i> , pp. 240-241.	
Kerler, Johanna	Univ. of Augsburg
Stykel, Tatjana	Univ. Augsburg
16:40-17:00	WeF01.2
<i>Model Order Reduction Approaches for the Optimal Design of Permanent Magnets in Electro-Magnetic Machines</i> , pp. 242-247.	
Alessandro, Alla	Univ. of Hamburg
Hinze, Michael	Univ. Hamburg
Lass, Oliver	Tech. Univ. Darmstadt
Ulbrich, Stefan	Tech. Univ. Darmstadt
17:00-17:20	WeF01.3
<i>Fast Simulation of Wireless Power Transfer Systems with Varying Coil Alignment</i> , pp. 248-253.	
Klis, Daniel	Saarland Univ
Burgard, Stefan	Saarland Univ
Farle, Ortwin	Saarland Univ
Dyczij-Edlinger, Romanus	Saarland Univ
17:20-17:40	WeF01.4
<i>Interface Reduction for CMS Methods and Alternative Model Order Reduction</i> , pp. 254-259.	
Holzwarth, Philip	Univ. of Stuttgart
Eberhard, Peter	Univ. of Stuttgart
17:40-18:00	WeF01.5
<i>A Joint IMEX-MOR Approach for Water Networks</i> , pp. 260-261.	
Grundel, Sara	MPI Magdeburg
Jansen, Lennart	Heinrich-Heine-Univ. Düsseldorf
WeF02	FH HS 7
MS: Object-Oriented Modelling, Simulation and Optimization (Minisymposium)	
Chair: Ferretti, Gianni	Pol. di Milano
Co-Chair: Casella, Francesco	Pol. di Milano
16:20-16:40	WeF02.1
<i>Efficient Computation of State Derivatives for Multi-Rate Integration of Object-Oriented Models</i> , pp. 262-267.	
Casella, Francesco	Pol. Di Milano
16:40-17:00	WeF02.2
<i>Design of Feed Drives with Object-Oriented Behavior Models</i> , pp. 268-273.	
Özdemir, Denis	Lab. for Machine Tools and Production Engineering WZL of Th
Herfs, Werner	Lab. for Machine Tools and Production Engineering (WZL) Of
Lohse, Wolfram	Lab. for Machine Tools and Production Engineering (WZL) Of
Brecher, Christian	Lab. for Machine Tools and Production Engineering (WZL) Of
17:00-17:20	WeF02.3
<i>A Modelica Simulator to Support the Development of the Control System of an Autonomous All-Terrain Mobile Robot</i> , pp. 274-279.	
D'Amelio, Enzo Luigi	Pol. Di Milano
Bascetta, Luca	Pol. Di Milano
Cucci, Davide Antonio	École Pol. Fédérale De Lausanne EPFL
Matteucci, Matteo	Pol. Di Milano
Bardaro, Gianluca	Pol. Di Milano
17:20-17:40	WeF02.4
<i>Effects of Event-Free Noise Signals on Continuous-Time Simulation Performance</i> , pp. 280-285.	
Van der Linden, Franciscus L.J.	DLR German Aerospace Center
Klöckner, Andreas	DLR German Aerospace Center
Zimmer, Dirk	DLR German Aerospace Center

17:40-18:00	WeF02.5
<i>Input Design and Parameter Estimation with Open Source Tools</i> , pp. 286-291.	
Mayr, Simon	Univ. of Applied Sciences - WELS
Grabmair, Gernot	Univ. of Applied Sciences - WELS
Reger, Johann	TU Ilmenau
WeF03	FH HS 3
MS: Regularization Techniques for DAEs to Improve Model Equations for the Numerical Treatment (Minisymposium)	
Chair: Steinbrecher, Andreas	TU Berlin
Co-Chair: Tischendorf, Caren	Humboldt Univ. of Berlin
16:20-16:40	WeF03.1
<i>Regularization of Nonlinear DAEs Based on Algebraic Analysis</i> , pp. 292-297.	
Scholz, Lena	TU Berlin
Steinbrecher, Andreas	TU Berlin
16:40-17:00	WeF03.2
<i>Regularization of Nonlinear DAEs Based on Structural Analysis</i> , pp. 298-299.	
McKenzie, Ross	Cardiff Univ
Pryce, John Derwent	Cardiff Univ
Nedialkov, Nedialko	McMaster Univ
Tan, Guangning	McMaster Univ
17:00-17:20	WeF03.3
<i>Regularization of Quasi-Linear Differential-Algebraic Equations</i> , pp. 300-305.	
Steinbrecher, Andreas	TU Berlin
17:20-17:40	WeF03.4
<i>Index Reduction and Regularisation Methods for Multibody Systems</i> , pp. 306-311.	
Pöll, Carina	Vienna Univ. of Tech
Hafner, Irene	Dwh GmbH
17:40-18:00	WeF03.5
<i>Regularization of Electrical Circuits</i> , pp. 312-313.	
Tischendorf, Caren	Humboldt Univ. of Berlin
18:00-18:20	WeF03.6
<i>Comparison of Regularisation Methods Referring to a Multi-Pendulum Case Study</i> , pp. 314-315.	
Hafner, Irene	Dwh GmbH
Pöll, Carina	Vienna Univ. of Tech
WeF04	FH HS 2
Mechanical Systems 1 (Regular Session)	
Chair: Ott, Christian	German Aerospace Center (DLR)
Co-Chair: Louca, Loucas	Univ. of Cyprus
16:20-16:40	WeF04.1
<i>A Closed-Form Approach to Determine the Base Inertial Parameters of Complex Structured Robotic Systems</i> , pp. 316-321.	
Klodmann, Julian	German Aerospace Center (DLR)
Lakatos, Dominic	German Aerospace Center (DLR)
Ott, Christian	German Aerospace Center (DLR)
Albu-Schaeffer, Alin	German Aerospace Center (DLR)
16:40-17:00	WeF04.2
<i>On the Inertially Decoupled Structure of the Floating Base Robot Dynamics</i> , pp. 322-327.	
Garofalo, Gianluca	German Aerospace Center (DLR)
Henze, Bernd	German Aerospace Center (DLR)
Englsberger, Johannes	German Aerospace Center (DLR)
Ott, Christian	German Aerospace Center (DLR)
17:00-17:20	WeF04.3
<i>Reduced Equations of Motion for a Wheeled Inverted Pendulum</i> , pp. 328-333.	
Delgado Londoño, Sergio	Tech. Univ. München
Gajbhiye, Sneha	IIT Bombay

Banavar, Ravi N.	Indian Inst. of Tech
17:20-17:40	WeF04.4
<i>Finite Segment Model Complexity of an Euler-Bernoulli Beam</i> , pp. 334-340.	
Louca, Loucas	Univ. of Cyprus
17:40-18:00	WeF04.5
<i>Force Control Strategy for the In-Vivo Robot During Stomach Biopsy*</i> .	
Sutar, Mihir Kumar	VEER SURENDRA SAI Univ. OF Tech.
Pathak, Pushparaj Mani	Indian Inst. of Tech. Roorkee, 247667
Mehta, Narinder Kumar	INDIAN INTITUTE OF Tech. ROORKEE
Sharma, Appurba Kumar	INDIAN Inst. OF Tech. ROORKEE

WeF05	FH HS 4
MS: Multiscale Modeling of Transport and Flow-Problems 1 (Minisymposium)	

Chair: Geiser, Juergen	Ruhr-Univ. of Bochum
Co-Chair: Bianca, Carlo	Sorbonne Univ. UPMC Univ. Paris 06, UMR 7600, Lab. de Physique Théorique de la Matière Condensée, CNRS, UMR 7600 LP

16:20-16:40	WeF05.1
<i>Modelling of Langevin Equations by the Method of Multiple Scales</i> , pp. 341-345.	
Geiser, Juergen	Ruhr-Univ. of Bochum

16:40-17:00	WeF05.2
<i>Reaction-Diffusion Approach to Somite Formation</i> , pp. 346-351.	
Lemarchand, Annie	CNRS, Univ. Pierre Et Marie Curie
Bianca, Carlo	Univ. Pierre Et Marie Curie

17:00-17:20	WeF05.3
<i>Smoothed Particle Hydrodynamics and Model-Order Reduction for Efficient Modeling of Fluid-Structure Interaction</i> , pp. 352-353.	
Schörgenhuber, Markus	Linz Center of Mechatronics
Humer, Alexander	Inst. of Tech. Mechanics, Johannes Kepler Univ. Lin
Gerstmayr, Johannes	Inst. of Mechatronics, Univ. of Innsbruck

17:20-17:40	WeF05.4
<i>Fluid Flow through Cracks Using a Novel Finite Element Method Based on XFEM*</i> .	
Gill, Peter	AMEC Clean Energy

Technical Program for Thursday February 19, 2015

ThAPL	FH HS 8
What Has Instrumental Variable Method to Offer for System Identification? (Plenary Session)	
09:00-09:40	ThAPL.1
<i>What Has Instrumental Variable Method to Offer for System Identification?</i> , pp. 354-359.	
Gilson, Marion	Univ. of Lorraine
ThB01	FH HS 8
Electrical Systems 1 (Regular Session)	
Chair: Dyczij-Edlinger, Romanus	Saarland Univ.
Co-Chair: Kemmetmueller, Wolfgang	Vienna Univ. of Tech.
09:40-10:00	ThB01.1
<i>Magnetic Equivalent Circuit Modeling of a Saturated Surface-Mounted Permanent Magnet Synchronous Machine</i> , pp. 360-365.	
Faustner, David	Vienna Univ. of Tech
Kemmetmueller, Wolfgang	Vienna Univ. of Tech
Kugi, Andreas	Vienna Univ. of Tech
10:00-10:20	ThB01.2
<i>Some Model Properties to Control a Permanent Magnet Machine Using a Controlled Invariant Subspace</i> , pp. 366-371.	
Mercorelli, Paolo	Leuphana Univ. of Lueneburg
Sergiyenko, Oleg	Autonomous Univ. of Baja California
Hernandez-Balbuena, Daniel	Univ. Autonoma De Baja California
Rodriguez-Quifonez, Julio	Baja California Autonomous Univ
Flores-Fuentes, Wendy	Baja California Autonomous Univ
Basaca-Preciado, Luis	Baja California Autonomous Univ
10:20-10:40	ThB01.3
<i>Availability Assessment of Electric Power Based on Switch Reliability Modelling with Dynamic Bayesian Networks: Case Study of Electrical Distribution Network*</i> .	
Lakehal, Abdelaziz	Department of Mechanical Engineering, Univ. of Souk Ahras,
Ghemari, Zine	Electrical Engineering Department, Univ. of M'sila, Algeria
10:40-11:00	ThB01.4
<i>Modelling, Simulation and Identification of Heat Loss Mechanisms for Parabolic Trough Receivers Installed in Concentrated Solar Power Plants</i> , pp. 372-377.	
Caron, Simon	Deutsches Zentrum Für Luft Und Raumfahrt (DLR); Inst. Für So
Röger, Marc	Deutsches Zentrum Für Luft Und Raumfahrt (DLR); Inst. Für So
ThB03	FH HS 3
MS: Engineering Applications of Fractional Derivatives (Minisymposium)	
Chair: Goodwine, Bill	Univ. of Notre Dame
Co-Chair: Maione, Guido	Pol. di Bari
09:40-10:00	ThB03.1
<i>Four Ways to Interpret Temporal Memory Operators in the Wave Equation</i> , pp. 378-379.	
Holm, Sverre	Univ. of Oslo
10:00-10:20	ThB03.2
<i>Recent Results in Fractional-Order Modeling for Multi-Agent Systems and Linear Friction Welding</i> , pp. 380-381.	
Goodwine, Bill	Univ. of Notre Dame
Leyden, Kevin	Univ. of Notre Dame
10:20-10:40	ThB03.3
<i>Fractional-Order Modeling of High-Pressure Fluid-Dynamic Flows: An Automotive Application</i> , pp. 382-387.	
Lino, Paolo	Pol. Di Bari
Maione, Guido	Pol. Di Bari
Saponaro, Fabrizio	Pol. Di Bari

10:40-11:00	ThB03.4
<i>Optimized Identification Method for Fractional Heating Processes on Heterogeneous Materials</i> , pp. 388-389.	
Caponetto, Riccardo	Univ. of Catania
Sapuppo, Francesca	Univ. of Catania
Tomasello, Vincenzo	Univ. of Catania
ThB04	FH HS 2
MS: Free Boundary Problems in Applications 1 (Minisymposium)	
Chair: Kimmerle, Sven-Joachim	Univ. der Bundeswehr München
Co-Chair: Dirk, Peschka	Weierstrass Inst. for Applied Analysis and Stochastics
09:40-10:00	ThB04.1
<i>Numerics of Contact Line Motion for Thin Films</i> , pp. 390-393.	
Dirk, Peschka	Weierstrass Inst. for Applied Analysis and Stochastics
10:00-10:20	ThB04.2
<i>Sharp Interface Limits of an Anisotropic Phase Field Model for Solid-State Dewetting</i> , pp. 394-395.	
Dziwnik, Marion	TU Berlin
Muench, Andreas	Univ. of Oxford
Wagner, Barbara	Department of Mathematics, TU Berlin
10:20-10:40	ThB04.3
<i>A Free Boundary Problem for Interfaces in Forward-Backward Lattice Diffusion</i> , pp. 396-400.	
Helmers, Michael	Univ. of Bonn
10:40-11:00	ThB04.4
<i>Sharp Interface Limits of the Cahn-Hilliard Equation with Degenerate Mobility</i> , pp. 401-402.	
Lee, Alpha Albert	Univ. of Oxford
Suli, Endre	Univ. of Oxford
Andreas, Muench	Univ. of Oxford
ThB05	FH HS 4
Identification (Regular Session)	
Chair: Gilson, Marion	Univ. of Lorraine
Co-Chair: Glück, Tobias	Vienna Univ. of Tech.
09:40-10:00	ThB05.1
<i>Identification of Wiener Time Delay Systems Based on Hierarchical Gradient Approach</i> , pp. 403-408.	
Atitallah, Asma	Enig
Bedoui, Saïda	Gabes Univ. National Engineering School of Gabes
Abderrahim, Kamel	Gabes Univ
10:00-10:20	ThB05.2
<i>Determination of Leaky Confined Aquifer Parameters by a Multilayer Perceptron Neural Network*</i> .	
Azari, Tahereh	Shiraz Univ
Samani, Nozar	Shiraz Univ
Mansoori, Eghbal	Shiraz Univ
10:20-10:40	ThB05.3
<i>Towards the Possibility of Applying the Wavelet Analysis to Derive Predicting Models</i> , pp. 409-414.	
Sakrutina, Ekaterina	V.A. Trapeznikov Inst. of Control Sciences, Russian Acad
Bakhtadze, Natalia	V.A. Trapeznikov Inst. of Control Sciences, Russian Acad
10:40-11:00	ThB05.4
<i>A Nonparametric Measure of Dependence in the Statistical Linearization</i> , pp. 415-420.	
Chernyshov, Kirill	V.A. Trapeznikov Inst. of Control Sciences
Sakrutina, Ekaterina	V.A. Trapeznikov Inst. of Control Sciences

ThC01		FH HS 8
MS: Computational Methods in Modelling and Simulation of Fluid Power Systems (Minisymposium)		
Chair: Manhartgruber, Bernhard		Johannes Kepler Univ.
Co-Chair: Montorsi, Luca		Univ. of Modena and Reggio Emilia
11:20-11:40		ThC01.1
<i>Multi-Phase and Multi-Component CFD Analysis of a Load – Sensing Proportional Control Valve</i> , pp. 421-426.		
Bigliardi, Elisa	DISMI - Univ. of Modena and Reggio Emilia	
Francia, Marco	DISMI - Univ. of Modena and Reggio Emilia	
Milani, Massimo	DISMI - Univ. of Modena and Reggio Emilia	
Montorsi, Luca	DISMI - Univ. of Modena and Reggio Emilia	
Paltrinieri, Fabrizio	DISMI - Univ. of Modena and Reggio Emilia	
Stefani, Matteo	DISMI - Univ. of Modena and Reggio Emilia	
11:40-12:00		ThC01.2
<i>A Combined Methodology for Studying the Axial Balancing Mechanism of Orbit Annular Hydraulic Machines</i> , pp. 427-432.		
Bigliardi, Elisa	Univ. of Modena and Reggio Emilia	
Francia, Marco	Univ. of Modena and Reggio Emilia	
Milani, Massimo	Univ. of Modena and Reggio Emilia	
Montorsi, Luca	Univ. of Modena and Reggio Emilia	
Paltrinieri, Fabrizio	Univ. of Modena and Reggio Emilia	
Stefani, Matteo	Univ. of Modena and Reggio Emilia	
12:00-12:20		ThC01.3
<i>A Study on Mesh Refinement in OpenFOAM for Wave Propagation Problems in Fluid Power Systems</i> , pp. 433-434.		
Fries, Clemens	Jku	
Manhartgruber, Bernhard	Johannes Kepler Univ	
12:20-12:40		ThC01.4
<i>Low Frequency Correction of a Multi-Degrees-Of-Freedom Model for Hydraulic Pipeline Systems</i> , pp. 435-440.		
Mikota, Gudrun	Johannes Kepler Univ. Linz	
12:40-13:00		ThC01.5
<i>A Reference Model for Modal Approximations of Linear Transmission Line Dynamics</i> , pp. 441-446.		
Manhartgruber, Bernhard	Johannes Kepler Univ	
ThC02		FH HS 7
MS: Mathematical Modelling and Control of Bio-Chemical Processes 1 (Minisymposium)		
Chair: Bogaerts, Philippe		Univ. Libre de Bruxelles
Co-Chair: Van Impe, Jan F.M.		KU Leuven
11:20-11:40		ThC02.1
<i>Development and Analysis of a Mathematical Model for a Synthetic Biological Cell</i> , pp. 447-452.		
Schneider, Eugenia	Max-Planck-Inst. for Dynamics of Complex Tech. Systems M	
Mangold, Michael	Max-Planck-Inst. for Dynamics of Complex Tech. Systems M	
11:40-12:00		ThC02.2
<i>On Stability Analysis of Genetic Regulatory Networks Represented by Delay-Differential Equations</i> , pp. 453-457.		
Haustenne, Laurie	Univ. Catholique De Louvain	
Bastin, Georges	Univ. Catholique De Louvain	
Coron, Jean-michel	Univ. Pierre Et Marie Curie	
Fontaine, Laetitia	Univ. Catholique De Louvain	
Hols, Pascal	Univ. Catholique De Louvain	
12:00-12:20		ThC02.3
<i>Symmetry Principles in Optimization Problems : An Application to Protein Stability Prediction</i> , pp. 458-463.		
Pucci, Fabrizio	Univ. Libre De Bruxelles	
Bernaerts, Katrien	Maastricht Univ	

Teheux, Fabian	Univ. Libre De Bruxelles	
Iliris, Dimitri	Univ. Libre De Bruxelles	
Rooman, Marianne	Univ. Libre De Bruxelles	
12:20-12:40		ThC02.4
<i>Metabolic Flux Analysis of Hybridoma Cells: Underdetermined Network and Influence of Batch and Perfusion Operating Modes</i> , pp. 464-469.		
Fernandes, Sofia	Univ. of Mons	
Bastin, Georges	Univ. Catholique De Louvain	
Vande Wouwer, Alain	Univ. De Mons	
12:40-13:00		ThC02.5
<i>Structural Identifiability Analysis of the Anaerobic Digestion Model No. 1 Using a Local Algebraic Observability Approach</i> , pp. 470-475.		
Lauwers, Joost	Katholieke Univ. Leuven	
Nimmegeers, Philippe	KU Leuven	
Logist, Filip	Katholieke Univ. Leuven	
Van Impe, Jan F.M.	KU Leuven	
ThC03		FH HS 3
MS: Distributed Parameter Systems 1 (Minisymposium)		
Chair: Schöberl, Markus		Johannes Kepler Univ. of Linz
Co-Chair: Schlacher, Kurt		Johannes Kepler Univ. Linz
11:20-11:40		ThC03.1
<i>Infinite Dimensional Port Hamiltonian Representation of Reaction Diffusion Processes</i> , pp. 476-481.		
Zhou, Weijun	LAGEP, Univ. of Lyon1	
Hamroun, Boussad	LAGEP, Univ. of Lyon1	
Le Gorrec, Yann	Femto-St, Ensmm	
Couenne, Françoise	LAGEP, Univ. of Lyon1	
11:40-12:00		ThC03.2
<i>Distributed and Backstepping Boundary Controls to Achieve IDA-PBC Design</i> , pp. 482-487.		
Vu, Trang	LCIS Lab	
Lefevre, Laurent	Univ. Grenoble Alpes	
Nouailletas, Rémy	Cea/irfm	
12:00-12:20		ThC03.3
<i>Asymptotic Stabilisation of Distributed Port-Hamiltonian Systems by Boundary Energy-Shaping Control</i> , pp. 488-493.		
Macchelli, Alessandro	Univ. of Bologna - Italy	
Le Gorrec, Yann	Femto-St, Ensmm	
Ramirez, Hector	Femto-St, Ufc	
12:20-12:40		ThC03.4
<i>Heat Transfer with Specular Reflections in an Experimental Annealing Device</i> , pp. 494-499.		
Jadachowski, Lukas	Vienna Univ. of Tech	
Steinboeck, Andreas	Vienna Univ. of Tech	
Kugi, Andreas	Vienna Univ. of Tech	
12:40-13:00		ThC03.5
<i>How to Choose the State for Distributed-Parameter Systems, a Geometric Point of View</i> , pp. 500-501.		
Schlacher, Kurt	Johannes Kepler Univ. Linz	
Schöberl, Markus	Johannes Kepler Univ. of Linz	
ThC04		FH HS 2
Mechanical Systems 2 (Regular Session)		
Chair: Murray-Smith, David.		Univ. of Glasgow
Co-Chair: Steinboeck, Andreas		Vienna Univ. of Tech.
11:20-11:40		ThC04.1
<i>Modelling and Simulation of Passive Limited-Slip Differentials</i> , pp. 502-507.		
Forstinger, Martin	Graz Univ. of Tech	
Bauer, Robert	Kristl, Seibt & Co GmbH	
Hofer, Anton	Graz Univ. of Tech	
11:40-12:00		ThC04.2
<i>Mathematical Modeling and Analysis of a Hydrostatic Drive Train</i> , pp. 508-513.		
Zeman, Paul	Vienna Univ. of Tech	

Kemmetmueller, Wolfgang
Kugi, Andreas

Vienna Univ. of Tech
Vienna Univ. of Tech

12:00-12:20 ThC04.3

Dynamical Modeling of Constraints with Friction in Mechanical Systems, pp. 514-519.

Specker, Thomas Univ. of Ulm
Buchholz, Michael Univ. Ulm
Dietmayer, Klaus Christian Univ. of Ulm
Jürgen

12:20-12:40 ThC04.4

Use of Complex Signals in Modelling of Journal Bearings, pp. 520-525.

Wagnerova, Renata VSB-Tech. Univ. of Ostrava
Tůma, Jiří VSB - Tech. Univ. of Ostrava, Faculty
of Mechanical Eng

12:40-13:00 ThC04.5

*Prediction of Surface Rewetting Temperature During Jet Impingement Cooling**.

Agrawal, Chitranjan Coll. of Tech. and Engineering
Udaipur
Ravi, Kumar Indian Inst. of Tech. Roorkee
Gupta, Akhilesh Indian Inst. of Tech. Roorkee

ThC05 FH HS 4

Control Systems 1 (Regular Session)

Chair: Kugi, Andreas Vienna Univ. of Tech.
Co-Chair: Atanasijevic-Kunc,
Maja Univ. of Ljubljana

11:20-11:40 ThC05.1

Designing Model and Control System Using Evolutionary Algorithms, pp. 526-531.

Corn, Marko INEA D.o.o
Atanasijevic-Kunc, Maja Univ. of Ljubljana

11:40-12:00 ThC05.2

Proportional-Integral-Observer: A Brief Survey with Special Attention to the Actual Methods Using ACC Benchmark, pp. 532-537.

Bakhshande, Fateme Duisburg-Essen Univ
Söffker, Dirk Univ. of Duisburg-Essen

12:00-12:20 ThC05.3

Bond-Graph-Based Multivariable Non Linear UIO-Type Estimation, pp. 538-543.

Tarasov, Evgeny Ec. Centrale De Lille
Sueur, Christophe Ec. CENTRALE DE LILLE
Ould Bouamama, Belkacem Ec. Pol. De Lille
Dauphin-Tanguy, Geneviève Ec. Centrale De Lille

12:20-12:40 ThC05.4

*Integrated Optimal Controller for Polyvalent Heating/Cooling Systems with Minimal Cost and Energy Usage**.

Muffato, Leonardo Angelo Sauter Ag
Bianchi, Mikael SUPSI, Inst. of Applied Electronics
Wemhoener, Carsten Univ. of Applied Sciences Rapperswil
Kunz, Dominique SAUTER AG, Basel, Switzerland

12:40-13:00 ThC05.5

Multivariable Control of Large Variable-Speed Wind Turbines for Generator Power Regulation and Load Reduction, pp. 544-549.

Njiri, Jackson Githu Univ. of Duisburg-Essen
Liu, Yan Univ. of Duisburg-Essen, Germany
Söffker, Dirk Univ. of Duisburg-Essen

ThD01 FH HS 8

Electrical Systems 2 (Regular Session)

Chair: Haase, Joachim Fraunhofer-Gesellschaft e.V.
Co-Chair: Detz, Hermann Vienna Univ. of Tech.

14:00-14:20 ThD01.1

Metropolis Monte Carlo Based Relaxation of Atomistic III-V Semiconductor Models, pp. 550-555.

Detz, Hermann Vienna Univ. of Tech

Strasser, Gottfried Vienna Univ. of Tech

14:20-14:40 ThD01.2

Correlated Noise Description Using HDLs, pp. 556-561.

Haase, Joachim Fraunhofer-Gesellschaft E.v
Lange, André Fraunhofer Inst. for Integrated
Circuits IIS

14:40-15:00 ThD01.3

Pull-In Range of the Classical PLL with Impulse Signals, pp. 562-567.

Alexandrov, K. D. Saint-Petersburg State Univ
Kuznetsov, Nikolay Saint-Petersburg State Univ
Leonov, Gennady Saint-Peterburg State Univ
Neittaanmaki, Pekka Univ. of Jyväskylä
Seledzhi, Svetlana St.Petersburg State Univ

15:00-15:20 ThD01.4

Simulation of the Classical Analog Phase-Locked Loop Based Circuits, pp. 568-573.

Kuznetsov, Nikolay Saint-Petersburg State Univ
Leonov, Gennady Saint-Peterburg State Univ
Yuldashev, Marat Saint Petersburg State Univ
Yuldashev, Renat Univ. of Jyväskylä

ThD02 FH HS 7

MS: Mathematical Modelling and Control of Bio-Chemical Processes 2 (Minisymposium)

Chair: Bogaerts, Philippe Univ. Libre de Bruxelles
Co-Chair: Van Impe, Jan F.M. KU Leuven

14:00-14:20 ThD02.1

Kriging Based Iterative Parameter Estimation Procedure for Biotechnology Applications with Nonlinear Trend Functions, pp. 574-579.

Freier, Lars Forschungszentrum Jülich
von Lieres, Eric Forschungszentrum Jülich

14:20-14:40 ThD02.2

Bogaerts-VanImpe; Set-Membership Identification of an Agro-Ecosystem from a Small Data Set: The Case of Ammonia Volatilisation in a Flooded Rice Field, pp. 580-585.

Khairudin, Nurulhuda Biobased Chemistry and Tech.
Wageningen Univ
Struik, Paul C. Centre for Crop Systems Analysis,
Wageningen Univ
Keesman, Karel J. Biobased Chemistry and Tech.
Wageningen Univ

14:40-15:00 ThD02.3

Parameter Identification of the Droop Model Using Optimal Experiment Design, pp. 586-591.

Benavides, Micaela Univ. De Mons
Telen, Dries KU Leuven
Lauwers, Joost KU Leuven
Logist, Filip KU Leuven
Van Impe, Jan F.M. KU Leuven
Vande Wouwer, Alain Univ. De Mons

ThD03 FH HS 3

MS: Distributed Parameter Systems 2 (Minisymposium)

Chair: Schlacher, Kurt Johannes Kepler Univ. Linz
Co-Chair: Schöberl, Markus Johannes Kepler Univ. of Linz

14:00-14:20 ThD03.1

Bi-Zone Modelling and Simulation of Twin-Screw Extrusion Process with Variable Screw Speed, pp. 592-597.

Lotero, Fernando Univ. De Concepción
Couenne, Françoise Univ. of Lyon 1
Maschke, Bernhard Univ. Claude Bernard of Lyon
Sbarbaro, Daniel G. Univ. De Concepcion

14:20-14:40 ThD03.2

Dynamical Models of Axially Moving Rods with Tensile and Bending Stiffness, pp. 598-603.

Steinboeck, Andreas Vienna Univ. of Tech

Baumgart, Michael	Vienna Univ. of Tech
Stadler, Georg	Vienna Univ. of Tech
Saxinger, Martin	Vienna Univ. of Tech
Kugi, Andreas	Vienna Univ. of Tech

14:40-15:00 ThD03.3

Modeling the Dynamics of a Flexible Belt Drive Using the Equations of a Deformable String with Discontinuities, pp. 604-609.

Vetyukov, Yury	Johannes Kepler Univ. Linz
Eliseev, Vladimir	St. Petersburg State Pol. Univ
Krommer, Michael	Vienna Univ. of Tech

15:00-15:20 ThD03.4

Lagrangian and Port-Hamiltonian Formulation for Distributed-Parameter Systems, pp. 610-615.

Schöberl, Markus	Johannes Kepler Univ. of Linz
Schlacher, Kurt	Johannes Kepler Univ. Linz

ThD04 FH HS 2

MS: Free Boundary Problems in Applications 2 (Minisymposium)

Chair: Dirk, Peschka	Weierstrass Inst. for Applied Analysis and Stochastics
Co-Chair: Kimmerle, Sven-Joachim	Univ. der Bundeswehr München

14:00-14:20 ThD04.1

A Gradient Flow Approach for Dissipative Equations on a Free Domain, pp. 616-620.

Zaal, Martijn	Univ. of Bonn
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14:20-14:40 ThD04.2

Modelling, Simulation and Stability of Free Surface and Bulk Nanobubbles in Hydrogen Electrolysis, pp. 621-626.

Kimmerle, Sven-Joachim	Univ. Der Bundeswehr München
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14:40-15:00 ThD04.3

Towards Topology Optimization in Quasi-Static Elastoplasticity, pp. 627-628.

Schleicher, Stephan	Department of Mathematics, Chemnitz Univ. of Tech
Herzog, Roland	Department of Mathematics, Chemnitz Univ. of Tech

15:00-15:20 ThD04.4

A Method to Model Impulsive Multi-Body-Dynamics Using Riemann-Stieltjes-Integrals, pp. 629-634.

Michael, Johannes	Univ. of the Federal Armed Forces Munich
Gerdt, Matthias	Univ. of the Federal Armed Forces Munich

ThD05 FH HS 4

MS: Multiscale Modeling of Transport and Flow-Problems 2 (Minisymposium)

Chair: Bianca, Carlo	Sorbonne Univ. UPMC Univ. Paris 06, UMR 7600, Lab. de Physique Théorique de la Matière Condensée, CNRS, UMR 7600 LP
Co-Chair: Geiser, Juergen	Ruhr-Univ. of Bochum

14:00-14:20 ThD05.1

Modelling Approach for Mobile and Immobile Transport Problems with Multiple Time-Scales, pp. 635-639.

Geiser, Juergen	Ruhr-Univ. of Bochum
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14:20-14:40 ThD05.2

Multiscale Analysis of a Retarded Equation: From Kinetic to Macroscopic Scale, pp. 640-644.

Bianca, Carlo	Sorbonne Univ. UPMC Univ. Paris 06, UMR 7600, Lab
Lemarchand, Annie	Sorbonne Univ. UPMC Univ. Paris 6

14:40-15:00 ThD05.3

A Discrete/Continuous Numerical Approach to Multi-Physics, pp. 645-650.

Peters, Bernhard	Univ. of Luxembourg
Besson, Xavier	Univ. of Luxembourg
Estupinan Donoso, Alvaro	Univ. of Luxembourg

Antonio	
Mahmoudi, Amirhoushang	Univ. of Luxembourg
Mohseni, Mohamad	Univ. of Luxembourg

ThEPL To be define

Poster Session - Discussion and Student Contributions (Regular Session)

15:20-16:40 ThEPL.1

*Three Dimensional Linear and Nonlinear Response of Rcc Dams**.

Karabulut, Muhammet	Univ.
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15:20-16:40 ThEPL.2

Methods of Inverse Simulation for Nonlinear Ship Steering Systems Investigations, pp. 651-652.

Murray-Smith, David	Univ. of Glasgow
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15:20-16:40 ThEPL.3

Closed Form Model of Manipulators with Highly fl Exible Links, pp. 653-654.

Scaglioni, Bruno	Pol. Di Milano
Ferretti, Gianni	Pol. Di Milano

15:20-16:40 ThEPL.4

Modeling of Elastic Robotic Arm Using a Soft-Computing Algorithm, pp. 655-656.

Tamimi, Hammam	Univ. of Duisburg-Essen
Söffker, Dirk	Univ. of Duisburg-Essen

15:20-16:40 ThEPL.5

Modeling, Control, and Powermanagement Optimization for an Emulated Multi-Source Hybrid Drivetrain, pp. 657-658.

Moulik, Bedatri	Univ. of Duisburg-Essen
Söffker, Dirk	Univ. of Duisburg-Essen

15:20-16:40 ThEPL.6

Network Based Simulation in Water Construction, pp. 659-660.

Brunner, Stefan	Strabag AG
Höfinger, Gerhard	Strabag AG

15:20-16:40 ThEPL.7

A New Tool for Visual Modeling - Rand Model Designer, pp. 661-662.

Senichenkov, Yuri Borisovitch	Saint Petersburg State Pol. Univ
Isakov, Andrey	St. Patersburg Pol. State Univ
Kolesov, Yuri Borisovitch	CP_Center

15:20-16:40 ThEPL.8

Efficient Modelling Approaches in Control, pp. 663-664.

Zupančič, Borut	Univ. of Ljubljana, Faculty of Electrical Engineering
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15:20-16:40 ThEPL.9

*Neutral Grounding in Middle Voltage Power Systems: Simulation Model**.

Ravlić, Sonja	Ravel d.o.o.
Marušić, Ante	Faculty of Electrical Engineering and Computing

15:20-16:40 ThEPL.10

Numerical Solution of an Optimal Control Problem in Cancer Treatment: Combined Radio and Anti-Angiogenic Therapy, pp. 665-666.

Chudej, Kurt	Univ. of Bayreuth
Wagner, Lisa	Univ. of Tech. Darmstadt
Pesch, Hans Josef	Univ. of Bayreuth

15:20-16:40 ThEPL.11

Information Management Platform Model for Local Sightseeing and Disaster Prevention Information, pp. 667-668.

Tsuchiya, Takeshi	Tokyo Univ. of Science, Suwa
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15:20-16:40 ThEPL.12

Influence of Sample Period Variation to MPC Trajectory Tracking of Mobile Robot, pp. 669-670.

Klancar, Gregor	Univ. of Ljubljana
Skrjanc, Igor	Univ. of Ljubljana

15:20-16:40 ThEPL.13

Modeling and Design of High-Speed FM-AFM Driver Electronics Using Cadence Virtuoso and Simulink, pp. 671-672.

Schlecker, Benedikt	Univ. of Ulm, Inst. of Microelectronics
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Anna, Eichel	Univ. of Ulm, Inst. of Microelectronics	Meier, J. Fabian	TU Dortmund Univ
Ortmanns, Maurits	Univ. of Ulm, Inst. of Microelectronics	Goedicke, Ina	TU Dortmund Univ
Fantner, Georg Ernest	École Pol. Fédérale De Lausanne, Lab. for Bio An	Clausen, Uwe	TU Dortmund Univ
Anders, Jens	Univ. of Ulm, Inst. of Microelectronics		
15:20-16:40	THEPL.14	15:20-16:40	THEPL.24
<i>GAMMA 3 - the System with Capabilities to Deciding of Declaratively Defined Tasks for Computer Aided Control Systems Design*</i> .		<i>System Entity Structure Ontology Toolbox for MATLAB/Simulink: Used for Variant Modelling</i> , pp. 685-686.	
Stepanov, Mikhail	Yuri Gagarin State Tech. Univ. of Saratov	Pawletta, Thorsten	Hochschule Wismar
		Pascheka, Daniel	Hochschule Wismar - Univ. of Applied Sciences
		Schmidt, Artur	Hochschule Wismar - Univ. of Applied Sciences
15:20-16:40	THEPL.15	15:20-16:40	THEPL.25
<i>Genetic Modelling for Selecting Optimal Machine Configurations in RMS*</i> .		<i>Robotic Control & Visualization Toolbox for MATLAB</i> , pp. 687-688.	
Hasan, Faisal	Aligarh Muslim Univ	Pawletta, Thorsten	Hochschule Wismar
Jain, Pk	MIED, IIT Roorkee	Freymann, Birger	Hochschule Wismar - Univ. of Applied Sciences
Kumar, Dinesh	MIED, IIT Roorkee	Deatcu, Christina	Hochschule Wismar - Univ. of Applied Sciences
15:20-16:40	THEPL.16	Schmidt, Artur	Hochschule Wismar - Univ. of Applied Sciences
<i>Neural Based Controller for Smart Detection of Crack in Cracked Cantilever Beam*</i> .		15:20-16:40	THEPL.26
Sutar, Mihir Kumar	VEER SURENDRA SAI Univ. OF Tech.	<i>Two Dimensional Mathematical Model of Heat-Transmission Using MAPLE</i> , pp. 689-690.	
Pattnaik, Sarojrani	DEPARTMENT OF MECHANICAL ENGINEERING, VEER SURENDRA SAI Univ. OF Tech.	Perjesi-Hamori, Ildiko	Univ. of Pécs
Rana, Jayadev	VEER SURENDRA SAI Univ. OF Tech.	15:20-16:40	THEPL.27
15:20-16:40	THEPL.17	<i>Distributed Parameter Model of the Buck Converter with Constant Inductive Load</i> , pp. 691-692.	
<i>Is Driving Assisted Behaviour Infectious? Using Spectral Analysis to Understand Car Following Behaviour of Naive Drivers</i> , pp. 673-674.		Huang, Chenzi	Tech. Univ. Dresden
Stemmler, Eric	German Aerospace Center	Woittennek, Frank	Tech. Univ. Dresden
Oeltze, Katharina	German Aerospace Center	Roebenack, Klaus	Tech. Univ. Dresden
Schießl, Caroline	German Aerospace Center	15:20-16:40	THEPL.28
15:20-16:40	THEPL.18	<i>Taylor Series Based Solution of Linear ODEs Systems and MATLAB Solvers Comparison</i> , pp. 693-694.	
<i>A Multi-Objective Multi-Start Algorithm for a Real-World Open Vehicle Routing Problem*</i> .		Satek, Vaclav	VSZ TU Ostrava
Hernández-Díaz, Alfredo G.	PABLO DE OLAVIDE Univ.	Kocina, Filip	FIT VUT Brno
LÓpez-SÁnchez, Ana Dolores	PABLO DE OLAVIDE Univ.	Kunovsky, Jiri	FIT VUT Brno
Molina, Julián	Univ. OF MÁLAGA	Schirrer, Alexander	Vienna Univ. of Tech
Caballero, Rafael	Univ. OF MÁLAGA	15:20-16:40	THEPL.29
Vigo, Daniele	Univ. OF BOLOGNA	<i>Numerical Investigation and Modeling of the Noncylindrical Viscoplastic Flows*</i> .	
15:20-16:40	THEPL.19	Jamel Ferchichi, Jamel Ferchichi	Univ. of Monastir,
<i>Modelling of Low Power Electronic Loads in Harmonic Analysis</i> , pp. 675-676.		Khenous, Houari Boumediene	King Khalid Univ.
Tokic, Amir	Univ. of Tuzla	15:20-16:40	THEPL.30
Jukan, Admir	Univ. of Tuzla	<i>SVD-AORA Method for Dynamic Linear Time Invariant Model Order Reduction</i> , pp. 695-696.	
Suljkanovic, Vedran	EAAE - ABB AG Wien	Kouki, Mohamed	Electronics
15:20-16:40	THEPL.20	Abbes, Mehdi	Electronics
<i>P(t)mor: Time-Varying Parametric Model Order Reduction and Applications for Moving Loads</i> , pp. 677-678.		Mami, Abdelkader	Electronics
Cruz Varona, Maria	Inst. of Automatic Control, Tech. Univ. München	15:20-16:40	THEPL.31
Geuss, Matthias	Tech. Univ. München	<i>Modelling "Breaking Bad": An Economic Model of Drugs and Population Dynamics to Predict How the Series Itself Feeds Back into the Drug Market</i> , pp. 697-698.	
Lohmann, Boris	Tech. Univ. München	Rössler, Christiane	Univ. of Graz
15:20-16:40	THEPL.21	Witzmann, Magdalena	Univ. of Graz
<i>Advances on the Adaptive Selection of Both Shifts and Reduced Order in H2-Pseudo-Optimal Model Reduction</i> , pp. 679-680.		Schmickl, Thomas	Artificial Life Lab of the Department of Zoology, Karl-Franzens
Castagnotto, Alessandro	Tech. Univ. München	15:20-16:40	THEPL.32
Panzer, Heiko K. F.	Tech. Univ. Muenchen	<i>Physiolibrary 2.3 – an Intuitive Tool for Integrative Physiology</i> , pp. 699-700.	
Wolf, Thomas	Univ	Mateják, Marek	1st Faculty of Medicine, Charles Univ. in Prague
Lohmann, Boris	Tech. Univ. München	Ježek, Filip	Czech Tech. Univ
15:20-16:40	THEPL.22	Tribula, Martin	1st Faculty of Medicine, Charles Univ. in Prague
<i>Equations of Motion with Redundant Coordinates for Mechanical Systems on Manifolds</i> , pp. 681-682.		Kofránek, Jiří	1st Faculty of Medicine, Charles Univ. in Prague
Konz, Matthias	Saarland Univ	15:20-16:40	THEPL.33
Rudolph, Joachim	Saarland Univ	<i>Model Predictive Control in Small Family House: Extravagance or Future of Energy Consumption in Households</i> , pp. 701-702.	
15:20-16:40	THEPL.23		
<i>Combining Discrete Optimization and Simulation to Understand Stochastic Hub Location Problems</i> , pp. 683-684.			
Dabidian, Peiman	TU Dortmund Univ		

Marušić, Ante	Univ. of Zagreb
Loncar, Drazen	Univ. of Zagreb
15:20-16:40	ThEPL.34
<i>Comparison between a Non-Linear and Linearized Three-Compartment Model of a Bioreactor for Hepatocyte Culturing</i> , pp. 703-704.	
Naghib, Seyed Danial	Univ. of Calabria
Di Renzo, Alberto	Univ. of Calabria
Curcio, Efrem	Univ. of Calabria
De Bartolo, Loredana	Inst. on Membrane Tech. National Res. Council of I
Di Maio, Francesco	Univ. of Calabria

15:20-16:40	ThEPL.35
<i>Taylor Series Based Differential Formulas</i> , pp. 705-706.	
Satek, Vaclav	VSB TU Ostrava
Necasova, Gabriela	FIT VUT Brno
Kunovsky, Jiri	FIT VUT Brno
Chaloupka, Jan	FIT VUT Brno
Veigend, Petr	FIT VUT Brno

ThF01	FH HS 8
MS: Model Reduction 4 (Minisymposium)	

Chair: Grepl, Martin	Numerical Mathematics, RWTH Aachen Univ.
Co-Chair: Saak, Jens	Max Planck Inst. for Dynamics of Complex Tech. Systems

16:40-17:00	ThF01.1
<i>Optimization Strategy for Parameter Sampling in the Reduced Basis Method</i> , pp. 707-712.	
Iapichino, Laura	Univ. of Konstanz
Volkwein, Stefan	Univ. Konstanz

17:00-17:20	ThF01.2
<i>Basis Generation Approaches for a Reduced Basis Linear Quadratic Regulator</i> , pp. 713-718.	
Schmidt, Andreas	Univ. of Stuttgart
Dihlmann, Markus	Univ. of Stuttgart
Haasdonk, Bernard	Univ. of Stuttgart

17:20-17:40	ThF01.3
<i>A Certified Reduced Basis Approach for Parametrized Linear-Quadratic Optimal Control Problems with Control Constraints</i> , pp. 719-720.	
Bader, Eduard	Aachen Inst. for Advanced Study in Computational Engineering
Kaercher, Mark	Aachen Inst. for Advanced Study in Computational Engineering
Grepl, Martin	Numerical Mathematics, RWTH Aachen Univ
Veroy-Grepl, Karen	Aachen Inst. for Advanced Study in Computational Engineering

17:40-18:00	ThF01.4
<i>Numerical Investigations of an Error Bound for Reduced Basis Approximations of Noncoercive Variational Inequalities</i> , pp. 721-726.	
Glas, Silke	Univ. of Duisburg-Essen
Urban, Karsten	Univ. of Ulm

18:00-18:20	ThF01.5
<i>The Empirical Cross Gramian for Parametrized Nonlinear Systems</i> , pp. 727-728.	
Himpe, Christian	Univ. of Muenster
Ohlberger, Mario	Univ. of Muenster

18:20-18:40	ThF01.6
<i>Interactive Simulations Using Localized Reduced Basis Methods</i> , pp. 729-730.	
Buhr, Andreas	Univ. of Muenster
Ohlberger, Mario	Univ. of Muenster

ThF02	FH HS 7
MS: Mathematical Modelling and Control of Bio-Chemical Processes 3 (Minisymposium)	

Chair: Van Impe, Jan F.M.	KU Leuven
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Co-Chair: Bogaerts, Philippe	Univ. Libre de Bruxelles
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16:40-17:00	ThF02.1
<i>Macroscopic Modelling of Intracellular Reserve Carbohydrates Production During Baker's Yeast Cultures</i> , pp. 731-736.	

Richelle, Anne	Univ
Bogaerts, Philippe	Univ. Libre De Bruxelles

17:00-17:20	ThF02.2
<i>Validation of a Simple Fouling Model for a Submerged Membrane Bioreactor</i> , pp. 737-742.	

Araujo Pimentel, Guilherme	Univ. De Mons
Dalmau, Montse	LEQUIA, Lab. of Chemical and Environmental Engineering, Un
Vargas, Alejandro	Inst. De Ingenieria UNAM
Comas, Joaquim	Univ. of Girona
Rodriguez-Roda, Ignasi	Catalan Inst. for Water Res
Rapaport, Alain	Inra
Vande Wouwer, Alain	Univ. De Mons

17:20-17:40	ThF02.3
<i>Thermodynamic Behavior-Rules for a Bacterial Individual-Based Model to Study the Denitrification Process</i> , pp. 743-748.	

Araujo Granda, Pablo Alejandro	Univ. Pol. De Catalunya
Gras Moreu, Anna	Univ. Pol. De Catalunya
Ginovart Gisbert, Marta	Univ. Pol. De Catalunya

17:40-18:00	ThF02.4
<i>Modelling Freezing Processes of High Concentrated Systems</i> , pp. 749-754.	

Lopez-Quiroga, Estefania	Univ. of Birmingham
Wang, Rui	Univ. of Birmingham
Gouseti, Ourania	Univ. of Birmingham
Fryer, Peter Jonathan	Univ. of Birmingham
Bakalis, Serafim	Univ. of Birmingham

ThF03	FH HS 3
Infinite-Dimensional Systems (Regular Session)	

Chair: Schöberl, Markus	Johannes Kepler Univ. of Linz
Co-Chair: Jadachowski, Lukas	Vienna Univ. of Tech.

16:40-17:00	ThF03.1
<i>Boundary Control of a Parallel-Flow Heat Exchange Process with Boundary Observation</i> , pp. 755-760.	

Sano, Hideki	Kobe Univ
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17:00-17:20	ThF03.2
<i>Noise and Fluctuations in Nanowire Biosensors</i> , pp. 761-765.	

Tulzer, Gerhard	Vienna Univ. of Tech
Heitzinger, Clemens	TU Wien

17:20-17:40	ThF03.3
<i>Capacity Drop and Traffic Hysteresis As a Consequence of Bounded Acceleration</i> , pp. 766-771.	

Khoshyaran, Megan	ETC Ec. Traffic Clinic
Lebacque, Jean-Patrick	Ifsttar

17:40-18:00	ThF03.4
<i>Optimal Design of Elastic Rod Motions Based on a Projection Approach</i> , pp. 772-777.	

Kostin, Georgy	Inst. for Problems in Mechanics of the Russian Acad. of Sc
Saurin, Vasily	Inst. for Problems in Mechanics of the Russian Acad. of Sc

ThF04	FH HS 2
MS: Modeling in Sport and Human Movement Science (Minisymposium)	

Chair: Baca, Arnold	Univ. Vienna
Co-Chair: Lames, Martin	TU München

16:40-17:00	ThF04.1
<i>Constants of Movement of Muscular Activation and Force-Velocity Relationship from Nonlinear Optimization</i> , pp. 778-779.	

Penasso, Harald	Univ. of Graz
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17:00-17:20	ThF04.2
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Normalized and Xpower to Generate Pacing Strategies in Road Cycling, pp. 780-781.

Dahmen, Thorsten Univ. of Konstanz
Saupe, Dietmar Univ. of Konstanz

17:20-17:40 ThF04.3

Towards Data-Based Assessment of Individual Tactics Skills in Team Sports Based on Fuzzy Petri Nets, pp. 782-783.

Serafini, Andrea RISC - Res. Inst. for Symbolic Computation
Leser, Roland Centre of Sport Science and Univ. Sports, Univ. of Vie
Hoch, Thomas Software Competence Center Hagenberg GmbH
Baca, Arnold Centre of Sport Science and Univ. Sports, Univ. of Vie
Moser, Bernhard Alois Software Competence Center Hagenberg GmbH

17:40-18:00 ThF04.4

Analysis of Tactical Defensive Behavior in Team Handball by Means of Artificial Neural Networks, pp. 784-785.

Tilp, Markus Univ. of Graz
Schrapf, Norbert Univ. of Graz

18:00-18:20 ThF04.5

Recurrence Analysis of Golfers' Performances on the PGA TOUR, pp. 786-787.

Stöckl, Michael Univ. of Vienna

18:20-18:40 ThF04.6

Modeling Soccer Matches by Recurrence Analyses, pp. 788-789.

Lames, Martin TU München
Plück, Denise TU München

ThF05 FH HS 4

Control Systems 2 (Regular Session)

Chair: Aschemann, Harald Univ. of Rostock
Co-Chair: Chudej, Kurt Univ. of Bayreuth

16:40-17:00 ThF05.1

Flatness Based Control of a Ball in Tube System, pp. 790-795.

Herrmann, Lukas Heilbronn Univ
Broecker, Markus Heilbronn Univ

17:00-17:20 ThF05.2

Ball on Ball: Modeling and Control of a Novel Experiment Set-Up, pp. 796-801.

Gahleitner, Reinhard Univ. of Applied Sciences Upper Austria

17:20-17:40 ThF05.3

Multi-Variable Integral Sliding Mode Control of a Two Degrees of Freedom Helicopter, pp. 802-807.

Butt, Saif Siddique Univ. of Rostock
Aschemann, Harald Univ. of Rostock

17:40-18:00 ThF05.4

Flight Path Optimization of a Hang-Glider in a Thermal Updraft, pp. 808-812.

Chudej, Kurt Univ. of Bayreuth
Klingler, Anna-Lena Fraunhofer-Inst. Für System Und Innovationsforschung ISI, Ka
Britzelmeier, Andreas Univ. of Bayreuth

18:00-18:20 ThF05.5

Modeling and Control of an Autonomous Hybrid Vehicle for Navigation and Guidance, pp. 813-818.

Moriwaki, Katsumi Daido Univ

18:20-18:40 ThF05.6

BEECLUST Used for Exploration Tasks in Autonomous Underwater Vehicles, pp. 819-824.

Bodi, Michael Karl-Franzens Univ. Graz
Möslinger, Christoph Artificial Life Lab of the Department of Zoology, Karl-Franzens
Thenius, Ronald Artificial Life Lab of the Department of Zoology, Karl-Franzens

Schmickl, Thomas

Artificial Life Lab of the Department of Zoology, Karl-Franzens

ThF06 SEM 101A

MS: Modelling of Dynamics and Control for Mobile Robots 1 (Minisymposium)

Chair: Bolotnik, Nikolay Inst. for Problems in Mechanics of the Russian Acad.
Co-Chair: Chernousko, Felix L. Russian Acad. of Sciences

16:40-17:00 ThF06.1

Swimming and Crawling Motility at Microscopic Scales: From Biological Templates to Bio-Inspired Devices, pp. 825-826.

DeSimone, Antonio SISSA, International School for Advanced Studies
Ciconofri, Giancarlo SISSA, International School for Advanced Studies

17:00-17:20 ThF06.2

Limless Locomotion on Solid Surfaces: A Case Study in Soft Bio-Inspired Robotics, pp. 827-828.

Ciconofri, Giancarlo SISSA, International School of Advanced Studies
DeSimone, Antonio Sissa

17:20-17:40 ThF06.3

Simple Modelling of the Rowing Process, pp. 829-833.

Karmanov, Sergey Inst. for Problems in Mechanics, Russia
Chernousko, Felix L. Russian Acad. of Sciences

17:40-18:00 ThF06.4

Modelling of Quasi-Static Motions for Three-Body Mobile Robot, pp. 834-835.

Chernousko, Felix L. Russian Acad. of Sciences
Figurina, Tatiana Inst. for Problems in Mechanics of the Russian Acad. of Sc

18:00-18:20 ThF06.5

Control of a Chain-Like Locomotion System Subject to Undulatory Excitation, pp. 836-841.

Bolotnik, Nikolay Inst. for Problems in Mechanics of the Russian Acad
Pivovarov, Mikhail Ilmenau Univ. of Tech
Zeidis, Igor Ilmenau Univ. of Tech
Zimmermann, Klaus Ilmenau Univ. of Tech

18:20-18:40 ThF06.6

An Approach to the Dynamics of Vibration-Driven Robots with Bristles, pp. 842-843.

Becker, Felix Tech. Univ. Ilmenau

Technical Program for Friday February 20, 2015

FrA01	FH HS 8
Operational Research and Planning (Regular Session)	
Chair: Music, Gasper	Univ. of Ljubljana
Co-Chair: George, K.M.	Oklahoma State Univ.
09:00-09:20	FrA01.1
<i>A Game-Theoretic Calibration Approach for Agent-Based Planning Simulations</i> , pp. 844-849.	
Buwaya, Julia	RWTH Aachen Univ
Cleophas, Catherine	RWTH Aachen Univ
09:20-09:40	FrA01.2
<i>A Reliability Measure for Time Series Forecasting Predictor</i> , pp. 850-855.	
George, K.M.	Oklahoma State Univ
Park, Nohpill	Oklahoma State Univ
Yang, Zhuxi	Oklahoma State Univ
09:40-10:00	FrA01.3
<i>Generation of Feasible Petri Net Based Scheduling Problem Solutions</i> , pp. 856-861.	
Mušič, Gašper	Univ. of Ljubljana, Faculty of Electrical Engineering
10:00-10:20	FrA01.4
<i>Adjacency in Hospital Planning</i> , pp. 862-867.	
Lorenz, Wolfgang E.	Vienna Univ. of Tech
Bicher, Martin	Dwh Simulation Services GmbH, Inst. of Analysis and Scientifi
Wurzer, Gabriel	Vienna UT
10:20-10:40	FrA01.5
<i>MODYPLAN: Early-Stage Hospital Simulation Based on Treatment Chains</i> , pp. 868-873.	
Wurzer, Gabriel	Vienna UT
Lorenz, Wolfgang E.	Vienna Univ. of Tech
Rößler, Matthias	DWH Simulation Services
Hafner, Irene	Dwh GmbH
Glock, Barbara	Dwh GmbH
Bruckner, Martin	Dwh GmbH
Popper, Nikolas	Dwh GmbH
FrA02	FH HS 7
MS: Modeling and Simulation to Support Sustainable Energy Systems and Water Treatment (Minisymposium)	
Chair: Juuso, Esko Kalevi	Univ. of Oulu
Co-Chair: Dahlquist, Erik	Mälardalen Univ.
09:00-09:20	FrA02.1
<i>Comparison Case between Modelica and Specialized Tools for Building Modelling</i> , pp. 874-879.	
Yebra, Luis J.	Ciemat
Fernandez Gonzalez, Daniel	Univ. De Almeria
09:20-09:40	FrA02.2
<i>Environmental Impacts and Benefits of Smart Home Automation: Life Cycle Assessment of Home Energy Management System</i> , pp. 880-885.	
Louis, Jean-Nicolas	Univ. of Oulu
Caló, Antonio	Univ. of Oulu
Leiviska, Kauko	Univ. of Oulu
Pongrácz, Eva	Univ. of Oulu
09:40-10:00	FrA02.3
<i>The Role and the Impact of Electric Vehicles on the Local Power Grid within the Northern Finland Climatic Conditions</i> , pp. 886-891.	
Caló, Antonio	Univ. of Oulu
Louis, Jean-Nicolas	Univ. of Oulu
Pongrácz, Eva	Univ. of Oulu
10:00-10:20	FrA02.4
<i>Evaluation of Fluidized Bed Condition by Image Analysis and Modelling</i> , pp. 892-897.	
Liukkonen, Mika	Univ. of Eastern Finland
Hiltunen, Teri	Foster Wheeler Ltd

Hiltunen, Yrjö	Univ. of Eastern Finland
10:20-10:40	FrA02.5
<i>Multivariate Analysis Models for Wood Properties Combined with Open Modelica Model for Process Performance Monitoring</i> , pp. 898-899.	
Skvaril, Jan	Mälardalen Univ
Kyprianidis, Konstantinos	Mälardalen Univ
Avelin, Anders	Mälardalen Univ
Odlare, Monica	Mälardalen Univ
Dahlquist, Erik	Mälardalen Univ
10:40-11:00	FrA02.6
<i>Monitoring of Water Processes Using Intelligent Condition Indicators</i> , pp. 900-901.	
Liukkonen, Mika	Univ. of Eastern Finland
Hiltunen, Yrjö	Univ. of Eastern Finland
Laakso, Ilkka	Stora Enso Fine Paper
Juntunen, Petri	Kuopio Waterworks
FrA03	FH HS 3
MS: Modelling of Dynamics and Control for Mobile Robots 2 (Minisymposium)	
Chair: Chernousko, Felix L.	Russian Acad. of Sciences
Co-Chair: Bolotnik, Nikolay	Inst. for Problems in Mechanics of the Russian Acad.
09:00-09:20	FrA03.1
<i>Dynamics and Control of a Suction-Type Wall-Climbing Robot</i> , pp. 902-903.	
Kuo, Chung-Hsien	National Taiwan Univ. of Science and Tech
Aniroh, Yunaff'atul	National Taiwan Univ. of Science and Tech
Yudha, Andika Pramanta	National Taiwan Univ. of Science and Tech
Chou, Hung-Chyun	National Taiwan Univ. of Science and Tech
Bolotnik, Nikolay	Inst. for Problems in Mechanics of the Russian Acad
Valery, Gradetsky	Russian Acad. of Sciences
Chernousko, Felix L.	Russian Acad. of Sciences
09:20-09:40	FrA03.2
<i>Cascaded Nonlinear Control of a Duocopter with Disturbance Compensation by an Unscented Kalman Filter</i> , pp. 904-909.	
Aschemann, Harald	Univ. of Rostock, Chair of Mechatronics
Meinlschmidt, Thomas	Univ. of Rostock, Chair of Mechatronics
09:40-10:00	FrA03.3
<i>Mathematical and Dynamic Model of the Lower Limb Exoskeleton and Synthesis of Anthropomorphic Gait*</i> .	
Aliseychik, Anton	Keldysh Inst. of Applied Mathematics
Orlov, Igor	Keldysh Inst. of Applied Mathematics
Pavlovsky, Vladimir E.	Keldysh Inst. for Applied Mathematics
Platonov, Alexander	Keldysh Inst. of Applied Mathematics
Ptakhin, Alexander	Lomonosov Moscow State Univ
10:00-10:20	FrA03.4
<i>Finite Element Approaches for Real-Time Control and Observer Design of Flexible Rack Feeder Systems</i> , pp. 910-915.	
Rauh, Andreas	Univ. of Rostock
Warncke, Julia	Univ. of Rostock, Chair of Mechatronics
Kostin, Georgy	Inst. for Problems in Mechanics of the Russian Acad. of Sc
Saurin, Vasily	Ipm Ras
Aschemann, Harald	Univ. of Rostock
10:20-10:40	FrA03.5
<i>On the Curvilinear Motion of a Slider with Internal Masses on a Rough Plan*</i> .	
Ivanov, Alexander P.	Moscow Inst. of Physics and Tech.
Sakharov, Alexander V.	Moscow Inst. of Physics and Tech. (State Univ.)
Semendyaev, Sergey V.	Moscow Inst. of Physics and Tech.

(State Univ.

Drinovsky, Jiri Drel, Feec, But
Kratochvil, Tomas Brno Univ. of Tech
Wieers, Aarnout ON Semiconductor

FrA04 FH HS 2

MS: Systems of Systems Modelling, Simulation and Optimization
(Minisymposium)

Chair: Kampert, David RWTH Aachen Univ.
Co-Chair: Gentile, Basilio ETH Zurich

09:00-09:20 FrA04.1

Challenges in the Modelling and Operation of Physically Coupled Systems of Systems, pp. 916-917.

Kampert, David RWTH Aachen Univ
Epple, Ulrich RWTH Aachen Univ

09:20-09:40 FrA04.2

Mean Field Modeling of Large-Scale Energy Systems, pp. 918-919.

Gentile, Basilio ETH Zurich
Grammatico, Sergio ETH Zurich
Lygeros, John ETH Zurich

09:40-10:00 FrA04.3

A Modelica-Based Modeling and Simulation Framework for Large-Scale Cyber-Physical Systems of Systems, pp. 920-921.

Nazari, Shaghayegh Tech. Univ. Dortmund
Sonntag, Christian Tech. Univ. Dortmund
Engell, Sebastian TU Dortmund

10:00-10:20 FrA04.4

Levels of Detail and Appropriate Model Types for Virtual Commissioning in Manufacturing Engineering, pp. 922-927.

Puntel Schmidt, Philipp Helmut-Schmidt-Univ. Hamburg
Fay, Alexander Helmut-Schmidt-Univ. Hamburg

10:20-10:40 FrA04.5

Equipment Interconnection Models in Discrete Manufacturing, pp. 928-929.

Grüner, Sten RWTH Aachen Univ
Wagner, Constantin RWTH Aachen Univ
Weber, Peter ABB Corp. Res
Epple, Ulrich RWTH Aachen Univ

10:40-11:00 FrA04.6

Modeling and Transformation of Systems of Systems Using Linked Data, pp. 930-931.

Graube, Markus Tech. Univ. Dresden
Urbas, Leon Tech. Univ. Dresden

FrA05 FH HS 4

MS: Mathematical Modeling for Nanoelectronic Coupled Problems
(Minisymposium)

Chair: Tischendorf, Caren Humboldt Univ. of Berlin
Co-Chair: Schöps, Sebastian Tech. Univ. Darmstadt

09:00-09:20 FrA05.1

A Fractional Step Method for the Dynamic Electro-Thermal Modelling of Device Structures, pp. 932-933.

Duque Guerra, David José Tech. Univ. Darmstadt
Schöps, Sebastian Tech. Univ. Darmstadt

09:20-09:40 FrA05.2

Model Order Reduction of an Electro-Thermal Package Model, pp. 934-935.

Banagaaya, Nicodemus Max-Planck Inst. Magdeburg
Feng, Lihong Max Planck Inst. Dynamics of Complex Tech. Systems
Meuris, Peter Magwel NV
Schoenmaker, Wim Magwel NV
Benner, Peter Max Planck Inst. for Dynamics of Complex Tech. Systems

09:40-10:00 FrA05.3

Measurement Setup for Identifying Parameters of the Encapsulated Bond Wires, pp. 936-937.

Petrzela, Jiri FEEC, Brno Univ. of Tech
Sotner, Roman Faculty of Electrical Engineering and Communication, Brno Univ
Gotthans, Tomas Brno Univ. of Tech

10:00-10:20 FrA05.4

Uncertainty Quantification in Electro-Thermal Coupled Problems Based on a Power Transistor Device, pp. 938-939.

Putek, Piotr Adam Bergische Univ. Wuppertal, Chair of Applied Mathematics /
Magwel NV
Meuris, Peter Magwel NV
Günther, Michael Bergische Univ. Wuppertal
ter Maten, E. Jan W. Bergische Univ. Wuppertal
Pulch, Roland Ernst-Moritz-Arndt-Univ. Greifswald
Wieers, Aarnout ON Semiconductor
Schoenmaker, Wim Magwel NV

10:20-10:40 FrA05.5

Interface Model Integrating Full-Wave Maxwell Simulation Models into Modified Nodal Equations for Circuit Simulation, pp. 940-941.

Strohm, Christian Humboldt Univ. of Berlin
Tischendorf, Caren Humboldt Univ. of Berlin

FrBPL FH HS 5

Advanced Mechatronics for Precision Engineering and Mechatronic Imaging Systems (Plenary Session)

11:20-12:00 FrBPL.1

Advanced Mechatronics for Precision Engineering and Mechatronic Imaging Systems, pp. 942-943.

Schitter, Georg Vienna Univ. of Tech