

Final program

	Monday 7-Jun	Tuesday 8-Jun	Wednesday 9-Jun	Thursday 10-Jun	Friday 11-Jun
8:00	Registration	Registration	Registration	Registration	Registration
9:00	Registration, coffee	ROB2	BRE2	MEM2	MAT2
10:15	Opening Ceremony	Coffee break	Coffee break	Coffee break	Coffee break
10:30	KEY1	KEY2	KEY3	KEY4	MAT2 / ROB4
11:45	Lunch	Lunch	Lunch	Lunch	Closing Remarks
12:00					
13:00	ROB1	MAT1	VEH	FRI	
14:15	Coffee break	Coffee break	Coffee break	Coffee break	
14:30	MEM1	BRE1	THE	FRI / ROB3	
15:45	Break	Break		Break	Break
16:10					
16:30	ACROBOTER DEMONSTRATION	ACROBOTER DEMONSTRATION	ACROBOTER DEMONSTRATION	ACROBOTER DEMONSTRATION	
17:00					
17:30					
18:30		Organ Concert and Sightseeing Tour *			
19:00	Welcome reception			Conference Banquet *	

* Attendance only with registration fee upgrade

Sessions

BRE	Biomechanics and rehabilitation	KEY1	Kouhei Ohnishi (Keio University, Yokohama, Japan)
FRI	Modeling dry friction	KEY2	József Kövecses (McGill University, Motreal, Quebec, Canada)
ROB	Dynamics modeling and control of robots	KEY3	Michael Beitelschmidt (Technical University of Dresden, Dresden, Germany)
ROB	Applications and control of bio-inspired robots	KEY4	Philippe Bidaud (Institute of Intelligent Systems and Robotics, Paris, France)
THE	Thermoelasticity aspects		
MEM	Micro-electromechanical Systems		
VEH	Vehicle dynamics and control		
MAT	Mathematical modeling of oscillatory systems		

MONDAY

08:00 – 09:45	Registration
09:45 – 10:00	Coffee break
10:00 – 10:15	Opening ceremony
10:30 – 11:45	Keynote lecture Kouhei Ohnishi (Keio University, Yokohama, Japan) Real World Haptics and Telehaptics
12:00 – 13:00	Lunch
13:00 – 14:15	Dynamics modeling and control of robots (ROB1) Thomas Gorius , Robert Seifried and Peter Eberhard The 3D Pendulum at the Word Exhibition 2010 – Simulations and Experimental Results Kamran Ghaffari Toiserkan , József Kövecses, Majid Sheikholeslami and Paul Karam The Predictive Modified Hold: An Approach to improving Digitally Controlled Systems Laszlo L. Kovacs , Ambrus Zelei, Laszlo Bencsik and Gabor Stepan Conceptual Design and Dynamics Modeling Aspects of ACROBOTER
14:15 – 14:30	Coffee break
14:30 – 15:45	Micro-electromechanical Systems (MEM1) A. Muc, Piotr Kedziora Optimal Design of Eigenfrequencies for Composite Structures Having Piezoelectric Sensors and Actuators A. Muc, Malgorzata Chwal Vibration Control of Defects in Carbon Nanotubes Vladimir Puzyrev , Valeriy Storozhev Control of Elastic Wave Propagation in Piezoceramic Cylinders of Sector Cross Section
15:45 – 16:30	Break
16:30 – 17:30	ACROBOTER demonstration (10 participants visit the laboratory of Department of Applied Mechanics)
19:00 – 20:00	Welcome reception

TUESDAY

08:00 – 09:00	Registration
9:00 – 10:15	<p>Applications and control of bio-inspired robots (ROB2)</p> <p>Quentin Bomble, O. Verlinden Current Sensing in a Six-Legged Robot</p> <p>Felix L. Chernousko Optimal control of a two-link system moving in a fluid</p> <p>Carsten Behn, Klaus Zimmermann Straight Worms Under Adaptive Control and Friction</p>
09:00 – 10:15	Coffee break
10:30 – 11:45	<p>Keynote lecture</p> <p>József Kövecses (McGill University, Montreal, Quebec, Canada) Approaches to Lagrangian Dynamics and Their Application to Interactions with Virtual Environments</p>
12:00 – 13:00	Lunch
13:00 – 14:15	<p>Mathematical modeling of oscillatory systems (MAT1)</p> <p>ING James, Ekaterina Pavlovskaja and Marian Wiercigroch Complex Nonlinear Response of a Piecewise Linear Oscillator: Experiment and Simulation</p> <p>Zaihua Wang Solution and Stability of a Linear Oscillator with Damping Described by Fractional-order Derivative</p> <p>Masaharu Kuroda The Fractional Derivative as a Complex Eigenvalue Problem</p>
14:15 – 14:30	Coffee break
14:30 – 15:45	<p>Biomechanics and rehabilitation (BRE1)</p> <p>András Bibó, Mihály Kovács and György Károlyi Internal Lever Arm Model for Myosin II</p> <p>István Bíró, B. M. Csizmadia and G. Krakovits Sensitivity Investigation of Three-cylinder Model of Human Knee Joint</p> <p>Tamás Insperger, Gábor Stépán Control concepts for human balancing</p>
15:45 – 16:30	Break
16:30 – 17:30	<p>ACROBOTER demonstration</p> <p>(10 participants visit the laboratory of Department of Applied Mechanics)</p>
18:30 – 21:00	Sightseeing Tour with Organ Concert

WEDNESDAY

08:00 – 09:00	Registration
9:00 – 10:15	<p>Biomechanics and rehabilitation (BRE2)</p> <p>Lacarbonara Walter, Charles R. Steele Nonlinear Wave Propagation in the Cochlea with Feed-forward and Feed-backward Effects</p> <p>Pawel Olejnik, Jan Awrejcewicz On the performance index optimization of a rheological dynamical system via numerical active control</p> <p>Viviane Pasqui, L. Saint-Bauzel and O. Sigaud Characterization of a Least Effort User-centered Trajectory for Sit-to-stand Assistance</p>
09:00 – 10:15	Coffee break
10:30 – 11:45	<p>Keynote lecture</p> <p>Michael Beitelschmidt (Technical University of Dresden, Germany) Real Time Simulation and Actuation of Shifting Forces of a Gearbox</p>
12:00 – 13:00	Lunch
13:00 – 14:15	<p>Vehicle dynamics and control (VEH)</p> <p>Walter V. Wedig Parameter Resonances of Road-Vehicle Systems with Non-linear Wheel Suspensions</p> <p>Lars Mikelsons, Thorsten Brandt and Dieter Schramm Realtime Simulation of Vehicle Models Using Symbolic Reduction Techniques</p> <p>Friedrich Pfeiffer Dynamics of Ravigneaux Gears</p>
14:15 – 14:30	Coffee break
14:30 – 16:10	<p>Elasticity and Thermo-elasticity (THE)</p> <p>Jacob P. Meijaard Refinements of Classical Beam Theory for Beams with a Large Aspect Ratio of Their Cross-Sections</p> <p>Igor Bock Dynamic Contact Problems for Shells with Moderately Large Deflections</p> <p>Shih Po-jen, Sheng-Ping Peng, Chau-Shiung Yeh, Tsung-Jen Teng, Wen-Shinn Shyu Application of Steepest Descent Path Method to Lamb's Solutions for Scattering in Thermoelastic Half-plane</p> <p>Rabindra K. Bhattacharyya On Wave Propagation in a Random Generalized Thermoelastic Medium</p>
16:10 – 17:00	Break
17:00 – 18:00	<p>ACROBOTER demonstration</p> <p>(10 participants visit the laboratory of Department of Applied Mechanics)</p>

THURSDAY

08:00 – 09:00	Registration
9:00 – 10:15	<p>Microelectromechanical Systems (MEM2)</p> <p>Ákos Miklós, Zsolt Szabó Multibody System Model of MEMS Resonators</p> <p>Subramanian Ramakrishnan, Balakumar Balachandran Influence Of Noise On Discrete Breathers In Nonlinearly Coupled Micro-Oscillator Arrays</p> <p>Aleksander Muc SHM of Composite Cylindrical Multilayered Shells with Delaminations</p>
09:00 – 10:15	Coffee break
10:30 – 11:45	<p>Keynote lecture</p> <p>Philippe Bidaud (Institute of Intelligent Systems and Robotics, Paris, France) Stability Analysis and Dynamic Control of Multi-limb Robotics Systems: Application to Humanoid Robots and Articulated Rovers</p>
12:00 – 13:00	Lunch
13:00 – 14:15	<p>Modeling dry friction (FRI)</p> <p>Go Kono, Y. Inagaki, T. Nohara, M. Kasama, T. Sugiura, H. Yabuno Frictional Vibration of a Cleaning Blade in Laser Printers</p> <p>Alexander V. Karapetyan New Models of Friction and Their Applications in Rigid Body Dynamics</p> <p>Alexey Albertovich Kireenkov On the Dynamics of Heavy Disk on the Rough Plane Under the Conditions of Combined Kinematics</p>
14:15 – 14:30	Coffee break
14:30 – 15:45	<p>Modeling dry friction / Dynamics modeling and control of robots (FRI / ROB3)</p> <p>Alexandra A. Zobova Different Models of Friction in Double-Spherical Tippe-Topp Dynamics</p> <p>Hiroshi Yabuno, M. Kuroda and T. Someya Contact to Sample Surface by Self-excited Micro-cantilever Probe in AFM</p> <p>Fumiya Matsumoto, Hiroaki Yoshimura Dynamics and Trajectory Planning of a Space Robot with Control of the Base Attitude</p>
15:45 – 16:30	Break
16:30 – 17:30	<p>ACROBOTER demonstration</p> <p>(10 participants visit the laboratory of Department of Applied Mechanics)</p>
19:15 – 22:00	Conference Banquet on a Boat

FRIDAY

08:00 – 09:00	Registration
09:00 – 09:50	Mathematical modeling of oscillatory systems (MAT2) Fabio A. Leyton, Jorge E. Hurtado and Gerard Olivar Bifurcations in Hysteresis Systems due to Vibrations and Impacts Gustavo A. Osorio, Fabiola Angulo and Gerard Olivar Discontinuity-induced Bifurcations due to Saturations Shaghghi K. Manouchehr , Gyorgy Lorincz The Easy Methods for Seism Analysis of Aerobic Storage with Attention to Interaction of Liquid-Structure-Soil
10:15 – 10:30	Coffee break
10:30 – 11:45	Mathematical modeling of oscillatory systems / Dynamics modeling and control of robots (MAT2 / ROB4) Béla Csizmadia, Attila Hegedűs, István Keppler Optimization of a Vibrating Screen's Mechanical Parameters Ambrus Zelei , Gabor Stepan Computed Torque Control of the ACROBOTER Platform A. Toth , G. Fazekas, M. Jurak and M. Horvath Dual Industrial Robot Based Movement Restoration System for Stroke Rehabilitation
11:45 – 12:00	Closing Remarks