

# Final program

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

\* Attendance only with registration fee upgrade

## Sessions

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

# MONDAY

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

# TUESDAY

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

# WEDNESDAY

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

# THURSDAY

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

# FRIDAY

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