

## TIME TABLE

	<b>August 3, 2014 (Sun.)</b>
17:00- 19:00	Welcome Reception @Sapporo Grand Hotel

	<b>August 4, 2014 (Mon.)</b>			
	<b>Room A</b>	<b>Room B</b>	<b>Room C</b>	<b>Room D</b>
9:00 - 9:15	Opening Ceremony @Room A			
9:15 - 10:00	Keynote Speech (I) @Room A			
10:00 - 10:20	Coffee Break			
10:20 - 12:00	1A1 Invited Session(I): Vibration Analysis with Identification	1B1 Ground Vehicles ( I )	1C1 Civil Infrastructures	1D1 Control Devices, Sensors, Actuators ( I )
12:00 - 13:20	Lunch			
13:20 - 15:20	1A2 Invited Session (II): Vibration Control by Active and Passive Means	1B2 Ground Vehicles (II)	1C2 Aerial Vehicles ( I )	1D2 Control Devices, Sensors, Actuators (II)
15:20 - 15:40	Coffee Break			
15:40 - 17:40	1A3 Invited Session (III): Energy Harvesting	1B3 Ground Vehicles (III)	1C3 Aerial Vehicles ( II )	1D3 Control Devices, Sensors, Actuators (III)
18:00 -	Evening Meeting @Restaurant SORA			

August 5, 2014 (Tue.)				
	Room A	Room B	Room C	Room D
9:00 - 10:00	Keynote Speech (II) @Room A			
10:00 - 10:20	Coffee Break			
10:20 - 12:00	2A1 Vibration Control( I )	2B1 Ground Vehicles (IV)	2C1 Robot Dynamics & Control( I )	2D1 Human-Machine Interface
12:00 - 13:20	Lunch			
13:20 - 15:20	2A2 Energy Harvesting	2B2 Monitoring and Identification	2C2 Advanced Control Systems	2D2 Invited Session (IV): Future of Fluid Power
15:20 - 15:40	Coffee Break			
15:40 - 18:00	2A3 Vibration Control(II)	2B3 Invited Session (V): Theory and Application of Adaptive and Auto-tuning Control Systems	2C3 Robot Arms	2D3 Invited Session (IV): Future of Fluid Power
19:00 -	Banquet @Conference Hall			

August 6, 2014 (Wed.)				
	Room A	Room B	Room C	Room D
9:00 - 10:00	Keynote Speech (III) @Room A			
10:00 - 10:20	Coffee Break			
10:20 - 12:00	3A1 Vibration Control(III)	3B1 Smart Structures ( I )	3C1 Robot Dynamics & Control(II)	3D1 Invited Session (VI): Advanced Dynamic Testing
12:20 - 13:40	Lunch			
13:40 - 15:40	3A2 Vibration Control(IV)	3B2 Smart Structures ( II )	3C2 Robot Dynamics & Control(III)	3D2 Invited Session (VI): Advanced Dynamic Testing
15:40 - 16:00	Coffee Break			
16:00 - 17:40	3A3 Vibration Control(V)	3B3 Smart Structures (III)		
18:00 -	Farewell Ceremony @Restaurant SORA			

August 7, 2014 (Thu.)	
	Technical Tour

**August 4, 2014**

**Room A 10:20-12:00**

**Invited session ( I ): Vibration Analysis with Identification**

Session Chairs : Jiong Tang (Univ. of Connecticut)

Kon-Well Wang (Univ. of Michigan)

- 1A11** A bio-inspired bistable flapping thrust mechanism with flexible suspension  
Ryan L Harne (Univ. of Michigan), Kon-Well Wang (Univ. of Michigan)
- 1A12** Noninterference Identification of Rotating Blade Vibration  
Peng Wang (Univ. of Connecticut), Robert X. Gao, Zhaoyan Fan (Univ. of Connecticut), Donald Karg (Univ. of Connecticut), Karrin Kwolek (Pratt Whitney Aircraft), Andrew Consiglio (Pratt Whitney Aircraft)
- 1A13** Robust Optimization Towards Reducing Response Variation By Efficient NURBS Finite Element Inverse Analysis  
Kai Zhou (Univ. of Connecticut), Jiong Tang (Univ. of Connecticut)
- 1A14** Period-2 Motions of a Non-linear Rotating Beam  
Yuihui Qu (Southern Illinois Univ., Edwardsville), Fengxia Wang (Southern Illinois Univ., Edwardsville)
- 1A15** Feasibility Study of Langasite Wafer Active Sensors for High Temperature Structural Health Monitoring  
Yuanye Bao (Univ. of North Texas), Haifeng Zhang (Univ. of North Texas)

**August 4, 2014**

**Room B 10:20-12:00**

**Ground Vehicles ( I )**

Session Chairs : Yuichi Ikeda (Shinshu Univ.)

Naohiko Hanajima (Muroran Institute of Tech.)

**1B11** Vehicle Stability Control System Design for a Micro Electric Vehicle with Four In-Wheel Motors Considering Energy Consumption Efficiency  
Sunkil Yun (Keio Univ.), Hidekazu Nishimura (Keio Univ.), Shintaroh Murakami (Dassault Systems K.K.)

**1B12** Vehicle velocity tracking control by switching controller according to change of driving situation  
Masato Furuyama (Shinshu Univ.), Yuichi Ikeda (Shinshu Univ.), Yuichi Chida (Shinshu Univ.)

**1B13** Experimental investigation on a controllable colloidal damper for vehicle suspension  
Barenten Suci (Fukuoka Institute of Tech.)

**1B14** Sensitivity Analysis of Natural Frequency of Tire Lateral Bending Mode  
Masami Matsubara (Doshisha Univ.), Nobutaka Tsujiuchi (Doshisha Univ.), Takayuki , Koizumi (Doshisha Univ.), Kensuke Bito (Toyo Tire & Rubber Co., Ltd.)

**1B15** Path-generating regulator along a straight passage for car-like robots  
Naohiko Hanajima (Muroran Institute of Tech.), Bo Yang (Muroran Institute of Tech.), Wei Luo (Muroran Institute of Tech.), Jun Dai (Muroran Institute of Tech.), Akihiko Takashima (Hokkaido Institute of Tech.)

**August 4, 2014**

**Room C 10:20-12:00**

**Civil Infrastructures**

Session Chairs : Kazuto Seto (Seto-Vibration Control Laboratory)

Kazuhiko Hiramoto (Niigata Univ.)

**1C11** Amazing Ability of the Developed Seismometer-type Absolute Displacement Sensor for Measuring Earthquake Waves with Large Magnitude and Long Period

Kazuto Seto (Seto-Vibration Control Laboratory), Ryo Watanabe (Nihon Univ.), Koji Ishikawa (Nihon Univ.), Yuichi Iwasaki (Oiles Corp.), Mitsuru Miyazaki (Oiles Corp.), Toru Watanabe (Nihon Univ.)

**1C12** Tracking Control of Mobile Harbor Crane to Moving Container Ship

Dongho Kim (KAIST), Youngjin Park (KAIST), Youn-sik Park (KAIST)

**1C13** Active/Semi-active Hybrid Control Framework for Vibration Control of Mechanical Systems

Kazuhiko Hiramoto (Niigata Univ.), Sho Saito (Graduate School of Niigata Univ.)

**1C14** Application of Fitz Hugh oscillator for semi-active control -Filtering of structure response and regulating of variable damper-

Kentaro Shinoda (Kyoto Institute of Tech.), Daisuke Iba (Kyoto Institute of Tech.), Junichi Hongu (Kyoto Institute of Tech.), Morimasa Nakamura (Kyoto Institute of Tech.), Ichiro Moriwaki (Kyoto Institute of Tech.)

**1C15** Development of Full Active Seismic Isolator via Mechanical Control

Yasuo Aoki (Tokyo Univ. of Agriculture and Tech.), Akinori Hiramatsu (Tokyo Univ. of Agriculture and Tech.), Tempei Wachi (Tokyo Univ. of Agriculture and Tech.), Kouichi Kajiwara (Hyogo Earthquake Engineering Research Center), Yasutaka Tagawa (Tokyo Univ. of Agriculture and Tech.)

**August 4, 2014**

**Room D 10:20-12:00**

**Control Devices, Sensors, Actuators ( I )**

Session Chairs : Nobutaka Tsujiuchi (Doshisha Univ.)

Masaya Takasaki (Saitama Univ.)

**1D11** Gravitational Potential Considered Position and Attitude Control of a Grasp Object by Pneumatic Manipulator

Nobutaka Tsujiuchi (Doshisha Univ.), Takayuki Koizumi (Doshisha Univ.), Kou Yaegashi (Doshisha Univ.)

**1D12** Seismic Response Control of High-rise Buildings by Using TMD with Lever and Pendulum Mechanism

Sunao Kato (Kyoto Institute of Tech.), Akira Sone (Kyoto Institute of Tech.), Shinichi Ueyama (Kyoto Institute of Tech.), Arata Masuda (Kyoto Institute of Tech.), Jun Sakai (Kyoto Institute of Tech.)

**1D13** Rotation Test of Tilt Controlling Axial Self-Bearing Motor with Superconducting Magnetic Bearing

Masayuki Sumino (Ritsumeikan Univ.), Satoshi Ueno (Ritsumeikan Univ.)

**1D14** Steering law considering biased loads for control moment gyroscopes

Yasuyuki Nanamori (Keio Univ.), Masaki Takahashi (Keio Univ.)

**1D15** Realization of Diamagnetic Levitation of Column-Shaped Graphite

Keisuke Iida (Saitama Univ.), Yoshinori Narisawa (Saitama Univ.), Yuji Ishino (Saitama Univ.), Masaya Takasaki (Saitama Univ.), Takeshi Mizuno (Saitama Univ.)

**August 4, 2014**

**Room A 13:20-14:40**

**Invited session (II): Vibration Control by Active and Passive Means**

Session Chairs : Lei Zuo (Virginia Tech)

Masayoshi Tomizuka (Univ. of California, Berkeley)

**1A21** Controller Design for Vibration Suppression of a Vacuum Wafer Handling Robot  
Xiaowen Yu (Univ. of California, Berkeley), Cong Wang (Univ. of California, Berkeley), Yu Zhao (Univ. of California, Berkeley), Masayoshi Tomizuka (Univ. of California, Berkeley)

**1A22** Parameters optimization to dual-functional electromagnetic Tuned Mass Damper (TMD)  
Yilun Liu (Stony Brook Univ.), Chi-Chang Lin(National Chung Hsing Univ.), Lei Zuo (Stony Brook Univ.)

**1A23** Vibration Control of Variable Stiffness Tuned Mass Damper with Consideration of Time Delay  
Chi-Chang Lin (National Chung-Hsing Univ.), Chang-Ching Chang (National Center for Research on Earthquake Engineering), Ging-Long Lin (National Chung-Hsing Univ.), Hui-Wen Su (National Chung-Hsing Univ.)

**1A24** Wheel cylinder pressure estimation of EHB based brake-by-wire system  
Ning Pan (Tsinghua Univ.), Liangyao Yu (Tsinghua Univ.), Yongsheng Zhang (China FAW Group Corp.), Wenruo Wei (China FAW Group Corp.), Jian Song (Tsinghua Univ.)



**August 4, 2014**

**Room B 13:20-15:00**

**Ground Vehicles (II)**

Session Chairs : Mohd Azman Abdullah (Universiti Teknikal Malaysia Melaka)

Chihiro Nakagawa (Osaka Prefecture Univ.)

**1B21 Modeling and Robust Control of a High Speed Train Pantograph**

Makoto Yokoyama (Niigata Univ.), Sho Yokoyama (Niigata Univ.), Hikaru Sakakibara (Niigata Univ.), Shigeyuki Kobayashi (Railway Technical Research Institute), Takayuki Usuda (Railway Technical Research Institute), Mitsuru Ikeda (Railway Technical Research Institute)

**1B22 Application of Genetic Algorithm to Tune PID controller for Railway Vehicle Suspension**

Mohd Azman Abdullah (Universiti Teknikal Malaysia Melaka), Mohd Hanif Harun (Universiti Teknikal Malaysia Melaka), Mohd Sazli Saad (Universiti Malaysia Perlis), Hishamuddin Jamaluddin (Universiti Teknologi Malaysia)

**1B23 Verification and Optimization of Formula SAE Suspension Employing Inerter Mechanism**

Thanh-Tung Tran (Shibaura Institute of Tech.), Chiaki Hori (Shibaura Institute of Tech.), Hiroshi Hasegawa (Shibaura Institute of Tech.)

**1B24 Robust Stabilization of Antilock Braking System with LQ Control**

Hiroshi Kataoka (Nanzan Univ.), Tatsuya Mizuno (Nanzan Univ.), Hisatsugu Yamazaki (Nanzan Univ.), Gan Chen (Nanzan Univ.), Isao Takami (Nanzan Univ.)

**1B25 Examination of Maneuverability of an Inverted Pendulum Vehicle according to the Steering Methods**

Takuya Chikayama (Osaka Prefecture Univ.), Chihiro Nakagawa (Osaka Prefecture Univ.), Atsuhiko Shintani (Osaka Prefecture Univ.), Tomohiro Ito (Osaka Prefecture Univ.)

**August 4, 2014**

**Room C 13:20-15:20**

**Aerial Vehicles ( I )**

Session Chairs : Satoshi Suzuki (Shinshu Univ.)

Masafumi Miwa (The Univ. of Tokushima)

- 1C21** Development and control of non-planar hexarotor helicopter  
Katsuaki Okuma (Chiba Univ.), Daisuke Iwakura (Chiba Univ.), Kenzo Nonami (Chiba Univ.)
- 1C22** Flying Cargo System based on Multi Rotor Helicopter -Direct Touch Operation Method for Multi Rotor Helicopter-  
Masafumi Miwa (The Univ. of Tokushima)
- 1C23** Development of Autonomous Battery Exchange System for Multi-Rotor Helicopter  
Takuya Nemoto (Chiba Univ.), Daisuke Iwakura(Chiba Univ.), Kenzo Nonami (Chiba Univ.)
- 1C24** Collision-free Guidance Control of Multiple UAVs with Restricted Communication Networks  
Yoshihiko Aida (Shinshu Univ.), Yohei Fujisawa (Shinshu Univ.), Satoshi Suzuki (Shinshu Univ.), Kojiro Iizuka (Shinshu Univ.), Takashi Kawamura (Shinshu Univ.), Yuichi Ikeda (Shinshu Univ.)
- 1C25** Parameter identification in dynamics model of a ground tethered satellite system with attitude motion  
Dongping Jin (Nanjing Univ. of Aeronautics and Astronautics), Hao Wen(Nanjing Univ. of Aeronautics and Astronautics), Hui Chen (Nanjing Univ. of Aeronautics and Astronautics), Bensong Yu (Nanjing Univ. of Aeronautics and Astronautics)
- 1C26** Long-range navigation for resource-constrained planetary rovers using angle of arrival  
Takayuki Ishida (Keio Univ.), Hiroka Inoue (Keio Univ.), Wataru Mogi (Keio Univ.), Masaki Takahashi (Keio Univ.), Masahiro Ono (Keio Univ.), Shuichi Adachi (Keio Univ.)

**August 4, 2014**

**Room D 13:20-15:00**

**Control Devices, Sensors, Actuators (II)**

Session Chairs : Mariam MD Ghazaly (Universiti Teknikal Malaysia Melaka)

Mochimitsu Komori (Kyushu Institute of Tech.)

**1D21** The Evaluation of a Locking Function for a Vertical Stage Electrostatic Actuator  
Mariam MD Ghazaly (Universiti Teknikal Malaysia Melaka), Kaiji Sato (Tokyo  
Institute of Tech.)

**1D22** Rotation Tests of 6 Salient-Pole Active Magnetic Bearings  
Hiroyuki Sakai (Ritsumeikan Univ.), Satoshi Ueno (Ritsumeikan Univ.)

**1D23** Gimbal Angle Feedback Steering Logic for Spacecraft with Control Moment  
Gyros considering Required Attitude Accuracy  
Satoshi Obuse (Keio Univ.), Masaki Takahashi (Keio Univ.)

**1D24** Basic Study on Magnetic Levitation System by Using Superconducting Coil  
Singo Takase (Kyushu Institute of Tech.), Mochimitsu Komori, Kaoru Nemoto  
(Kyushu Institute of Tech.), Yuta Hanazawa (Kyushu Institute of Tech.), Nobuo  
Sakai (Kyushu Institute of Tech.), Ken-ichi Asami (Kyushu Institute of Tech.)

**1D25** Mass Measurement Using the Fixed-Point of a Spring-Mass System with a  
Dynamic Vibration Absorber and an Inertial-Mass Vibrator  
Tomoyuki Korikawa (Saitama Univ.), Yuji Ishino (Saitama Univ.), Masaya  
Takasaki (Saitama Univ.), Takeshi Mizuno (Saitama Univ.)

**August 4, 2014**

**Room A 15:40-17:40**

**Invited session (III): Energy Harvesting**

Session Chairs : Lei Zuo (Virginia Tech)

Jiong Tang (Univ. of Connecticut)

- 1A31** Levitation-Induced Vibration Energy Harvesters  
Daniel Apo (Virginia Tech), Shashank Priya (Virginia Tech)
- 1A32** On the dynamics and design of a two body ocean wave energy converter  
Changwei Liang (Stony Brook Univ.), Lei Zuo (Stony Brook Univ.)
- 1A33** Improved Piezoelectric Energy Harvesting with Magnetically Enhanced Electro-Mechanical Coupling  
Jiawen Xu (Univ. of Connecticut), Jiong Tang (Univ. of Connecticut)
- 1A34** Energy Delivery from Piezoelectric Structure to Resistive Load  
Wanlu Zhou (Stony Brook Univ.), Lei Zuo (Stony Brook Univ.), Tian-Bing Xu (National Institute of Aerospace)
- 1A35** A piezoelectric laminated curved THUNDER model for energy harvesting  
Fengxia Wang (Southern Illinois Univ., Edwardsville), Xiaopeng Li (Southern Illinois Univ., Edwardsville), Wei Wu (Southern Illinois Univ., Edwardsville)
- 1A36** Amplified energy harvesting from footsteps: design an experimental analysis  
Ya Wang (Stony Brook Univ.), Wusi Chen (Stony Brook Univ.), Lei Zuo (Stony Brook Univ.)

**August 4, 2014**

**Room B 15:40-17:20**

**Ground Vehicles (III)**

Session Chairs : Seung-Bok Choi (Inha Univ.)

Takeshi Kawashima (Kanagawa Institute of Tech.)

**1B31** Optimal design and performance evaluation of active hood lift system for vehicle  
Tae-Hoon Lee (Inha Univ.), Gun-Ha Yoon (Inha Univ.), Juncheol Jeon (Inha Univ.), Seung-bok Choi (Inha Univ.)

**1B32** Basic research on semi-active child-car bed with joint application of regular and inverted pendulum mechanisms -Study on the control system-  
Takeshi Kawashima (Kanagawa Institute of Tech.)

**1B33** Benchmark of Control Algorithm for Flywheel with Active Magnetic Bearing on Electric Vehicle  
Fumiya Shimizu (Chiba Univ.), Kenzo Nonami (Chiba Univ.)

**1B34** Integral Sliding Mode Control for Active Suspension systems of Half-Vehicle Model  
Shigehiro Toyama (Nagaoka National College of Tech.), Fujio Ikeda (Nagaoka National College of Tech.), Honghai Liu (Univ. of Portsmouth)

**1B35** Identification of the yaw moment of inertia of vehicle in real-time using GPS sensor  
Seungyong Lee (The Univ. of Tokyo), Kimihiko Nakano (The Univ. of Tokyo), Masanori Ohori (The Univ. of Tokyo)

**August 4, 2014**

**Room C 15:40-17:40**

**Aerial Vehicles (II)**

Session Chairs : Jinjun Shan (York Univ.)

Koju Hiraki (Kyushu Institute of Tech.)

- 1C31** Performance Evaluation of Whole-spacecraft Vibration Isolation  
Likun Liu (York Univ.), Jinjun Shan (York Univ.), Gangtie Zheng (Tsinghua Univ.)
- 1C32** Delayed Feedback Control for Helicopter Slung Load System  
Motomichi Sonobe(The Univ. of Tokushima), Zhiao Chen(The Univ. of Tokushima), Hiroki Nishimura (The Univ. of Tokushima), Masafumi Miwa (The Univ. of Tokushima), Junichi Hino (The Univ. of Tokushima)
- 1C33** Mechanical Parameter Optimization of Fixed-pitch Coaxial-rotor Helicopter  
Masahiro Tatsuno (Shinshu Univ.), Puneet Singh (Indian Institute of Tech. Kanpur), Satoshi Suzuki (Shinshu Univ.), Gennai Yanagisawa (GEN Corp.), Yasutoshi Yokoyama (GEN Corp.)
- 1C34** Hovering Test of Flapping Robot using Circular Flight Device  
Koju Hiraki (Kyushu Institute of Tech.), Nobuhiro Mie (Kyushu Institute of Tech.), Keiichi Yoshino (Kitakyushu National College of Tech.), Masanobu Inoue (Kitakyushu National College of Tech.)
- 1C35** A Study of Adaptive Control for Multi-rotor Helicopter  
Atsushi Hori (Chiba Univ.), Tatsuya Furui(Chiba Univ.), Daisuke Iwakura(Chiba Univ.), Kenzo Nonami(Chiba Univ.)
- 1C36** Online mass estimation and autonomous control of multi-rotor helicopter  
Tatsuya Furui (Chiba Univ.), Atsushi Hori (Chiba Univ.), Daisuke Iwakura (Chiba Univ.), Kenzo Nonami(Chiba Univ.)

**August 4, 2014**

**Room D 15:40-17:40**

**Control Devices, Sensors, Actuators (III)**

Session Chairs : Nobuyuki Kurita (Gunma Univ.)

Hiroyuki Harada (Hokkaido Univ.)

**1D31** Smart-Servo Control by Rigid Body Physics Based Methods

Lionel Sobehart (Hokkaido Univ.), Hiroyuki Harada (Hokkaido Univ.)

**1D32** Measurement of Step Length and Foot Clearance During Human Walking Using an Inertial Sensor Attached to the Foot

Naoki Kitagawa (Keio Univ.), Shumpei Maeda (Keio Univ.), Naomichi Ogihara (Keio Univ.)

**1D33** A Neural-Preisach Model for Hysteresis Control of Piezoelectric Actuators

Yuansheng Chen (Nanjing Univ.), Jinhao Qiu (Nanjing Univ.), Hongli Ji (Nanjing Univ.)

**1D34** NMPC Approach on Nonlinear Model Reduction Techniques -Application to an ultrasonic motor-

Ryutaro Miyauchi (Cybernet Systems Co.,Ltd.), Nami Matsunaga (Cybernet Systems Co.,Ltd.), Shinichi Ishizuka(Cybernet Systems Co.,Ltd.)

**1D35** Measurement of one-leg standing for qualification test of rhythmic stepping exercise using laser range sensor

Ayanori Yorozu (Keio Univ.), Toshiki Moriguchi (Murata Machinery), Hirofumi Namikawa (Murata Machinery), Masaki Takahashi (Keio Univ.)

**1D36** Proposal of a magnetically levitated shaded pole induction motor

Nobuyuki Kurita (Gunma Univ.), Takeo Ishikawa (Gunma Univ.), Genri Suzuki (Gunma Univ.)

**August 5, 2014**

**Room A 10:20-12:00**

**Vibration Control ( I )**

Session Chairs : Takumi Sasaki (Univ. of Kitakyushu)

Yohji Kobayashi (Kobe City College of Tech.)

**2A11** In-plane vibration of micro ring with irregular mass distribution

Jung-Hwan Kim (Seoul National Univ.), Ji-Hwan Kim (Seoul National Univ.)

**2A12** Damping estimation of joined plate structures using static contact analysis

Takao Hirai (Univ. of Fukui), Fumiyasu Kuratani (Univ. of Fukui), Kazushi Koide (Univ. of Fukui), Ichiro Kido (Univ. of Fukui)

**2A13** Experimental study on a nonlinear vibration isolator based on a post-buckled inverted L-shaped beam

Takumi Sasaki (Univ. of Kitakyushu), Timothy Waters (Univ. of Southampton), Koichi Fujito (Univ. of Kitakyushu), Yumiko Tsuji (Univ. of Kitakyushu)

**2A14** Co-operative PID Tuning for Interference Systems using Simultaneous Perturbation Stochastic Approximation

Shinichi Ishizuka (Hokkaido Univ.), Itsuro Kajiwara (Hokkaido Univ.)

**2A15** Decentralized Robust Optimal Control of Large Flexible Space Structures by Local Proper Controllers Using Displacement Output

Yohji Kobayashi (Kobe City College of Tech.)



**August 5, 2014**

**Room B 10:20-12:00**

**Ground Vehicles (IV)**

Session Chairs : Jeffrey Too Chuan Tan (Univ. of Tokyo)

Shigeru Ogawa (Kure National College of Tech.)

**2B11** Evaluation of dynamic absorber to suppress sub-harmonic nonlinear vibration in car powertrain

Sofian Rosbi (Oita Univ.), Takahiro Ryu (Oita Univ.), Takashi Nakae (Oita Univ.), Kenichiro Matsuzaki (Kagoshima Univ.), Atsuo Sueoka (Kyushu Polytechnic College), Yoshihiro Takikawa (Aisin AW Co., Ltd.), Yoichi Ooi (Aisin AW Co., Ltd.)

**2B12** Hazard-Anticipatory Collision Avoidance Braking Assistance System Based on Pedestrian Motion Prediction

Kazuhiro Ezawa (Tokyo Univ. of Agriculture and Tech.), Pongsathorn Raksincharoensak (Tokyo Univ. of Agriculture and Tech.)

**2B13** Adaptive control of a skid-steer mobile robot with uncertain cornering stiffness

Makoto Yokoyama (Niigata Univ.), Jun Ikarashi (Niigata Univ.), Akinori Okawa (Niigata Univ.)

**2B14** Stability Control with Gyro Moment to Improve Rollover Resistance of Narrow Tilting Vehicle

Jeffrey Too Chuan Tan (Univ. of Tokyo), Yitsao Huang (Univ. of Tokyo), Yoshihiro Suda (Univ. of Tokyo), Akira Mizuno (Equos Research Co., Ltd), Munehisa Horiguchi (Equos Research Co., Ltd)

**2B15** Control of the longitudinal vortex generated around the front pillar of vehicles, based on clarification of the vortex generation mechanism using a delta-wing

Shigeru Ogawa (Kure National College of Tech.), Ye Li (Mazda Motor Corp.)

**August 5, 2014**

**Room C 10:20-12:00**

**Robot Dynamics & Control ( I )**

Session Chairs : Katsutoshi Yoshida (Utsunomiya Univ.)

Susumu Hara (Nagoya Univ.)

**2C11** Artificial Wrestling: A Dynamical Formulation of Autonomous Agents Fighting in a Coupled Inverted Pendula Framework

Katsutoshi Yoshida (Utsunomiya Univ.), Shigeki Matsumoto (Utsunomiya Univ.), oichi Matsue (Yuhara Mfg Co., Ltd)

**2C12** Joint control of a lower-limb robot with musculoskeletal structure

Takuma Nakamura (Tokai Univ.), Atsushi Okuyama (Tokai Univ.), Tomohiro Komatsu (Tokai Univ.)

**2C13** Manual Motion Control for Connection and Cooperation of Plural Mechanical Systems

Takahito Yoshiura (Nagoya Univ.), Susumu Hara (Nagoya Univ.), Yoshifumi Morita (Nagoya Institute of Tech.), Noritaka Sato (Nagoya Institute of Tech.), Yoji Yamada (Nagoya Univ.)

**2C14** Level-Ground Walking Based on Passive Walk for a Simple Planar Biped with Torso and Flat Feet

Terumasa Narukawa (Saitama Univ.), Hiroshi Yamamoto (Saitama Univ.)

**2C15** Dynamics and Control of Reconfigurable Multi-body Systems -Control Utilizing Embedded Dynamics Models in Modules-

Tempei Wachi (Tokyo Univ. of Agriculture and Tech.), Seiya Ogawa (Tokyo Univ. of Agriculture and Tech.), Yasutaka Tagawa (Tokyo Univ. of Agriculture and Tech.), Gentiane Venture (Tokyo Univ. of Agriculture and Tech.)

**August 5, 2014**

**Room D 10:20-12:00**

**Human-Machine Interface**

Session Chairs : Shoichiro Takehara (Sophia Univ.)

Ken-ichi Koyanagi (Toyama Prefectural Univ.)

**2D11** Technique for Discrimination between Seven Motions Using Real-Time EMG Signals

Nobutaka Tsujiuchi (Doshisha Univ.), Takayuki Koizumi (Doshisha Univ.),  
Tetsushi Yamamoto (Doshisha Univ.)

**2D12** Motion Control of Simplified Human Trunk Seated in a Vehicle

Fumiya Takahashi (Sophia Univ.), Shoichiro Takehara (Sophia Univ.), Yoshiaki  
Terumichi (Sophia Univ.), Kazunori Hase (Tokyo Metropolitan Univ.), Toshikazu  
Torigaki (Nissan Motor co., Ltd.)

**2D13** Development of an isokinetic exercise equipment for the lower limb: ERIK

Ken'ichi Koyanagi (Toyama Prefectural Univ.), Yoshinori Kimura (Osaka Univ.),  
Maki Koyanagi (Osaka Electro-Communication Univ.), Akio Inoue (ER-tec Co.),  
Tatsuo Motoyoshi (Toyama Prefectural Univ.), Hiroyuki Masuta (Toyama  
Prefectural Univ.), Toru Oshima (Toyama Prefectural Univ.)

**2D14** A Method to Convey Relative Velocity Information by Vibration Alert Interface

Zhantao Lai (Hokkaido Univ.), Takayuki Tanaka (Hokkaido Univ.), Yuki Sampei  
(Hokkaido Univ.), Yuki Mori (RIKEN Innovation Center)

**2D15** Evaluation of Driver Characteristics Using Steering Torque Simulator with  
Multibody Vehicle Model

Takehito Kano (Meiji Univ.), Toshimasa Takouda (Meiji Univ.), Ryuta Ishizaki  
(Meiji Univ.), Kazuhiro Morihara (Meiji Univ.), Taichi Shiiba (Meiji Univ.)

**August 5, 2014**

**Room A 13:20-15:20**

**Energy Harvesting**

Session Chairs : Kanjuro Makihara (Tohoku Univ.)

Emiliano Rustighi (Univ. of Southampton)

**2A21** Evaluation of the energy harvestable from a non-pneumatic tire equipped with piezoelectric bimorphs on the lamellar spokes or on the tread supporting lamellar springs

Barenten Suci (Fukuoka Institute of Tech.), Junya Ohtsu (Fukuoka Institute of Tech.), Keisuke Koyanagi (Fukuoka Institute of Tech.)

**2A22** Power Evaluation of Dynamic Behavior of Advanced Energy-Harvester Using Graphical Analysis

Daisuke Shigeta (Tohoku Univ.), Yuta Yamamoto (Tohoku Univ.), Kanjuro Makihara (Tohoku Univ.)

**2A23** Stiffness tunable nonlinear vibrational energy harvester with damping control

Dongxu Su (Univ. of Tokyo), Kimihiko Nakano (Univ. of Tokyo), Rencheng Zheng (Univ. of Tokyo), Matthew Cartmell (Univ. of Sheffield)

**2A24** Comprehensive assessment of smart energy-harvesting from multimodal vibrations

Yuta Yamamoto (Tohoku Univ.), Kanjuro Makihara (Tohoku Univ.)

**2A25** Experimental Study on Harvesting Energy from a Parametrically Excited System

Bahareh Zaghari (Univ. of Southampton), Emiliano Rustighi (Univ. of Southampton), Maryam Ghandchi-Tehrani (Univ. of Southampton)

**2A26** A Bistable Mechanical Oscillator with Stoppers for Wideband Vibration Energy Harvesting

Arata Masuda (Kyoto Institute of Tech.), Koki Yamane (Kyoto Institute of Tech.), Akira Sone (Kyoto Institute of Tech.)

**August 5, 2014**

**Room B 13:20-15:00**

**Monitoring and Identification**

Session Chairs : No-Cheol Park (Yonsei Univ.)

Soo Il Lee (Univ. of Seoul)

**2B21** Detection of Adhesive Failures via Nonlinear Piezoelectric Impedance Modulation

Arata Masuda (Kyoto Institute of Tech.), Akane Akisada (Kyoto Institute of Tech.), Takashi Tanaka (Kyoto Institute of Tech.), Akira Sone (Kyoto Institute of Tech.)

**2B22** Localization of Contact-type Failure in Beam Structure Based on Reflectivity Modulation

Takashi Tanaka (Kyoto Institute of Tech.), Arata Masuda (Kyoto Institute of Tech.), Akira Sone (Kyoto Institute of Tech.),

**2B23** A study on dynamic behaviors of integrated reactor internals about an earthquake

Youngin Choi (Yonsei Univ.), Kyoung-Su Park (Yonsei Univ.), No-Cheol Park (Yonsei Univ.), Young-Pil Park (Yonsei Univ.), Kyeong-Hoon Jeong (Korea Atomic Energy Research Institute)

**2B24** Application of Vibration Signal Processing for Gear Fault Detection

Woong-Yong Lee (Korea Railroad Research Institute), Hae-Young Ji (Univ. of Science and Tech.), Dong-Hyong Lee (Korea Railroad Research Institute), Jae-Chul Kim (Korea Railroad Research Institute)

**2B25** Modal estimation of a cantilever using aliased video images

Jong Min Kim (Univ. of Seoul), Il Kwang Kim (Univ. of Seoul), Soo Il Lee (Univ. of Seoul)

**August 5, 2014**

**Room C 13:20-15:20**

**Advanced Control Systems**

Session Chairs : Hsin-Jang Shieh (National Dong Hwa Univ.)

Shigeo Kotake (Mie Univ.)

**2C21** Integral-Proportional Sliding-Mode Controller for a Power-Factor-Corrected SEPIC Rectifier

Hsin-Jang Shieh (National Dong Hwa Univ.), Ying-Zou Chen (National Dong Hwa Univ.)

**2C22** Robust stabilizing simple repetitive controllers for multiple-input/multiple-output time-delay plants with specified input-output characteristic

Tatsuya Sakanushi (Gunma Univ.), Kou Yamada (Gunma Univ.)

**2C23** Control system to attenuate periodic state disturbances using disturbance observers for time-delay plants

Jie Hu (Gunma Univ.), Kou Yamada (Gunma Univ.), Tatsuya Sakanushi (Gunma Univ.), Tomohisa Maruyama

**2C24** Optimal sampled-data control by vibration manipulation function for one mass-spring system obtained from three vibro-impact oscillators under Grover algorithm

Shigeo Kotake (Mie Univ.), Kazunori Yagi (Mie Univ.), Soichiro Takata (Mie Univ.)

**2C25** Application of sampled-data control by using vibration manipulation function to suppress residual vibration of travelling crane

Shigeo Kotake (Mie Univ.), Kazunori Yagi (Mie Univ.)

**2C26** Positioning control of an XY table based on practical NCTF control

Shin\_horng Chong (Center of Excellence of Robotics and Automation), Wai-Keat Hee (Center of Excellence of Robotics and Automation), Kaiji Sato (Tokyo Institute of Tech.)

**August 5, 2014**

**Room D 13:20-14:40**

**Invited session (IV): Future of Fluid Power**

Session Chairs : Kazushi Sanada (Yokohama National Univ.)

Yutaka Tanaka (Hosei Uni.)

Toshiharu Kazama (Muroran Institute of Tech.)

Yasuhiro Hayakawa (Nara National College of Tech.)

**2D21** Tutorial-Control schemes for an overlap type proportional directional control valve-

Ill-yeong Lee (Pukyong National Univ.)

**2D22** Experimental investigation of effective bulk modulus of oil with entrained air bubbles

Yutaka Tanaka (Hosei Univ.), Sayako Sakama (Hosei Univ.), Hiroyuki Goto (Japan Society for the Promotion of Machine Industry)

**2D23** Effect of a DLC-thin film on improving the piston shoe's power losses under mixed friction operating conditions

Yeh-Sun Hong (Korea Aerospace Univ.), Seong-Ryeol Lee (Korea Aerospace Univ.), Chong-Hyeok Kim (Korea Aerospace Univ.), Sang-Yul Lee (Korea Aerospace Univ.)

**2D24** Investigation of pressure control in balancing cylinder for hybrid electric-pneumatic ultra-precision vertical positioning device

Tomonori Kato (Fukuoka Institute of Tech.), Tetsuma Hirakawa (Fukuoka Institute of Tech.), Shunta Honda (Fukuoka Institute of Tech.), Hiromi Masuda (Fukuoka Institute of Tech.)

**August 5, 2014**

**Room A 15:40-17:40**

**Vibration Control (II)**

Session Chairs : Hiroki Matsumoto (Muroran Institute of Tech.)

HyeongJoon Ahn (Soongsil Univ.)

**2A31** Improvement of Magnetic Bearings equipment and its controller for a flexible rotor

Masamitsu Shiga (Nihon Univ.), Hiroyuki Fujisaki (Nihon Univ.), Zhengjie (Nihon Univ.), Sachito Okada (Nihon Univ.), Toru Watanabe (Nihon Univ.), Kazuto Seto (Seto Vibration Control Lab)

**2A32** Vibration Control Evaluation for Underwater Structures Using Non-contact Laser Excitation

Koh Umenai (Shibaura Institute of Tech.), Naoki Hosoya (Shibaura Institute of Tech.), Itsuro Kajiwara (Hokkaido Univ.)

**2A33** Suppression Method for Rebound Amount of the Internal Mirror Model of SLR Camera

Hiroki Matsumoto (Muroran Institute of Tech.), Masaki Hirashima (Muroran Institute of Tech.)

**2A34** Vibration Suppression Mechanism for Thin Steel Plate Using Rotary Permanent Magnet Array

Koichi Oka (Kochi Univ. of Tech.), Nao Okada (Kochi Univ. of Tech.), Yoshio Inoue (Kochi Univ. of Tech.), Shin Nakayama (Kochi National College of Tech.)

**2A35** A study on dynamic behaviors of slider considering ramp disk contact during operational shock

Geonyup Lim (Yonsei Univ.), Kyoung-Su Park (Yonsei Univ.), No-Cheol Park (Yonsei Univ.), Young-Pil Park (Yonsei Univ.)

**2A36** Back EMF compensation of a linear motor stage with a passive reaction force compensation mechanism

Duc Canh Nguyen (Soongsil Univ.), Hyeong Joon Ahn (Soongsil Univ.), Yo Han You (Soongsil Univ.)



**August 5, 2014**

**Room B 15:40-18:00**

**Invited session (V): Theory and Application of Adaptive and Auto-tuning Control Systems**

Session Chairs : Ikuro Mizumoto (Kumamoto Univ.)

Masahiro Oya (Kyushu Institute of Tech.)

**2B31** Steering Control without Using Measurement of Lateral Velocity of combination vehicle

Panfeng Shu (Kyushu Institute of Tech.)

**2B32** Adaptive Steering Control Scheme for Vehicles with the Saturated Lateral Tire Force

Jinxin Zhuo (Kyushu Institute of Tech.)

**2B33** PFC design method based on frequency response fitting -Assurance of minimum phase property by stability theorem of descriptor system-

Masaya Tanemura (Shinshu Univ.), Yuichi Chida (Shinshu Univ.), Yuichi Ikeda (Shinshu Univ.)

**2B34** FRIT of ILQ Based Intergral Type Servo Controllers and Its Applications

Osamu Kaneko (Kanazawa Univ.), Fumiaki Sawakawa (Kanazawa Univ.), Shigeru Yamamoto (Kanazawa Univ.)

**2B35** Quaternion-based adaptive attitude control for a winged rocket

Kazuki Ueno (Kyushu Institute of Tech.), Radzi Bin Ambar (Kyushu Institute of Tech.), Shinichi Sagara (Kyushu Institute of Tech.)

**2B36** Closed-Loop System Identification of an Overhead Travelling Crane Using Evolutionary Computation

Kazuo Kawada (Hiroshima Univ.), Toru Yamamoto (Hiroshima Univ.)

**2B37** Adaptive Control System Design of a Quadrotor by High Gain Based Feedback Control via Backstepping Strategy with an Inner-Loop PFC

Ikuro Mizumoto (Kumamoto Univ.), Takuto Nakamura (Kumamoto Univ.), Makoto Kumon (Kumamoto Univ.)

**August 5, 2014**

**Room C 15:40-17:40**

**Robot Arms**

Session Chairs : Toru Watanabe (Nihon Univ.)

Akira Sone (Kyoto Institute of Tech.)

- 2C31** Bilateral Tele-robot control based on Scattering and virtual damping  
Thuan Xuan Nguyen (Hanoi Univ.), Nam Duc Do (Hanoi Univ.), Hung Chi Nguyen (Hanoi Univ.), Akira Sone (Kyoto Institute of Tech.)
- 2C32** Grasping Strategy of Industrial Robot with Pneumatic Robot Arm  
Nobutaka Tsujiuchi (Doshisha Univ.), Takayuki Koizumi (Doshisha Univ.), Daisuke Kuse (Doshisha Univ.), Mitsumasa Sugiura (SQUSE Inc)
- 2C33** Motion Control and Optimization of a Ball Throwing Robot with a Flexible Arm  
Yizhi Gai (Hokkaido Univ.), Yukinori Kobayashi (Hokkaido Univ.), Takanori Emaru (Hokkaido Univ.)
- 2C34** Proposal of a multistage Tensegric robot arm and its motion control  
Kazuhiro Miyashita (Nihon Univ.), Toru Watanabe (Nihon Univ.)
- 2C35** Null Space Motion Control of a Redundant Robot Arm Using Matrix Augmentation and Saturation Method  
Hyun-Cheol Cho (Korea Univ.), Jae-Bok Song (Korea Univ.)
- 2C36** Drawing operation taking into account the stiffness of controlled object by dual-arm robot  
Kentarō Kasuya (Chiba Univ.), Kota Nakamizo (Chiba Univ.), Zunzun Hu (Chiba Univ.), Kenzo Nonami (Chiba Univ.)

**August 5, 2014**

**Room D 15:40-17:00**

**Invited session (IV): Future of Fluid Power**

Session Chairs : Yutaka Tanaka (Hosei Univ.)

Tomonori Kato (Fukuoka Institute of Tech.)

**2D31** On thermal lubrication characteristics of hydraulic pumps -Comparison among piston, vane, and gear types-

Toshiharu Kazama (Muroran Institute of Tech.)

**2D32** Study on High-Performance Shoes for Walking Training

Kazuma Kanazaki (Nara National College of Tech.), Yasuhiri Hayakawa(Nara National College of Tech.), Shogo Kawanaka (Nara National College of Tech.), Shigeki Doi (Nara National College of Tech.)

**2D33** A method for measuring frequency series wave speed in viscoelastic pipes

Ill-Yeong Lee (Pukyong National Univ.)

**2D34** Torque observer and decoupling control of automatic transmission

Kazushi Sanada (Yokohama National Univ.), Kazuki Kishi (Yokohama National Univ.), Hideki Takamatsu (Toyota Motor Corp.), Kazufumi Toriya(Toyota Motor Corp.)

**August 6, 2014**

**Room A 10:20-12:00**

**Vibration Control (III)**

Session Chairs : Yoshiyuki Noda (Univ. of Yamanashi)

Hong Hee Yoo (Hanyang Univ.)

**3A11** Vibration and Control of Active Isolator taking Dynamical Property of Elastic Load into Account

Hazime Shiraishi (Nihon Univ.), Kazuya Shiobara (Nihon Univ.), Toru Watanabe (Nihon Univ.), Kazuto Seto (Seto Vibration Control Lab)

**3A12** Effectiveness of TPA based on change in mode shape

Nobutaka Tsujiuchi (Doshisha Univ.), Takayuki Koizumi (Doshisha Univ.), Akifumi Yoshimura (Doshisha Univ.), Kimihisa Tanaka (Doshisha Univ.)

**3A13** Trajectory planning method with obstacle avoidance and vibration suppression for 2-D transfer machine

Junichi Nakajima (Univ. of Yamanashi), Yoshiyuki Noda (Univ. of Yamanashi)

**3A14** Study on Wired Tuned Mass Damper Using Wires and Suspended Weights to Obtain Restoring Force

Yusuke Kuwano (Nihon Univ.), Toru Watanabe (Nihon Univ.), Kazuto Seto (Seto Vibration Control Lab)

**3A15** Vibration localization of a multi-packet blade system

Seungmin Kwon (Hanyang Univ.), Hong Hee Yoo (Hanyang Univ.)

**August 6, 2014**

**Room B 10:20-12:00**

**Smart Structures ( I )**

Session Chairs : Takeshi Nakahara (Kyushu Sangyo Univ.)

Ulrich Gabbert (Otto-von-Guericke-Universitaet)

**3B11** Adaptive vibration control using self-organizing map

Naohiro Kida (Hokkaido Univ.), Shinya Honda (Hokkaido Univ.), Yoshihiro Narita (Hokkaido Univ.)

**3B12** Model predictive controllers for energy regenerative active vibration control systems using piezoelectric actuators and class D amplifiers

Takeshi Nakahara (Kyushu Sangyo Univ.), Takashi Fujimoto (Kyushu Sangyo Univ.)

**3B13** Control of the Direct Drive Valve System Actuated by Piezostack Actuator

Juncheol Jeon (Inha Univ.), Chulhee Han (Inha Univ.), Seung-Bok Choi (Inha Univ.)

**3B14** Active piezoelectric noise control of a car engine

Ulrich Gabbert (Otto-von-Guericke-Univ.), Fabian Duvigneau (Otto-von-Guericke-Univ.), Stefan Ringwelski (Otto-von-Guericke-Univ.), Jinjun Shan (York Univ.)

**3B15** A study on introduction of gas engine to micro-grid with genetic algorithm

Yugo Yamaguchi (The Univ. of Tokyo), Riku Machida (The Univ. of Tokyo), Shigehiko Kaneko (The Univ. of Tokyo), Yudai Yamasaki (The Univ. of Tokyo)

**August 6, 2014**

**Room C 10:20-12:00**

**Robot Dynamics & Control (II)**

Session Chairs : Katsuyoshi Tsujita (Osaka Institute of Tech.)

Makoto Yokoyama (Niigata Univ.)

**3C11** Touchdown dynamics simulation of a novel pulley suspension mechanism for a movable lander

Tomohiro Oya (The Univ. of Tokyo), Takao Maeda (The Univ. of Tokyo), Masatsugu Otsuki (JAXA), Takashi Kubota (JAXA), Tatsuaki Hashimoto (JAXA)

**3C12** Motion Analysis of the Root-Cutting Blade for the Automatic Spinach Harvester  
Akihiro Fujisawa (Shinshu Univ.), Yuichi Chida (Shinshu Univ.), Yuta Nakamura (Shinshu Univ.), Kosuke Hirano (Shinshu Univ.), Takashi Tsuchiya (Shinshu Univ.), Takamitsu Hatakeyama (Shinshu Univ.), Tatsuya Yamaguchi (Shinshu Univ.), Kojiro Iizuka (Shinshu Univ.), Takeshi Shimada (JA Nat. Fed. of Agricultural Cooperative Assoc. Nagano), Susumu Kitazawa (Nisizawa Electric Meters Manufac. Corp.)

**3C13** Study on Mobility Mechanism using Earth Pressure to traverse Loose soil with Steep Slope for Lunar Exploration Robot

Kojiro Iizuka (Shinshu Univ.), Atumu Oki (Shinshu Univ.), Satoshi Suzuki (Shinshu Univ.), Takashi Kawamura (Shinshu Univ.)

**3C14** Development of a gravity compensation system for the prototype test of space crafts by using modular robots

Hiroki Shigematsu (Osaka Institute of Tech.), Katsuyoshi Tsujita (Osaka Institute of Tech.), Naoko Kishimoto (Setsunan Univ.)

**3C15** Limiting Rocking Oscillation of Cable-Riding Robots Subject to Wind Disturbances

Ninad Dhundur (Univ. of Louisiana at Lafayette), Joshua Vaughan (Univ. of Louisiana at Lafayette), Michele Guarnieri (HiBot, Corp.), Paulo Debenest (HiBot, Corp.)

**August 6, 2014**

**Room D 10:20-12:20**

**Invited session (VI): Advanced Dynamic Testing**

Session Chairs : Yasutaka Tagawa (Tokyo Univ. of Agri. & Tech.)

Jia-Ying Tu (National Tsing Hua Univ.)

**3D11** Tutorial(40min)-A comparison of hybrid and DSS schemes for substructured system testing-

David Paul Stoten (Univ. of Bristol)

**3D12** Substructurability analysis for dynamically substructured systems

Jia-Ying Tu (National Tsing Hua Univ.), Chen-Yu Chen (National Tsing Hua Univ.)

**3D13** Actuator control for a rapid prototyping railway bogie, using a dynamically substructured systems approach

Nobuyuki Watanabe (Railway Technical Research Institute), David Paul Stoten (Univ. of Bristol)

**3D14** Frequency- range expansion into elastic vibration on the system of hardware in the loop simulation for railway vehicle

Reiko Koganei (Railway Technical Research Institute), Nobuyuki Watanabe (Railway Technical Research Institute)

**3D15** Comparative results for DSS and hybrid testing for a base isolated structure with rubber bearings

Ryuta Enokida (Kyoto Univ.), David Stoten (Univ. of Bristol)

**August 6, 2014**

**Room A 13:40-15:20**

**Vibration Control (IV)**

Session Chairs : Akira Sanada (Industrial Tech. center of Okayama prefecture)

Satoshi Ueno (Ritsumeikan Univ.)

- 3A21** Synchronization Error Suppression Control for Twin-drive Table System  
Tetsuya Ojira (Kyushu Institute of Tech.), Kazuhiro Tsuruta (Kyushu Sangyo Univ.), Hideki Honda (Kyushu Institute of Tech.)
- 3A22** Experimental investigation of sound insulation property of active acoustic enclosure  
Akira Sanada (Industrial Tech. center of Okayama prefecture), Kouji Higashiyama (Kurashiki kako Co., Ltd)
- 3A23** Relationship between oscillator's natural frequency and amplitude map -Matsuoka neural oscillators having same limit cycles-  
Junichi Hongu (Kyoto institute of Tech.), Daisuke Iba (Kyoto institute of Tech.), Morimasa Nakamura (Kyoto institute of Tech.), Ichiro Moriwaki (Kyoto institute of Tech.)
- 3A24** Levitation of a Flexible Rotor Supported by Hybrid Magnetic Bearings  
Nozomu Ishikawa (Ritsumeikan Univ.), Tomohiro Nezu (Ritsumeikan Univ.), Satoshi Ueno (Ritsumeikan Univ.)
- 3A25** Vibro-Acoustic Behaviour of a Non-Uniform Beam Traversed by a Moving Point Load  
Sudheesh Kumar C.P. (Indian Institute of Tech. Madras), Sujatha C (Indian Institute of Tech. Madras), Shankar Krishnapillai (Indian Institute of Tech. Madras)



**August 6, 2014**

**Room B 13:40-15:20**

**Smart Structures (II)**

Session Chairs : Kwon Joong Son (American Univ. in Dubai)

Tsutomu Nishigaki (Kinki Univ.)

**3B21** Vibration Control of Washing Machine with MR Damper Using Direct Adaptive Fuzzy Controller

Do Xuan Phu (Inha Univ.), Seung-Hyun Choi (Inha Univ.), Nguyen Quoc Hung (Inha Univ.), Seung Bok Choi (Inha Univ.)

**3B22** Dynamic Modeling and Control System Design of Stewart Platform for Vibration Isolation

Jinjun Shan (York Univ.), Ziliang Kang (York Univ.), Ulrich Gabbert (Univ. of Magdeburg)

**3B23** Pole tuning of model-based controller using simultaneous perturbation stochastic approximation

Keiichiro Furuya (Hokkaido Univ.), Shinichi Ishizuka (Hokkaido Univ.), Itsuro Kajiwara (Hokkaido Univ.), Yuelin Zhang (Hokkaido Univ.)

**3B24** The Use of Degenerate Mode Shapes in Piezoelectric Variable Friction Tactile Displays

Kwon Joong Son (American Univ. in Dubai), Keehoon Kim (Korea Institute of Tech. (KIST))

**3B25** Vibration Analysis of Rectangular Plates with Piezoelectric Film Actuators

Tsutomu Nishigaki (Kinki Univ.), Izumi Umakoshi (Kinki Univ.)

**August 6, 2014**

**Room C 13:40-15:20**

**Robot Dynamics & Control (III)**

Session Chairs : Chin-Sheng Chen (National Taipei Univ. of Tech.)

Fujio Ikeda (Nagaoka National College of Tech.)

**3C21** Phase Control for Moving Body in Narrow Passage

Akio Yamano (Osaka Prefecture Univ.), Atsuhiko Shintani (Osaka Prefecture Univ.), Tomohiro Ito (Osaka Prefecture Univ.), Chihiro Nakagawa (Osaka Prefecture Univ.)

**3C22** Simulation and Experimental Validation on Touchdown Dynamics of Lunar-Planetary Lander with Controllable Landing Gear

Takao Maeda (The Univ. of Tokyo), Masatsugu Otsuki (JAXA), Tatsuaki Hashimoto (JAXA)

**3C23** Synchronous Motion of Gantry Robot using Neural Network Compensator

Chin-Sheng Chen (National Taipei Univ. of Tech.), Kun-Zhang Wu (National Taipei Univ. of Tech.)

**3C24** Novel Landmark based Navigation for Autonomous Mobile Robot

Nobuya Okada (Shinshu Univ.), Daichi Abe (Shinshu Univ.), Satoshi Suzuki (Shinshu Univ.), Kojiro Iizuka (Shinshu Univ.), Takashi Kawamura (Shinshu Univ.)

**3C25** Development of sewer pipe inspection vehicle using integrated sensing system

Fujio Ikeda (Nagaoka National College of Tech.), Shigehiro Toyama (Nagaoka National College of Tech.), Toshio Kumota (Kumota Incorporated Company), Takashi Yanagisawa (Kumota Incorporated Company)

**August 6, 2014**

**Room D 13:40-15:40**

**Invited session (VI): Advanced Dynamic Testing**

Session Chairs : David Stoten (Univ. of Bristol)

Kenta Seki (Nagoya Institute of Tech.)

- 3D21** Model-based tracking control framework for real-time hybrid simulation  
Pei-Ching Chen(National Center for Research on Earthquake Engineering), Chia-Ming Chang (Guangzhou Univ.), Billie F. Spencer Jr. (Univ. of Illinois at Urbana-Champaign), Keh-Chyuan Tsai (National Taiwan Univ.)
- 3D22** Dynamically substructured testing for mechanical system incorporating inerter devices  
Jason Zheng Jiang (Univ. of Bristol), Jinrong Yang (Univ. of Bristol), David P Stoten (Univ. of Bristol)
- 3D23** Acceleration control of 3DOF shaking table which can suppress reaction force from test models  
Mineki Okamoto (Kisarazu National College of Tech.), Yasutaka Tagawa(Tokyo Univ. of Agriculture and Tech.)
- 3D24** Development of a multiple seismic shaking table test system  
Pei-Ching Chen (National Center for Research on Earthquake Engineering), Pei-Yang Lin (National Center for Research on Earthquake Engineering), Hung-Wei Chiang (National Center for Research on Earthquake Engineering)
- 3D25** Modeling of Shaking Table Systems Aided by Multi-Body Dynamics Software  
Kenta Seki (Nagoya Institute of Tech.), Makoto Iwasaki (Nagoya Institute of Tech.)
- 3D26** A Unified Approach for Composite Filter and Controller Fusion  
Keisuke Shimono (Tokyo Univ. of Agriculture and Tech.), David Stoten (Univ. of Bristol), Yasutaka Tagawa (Tokyo Univ. of Agriculture and Tech.)

**August 6, 2014**

**Room A 16:00-17:40**

**Vibration Control (V)**

Session Chairs : Barenten Suciu (Fukuoka Institute of Tech.)

Joshua Vaughan (Univ. of Louisiana at Lafayette)

**3A31** Investigation on a colloidal damper rendered controllable under electric and magnetic fields

Barenten Suciu (Fukuoka Institute of Tech.)

**3A32** Vibration analysis of a rotating gas turbine blade made-up of functionally graded materials considering operating temperatures and its ceramic particle size

Kibok Lee (Hanyang Univ.), Yutaek Oh (Hanyang Univ.), Hong Hee Yoo (Hanyang Univ.)

**3A33** Development of an active isolation system using the reference mass of a two DOF system

Ryo Nawata (Canon Inc.), Katsumi Asada (Canon Inc.), Wataru Tamura (Canon Inc.), Naoki Maruyama (Canon Inc.)

**3A34** Development of a Vibration Control System using Variable-Pitch Propeller for Life-Size Suspended Load

Junichi Sugimoto (Nihon Univ.), Kouta Kuriki (Nihon Univ.), Toru Watanabe (Nihon Univ.), Kazuto Seto (Nihon Univ.)

**3A35** Concurrent Command and Mechanical System Design to Limit Transient and Residual Vibration

Ali Baheri (Univ. of Louisiana at Lafayette), Joshua Vaughan (Univ. of Louisiana at Lafayette)

**August 6, 2014**

**Room B 16:00-17:40**

**Smart Structures (III)**

Session Chairs : Yohei Hoshino (Kitami Institute of Tech.)

Toshihiko Shiraishi (Yokohama National Univ.)

**3B31** Multi-objective optimization for vibration suppression of smart laminated composites

Shinya Honda (Hokkaido Univ.), Kazuki Watanabe (Hokkaido Univ.), Yoshihiro Narita (Hokkaido Univ.), Itsuro Kajiwara (Hokkaido Univ.)

**3B32** repulsive torque control of MR haptic master in virtual environment

Seung-Hyun Choi (Inha Univ.), Jong-Seok Oh (Inha Univ.), Sang-Rock Lee (Inha Univ.), Seung-Bok Choi (Inha Univ.)

**3B33** A Viscoelastic Adaptive Tuned Vibration Absorber

Emiliano Rustighi (Univ. of Southampton), Matthieu Beaugrand (Univ. of Southampton)

**3B34** Self-identification method of arrangement and effective pressure areas for a vibration-isolation table supported with a redundant number of pneumatic actuators

Yohei Hoshino (Kitami Institute of Tech.), Soichiro Suzuki (Kitami Institute of Tech.), Kenji Takagi (Kitami Institute of Tech.), Yukinori Kobayashi (Hokkaido Univ.)

**3B35** Application of Magnetorheological Grease to a Shear Type Controllable Damper

Toshihiko Shiraishi (Yokohama National Univ.), Takashi Sugiyama (Yokohama National Univ.)