

August 17, 2010

		Room A	Room B	Room C	Room D
10:45		Opening Ceremony			
11:00		Keynote Speech			
12:00	Lunch				
13:20	Technical Session	Civil Infrastructures (I)	Flying Robots	Crane and Logistic Systems	
15:20	Coffee Break (20 min)				
15:40	Technical Session	Civil Infrastructures (II)	Control Systems Design	Nonlinear Vibration	
18:00	Welcome Reception (Capo Pellicano on first floor of An Block)				

August 18, 2010

		Room A	Room B	Room C	Room D
9:00		Keynote Speech			
10:00	Coffee Break (20 min)				
10:20	Technical Session	Electromagnetic Systems (I)	Adaptive Control	Control Systems Design for Vehicle	Sensor and Monitoring
12:20	Lunch				
13:40	Technical Session	Electromagnetic Systems (II)	Manipulator and Personal Mobility Mechanism	Simulator and Eco-drive	Fluid Related Dynamics and Control
15:40	Coffee Break (20 min)				
16:00	Technical Session	Rotary Machinery	Vision Systems	Dynamics Analysis and Simulation	Aerospace Systems

August 19, 2010

		Room A	Room B	Room C	Room D
10:00	Technical Session	Riding Comfort	Modeling	Sound and Vibration	Actuators
12:20	Lunch				
13:40		Special Session			
16:00	(Bus leaves for the Railway Museum at 16:00)				
18:00	Banquet (The Railway Museum)				

August 20, 2010

		Room A	Room B	Room C	Room D
9:00		Keynote Speech			
10:00	Coffee Break (20 min)				
10:20	Technical Session	Rotor Dynamics	Vibration and Isolation	Manipulator and Pendulum Control	
12:30		Closing Ceremony			
13:00	Lunch				
14:00 16:00	Technical Tour (Lab tour participants should gather at the foyer on the second floor of An Block)				

17 August, 2010

Room A 11:00-12:00

Keynote Speech

Session Chair: Takeshi Mizuno

1K11 Vehicle System Dynamics and Control for Sustainable Transportation
Yoshihiro Suda

18 August, 2010

Room A 9:00-10:00

Keynote Speech

Session Chair: Yoshihiro Suda

2K11 Present and Future State of High Speed Railways
-From the Tokaido Shinkansen to the Superconducting Maglev-
Noriyuki Shirakuni

20 August, 2010

Room A 9:00-10:00

Keynote Speech

Session Chair: Kimihiko Nakano

4K11 Status and Perspective on the Motion and Vibration Control of Road Vehicle
Guangqiang Wu

19 August, 2010

Room A 13:40-15:10

Special Session:

MOVIC—Past, Present and Future

Session Chair: Yoshihiro Suda

- 3S11** Some Thoughts on the Future of MOVIC Based on a SWOT Analysis
Chong-Won Lee
- 3S12** European Research Activities in the Field of the MOVIC
Heinz Ulbrich, Lucas Ginzinger
- 3S13** MOVIC - Past, Present and Future
Masayoshi Tomizuka

17 August, 2010

Room A 13:20-15:20

Civil Infrastructures (I)

Session Chair: Bijan Samali, Kazuhiko Hiramoto

- 1A11** Damping Characteristics of a Prestressed Concrete Cylindrical Shell in Chiba, Japan
Kiyoshi Shingu, Kiyotoshi Hiratsuka, Masaki Yukawa, Kazuo Mitsui, Takayuki Kawashima, Norio Kondo, Kiyoshi Ogawa
- 1A12** Boundary Damage Identification of a Two-storey Framed Structure Utilising Frequency Response Functions and Artificial Neural Networks
Ulrike Dackermann, Jianchun Li, Bijan Samali
- 1A13** Reduction of Vibration of House Using Oil Damper
Shigeru Aoki, Katsumi Kurita, Yuuki Yokoyama
- 1A14** Semi-active Control of MR Dampers Setting at Inter-stories Level of a Building
Hideto Kanno, Tetsuya Nishida, Jun Kobayashi
- 1A15** Integrated Design of Structural and Semi-active Control Systems
Kazuhiko Hiramoto, Taichi Matsuoka, Akira Fukukita, Katsuaki Sunakoda
- 1A16** 6 Force Component Balance for Wind Tunnel Model Tests
Wenjun Wang, Hiroshi Kuroyanagi, Kazunori Yoshida

17 August, 2010

Room A 15:40-17:40

Civil Infrastructures (II)

Session Chair: Faical Ikhouane, Akira Fukukita

- 1A21** A Study on Nonlinear Characteristics of Rubber Isolator
Kosuke Iwamoto
- 1A22** Semi-active Control for Isolated Structure Based on Response Evaluator of System Respected to the Regional Characteristics and Ground Motion of Earthquake
Akira Fukukita, Masaki Takahashi
- 1A23** Vibration Control for House Structures beyond 3 Story under Ground Excitation Using Adjustable Pendulum-type Controller under Ground Excitation like Traffic Vibrations or Earthquakes
Kazuto Seto, Yuichi Iwasaki, Toru Watanabe, Shunya Oda
- 1A24** Dynamic Performance of a Novel Magnetorheological Pin Joint
Yancheng Li, Jianchun Li, Bijan Samali
- 1A25** PI semiactive Control Using MR Dampers
Naile Aguirre, Faical Ikhouane, Jose Rodellar
- 1A26** Stability of Delayed Systems for Substructuring Testing Applications
Julian Mauricio Londono, Giorgio Serino

17 August, 2010

Room B 13:20-15:00

Flying Robots

Session Chair: Makoto Yokoyama, Satoshi Suzuki

- 1B11** Nonlinear Adaptive Control for Small-scale Helicopter
Satoshi Suzuki, Kenzo Nonami
- 1B12** Agile and Precise Attitude Switching Maneuver of Flexible Spacecraft Based
on Nonstationary Frequency-shaped Robust Control
Ryota Ikeda, Masaki Takahashi
- 1B13** Aerial Robot Performance by Link Motion
Kensuke Nishi, Hirohisa Kojima
- 1B14** Movable Range-finding Sensor System and Precise Automated Landing of
Quad-rotor MAV
Daisuke Iwakura, Wei Wang, Kenzo Nonami, Mark Haley
- 1B15** Design and Autonomous Control of a Six-rotor Type Flying Robot
Yuze Song, Wei Wang, Kenzo Nonami

17 August, 2010

Room B 15:40-17:40

Control Systems Design

Session Chair: Yutaka Kurita, Takeshi Kawashima

- 1B21** A Novel Position Control Strategy Based on Electrical Energy Consumption Analysis
Rencheng Zheng, Kimihiko Nakano
- 1B22** Basic Study on Sliding Mode Control System of Shaking Table for a Baby Carriage
Takeshi Kawashima
- 1B23** Active Control of Vibrations in a Rolling Process by Nonlinear Optimal Controller
Juha Orivuori, Kai Zenger
- 1B24** Driving at Resonance Point of Multi-degree-of-freedom System by Decentralized Control (Experiment Using Five Carts Connected in Series by Four Springs)
Yutaka Kurita, Yasunori Oura, Shigekatsu Matsuda
- 1B25** Mixed Sensitivity Problem in Sampled-data Positioning Control System
Takenori Atsumi, William C. Messner
- 1B26** PID Control of Eigenfrequency for Smart Helmholtz Resonator
Wakae Kozukue, Hideyuki Miyaji

17 August, 2010

Room C 13:20-15:20

Crane and Logistic Systems

Session Chair: Yasutaka Tagawa, Toru Watanabe

- 1C11** Basic Study on a Vibration Control System Using a Variable-Pitch Propeller for Crane Load
Noriyuki Takasaki, Fumiya Yonekura, Toru Watanabe, Kazuto Seto
- 1C12** Control of a Linear Motor Driven Table via Minimal Control Synthesis
Keisuke Shimono, Atsushi Kato, Koji Hironaka, Yasutaka Tagawa, David Stoten
- 1C13** Dynamic Behavior of Continuous Unloader with Hinged-Leg Structure under Earthquakes (Effects of an Antiseismic Device)
Hiroto Masuda, Masajiro Abe, Tomoko Koga, Masaki Hayatsu, Masaomi Wada, Takafumi Fujita
- 1C14** Development of an Auto-positioning Spreader for Mobile Harbor
Eun Ho Kim, Kyung Woon Kwak, Young Kook Kim, In Gwun Jang, Youn Sik Park, Byung Man Kwak
- 1C15** Nonlinear Control of an Offshore Container Crane
Quang Hieu Ngo, Quoc Chi Nguyen, Keum-Shik Hong
- 1C16** Dynamic Analysis of a Container Stacking System for the Mobile Harbor
In Su Kim, Kwang Hoon Kim, Kwon Son

17 August, 2010

Room C 15:40-17:40

Nonlinear Vibration

Session Chair: Hong-Hee Yoo, Daisuke Iba

- 1C21** Vibration Control Using Harmonically-varying Damping
Daisuke Iba, Billie F. Spencer, Jr.
- 1C22** Non-linear Vibration Analysis of a Beam with Embedded Shape Memory
Alloy Wires
Hojatolah Rezaei, Hassan Nahvi, Mahmood Kadkhodaei
- 1C23** Performance Uncertainty Estimation of a Nonlinear Vibration System
Chan-Kyu Choi, Hong-Hee Yoo
- 1C24** Influence of Stiffness Distribution in Frictional Contact Surface on Disk Brake
Squeal
Yasunori Oura, Yutaka Kurita, Yukio Nishizawa
- 1C25** Influence of Initial SRO and DTV on Brake Judder Based on the Disc Brake
Model with Multi-points Contact
Lijun Zhang, Dejian Meng, Zhuoping Yu
- 1C26** Stabilization of Hunting Motion by Gyroscopic Damper
Shihpin Lin, Kentaro Nishimura, Hirokazu Okamoto, Hiroshi Yabuno,
Yoshihiro Suda

18 August, 2010

Room A 10:20-12:20

Electromagnetic Systems (I)

Session Chair: Takeshi Mizuno, Takeshi Nakahara

- 2A11** Series-type Multiple Magnetic Suspension System
Takeshi Mizuno, Yutaka Maruyama, Masaya Takasaki, Yuji Ishino, Yusuke Oshiba
- 2A12** Vibration Control With Linear Actuator Permanent Magnet System Using Robust Control
Phaisarn Sudwilai, Koichi Oka, Akiyuki Sano, Yuta Hirokawa
- 2A13** Energy Regenerative Active Vibration Control of Cantilever Beam Using Piezoelectric Actuator and Class D Amplifier
Takeshi Nakahara, Takashi Fujimoto
- 2A14** Simultaneous Noncontact Suspension of Two Iron Balls Using Flux Path Control Mechanism
Feng Sun, Koichi Oka, Toru Takechi
- 2A15** Zero-power control of Parallel Magnetic Suspension Systems
Takeshi Mizuno, Takumi Sakurada, Yuji Ishino, Masaya Takasaki
- 2A16** Development of a Flux-Path Control Magnetic Suspension System with Swing-type Control Plates
Yasuhiro Sakai, Yuji Ishino, Masaya Takasaki, Takeshi Mizuno

18 August, 2010

Room A 13:40-15:40

Electromagnetic Systems (II)

Session Chair: Mochimitsu Komori, Satoshi Ueno

- 2A21** Flux Concentrated Hybrid Magnetic Bearing
Yohji Okada, Hidetoshio Miyazawa, Ryou Kondo, Masato Enokizono
- 2A22** Application of Switching Stiffness Control to Magnetic Suspension System for Increasing Load Capacity.
Yuji Ishino, Takeshi Mizuno, Masaya Takasaki
- 2A23** H-inf Observer for Sensorless Velocity Control of Permanent Magnet Synchronous Motors
Hsin-Hung Chou, Stone Cheng, Chia-Min Ting
- 2A24** Rotational Test of High-load-type Active Magnetic Bearing for Induction-heated Roll
Satoshi Ueno, Daiki Kishimoto, Tomoya Uchida, Motomasa Hirao, Osamichi Matsukawa, Kozo Okamoto
- 2A25** A Proposal of New Flywheel Energy Storage System Using a Superconducting Magnetic Bearing
Mukhamad Subkhan, Mochimitsu Komori, Kenichi Asami
- 2A26** Active Vibration Control of AC Motors Using Linear Time Periodic Models
Tapani Hyvamaki, Kai Zenger

18 August, 2010

Room A 16:00-17:00

Rotary Machinery

Session Chair: Yohji Okada, Hiro-o Yamazaki

- 2A31** Optimal Control in Reducing Rotor Vibrations
Sami Kiviluoto, Ying Wu, Kai Zenger, Xiao-Zhi Gao
- 2A32** Simulation and Analysis of Dynamic Characteristics of In-wheel Motor and
Tire System
Qian Min, Zhang Lijun
- 2A33** Modeling and Discrete-time State Observer for Anti-lock Brake System
Hiro-o Yamazaki

18 August, 2010

Room B 10:20-12:40

Adaptive Control

Session Chair: Hiroshi Okubo, Hiroyuki Iwamoto

- 2B11** Adaptive Control for a Winding Process of High-speed Roll-to-roll Systems
Quoc Chi Nguyen, Quang Hieu Ngo, Keum-Shik Hong
- 2B12** Adaptive Control of a Four-rotor Mini Helicopter
Keigo Fujimoto, Makoto Yokoyama, Yuji Tanabe
- 2B13** Damping of Cyclic Bladed Disks Utilizing a Piezoelectric Switching
Technique
Andreas Hohl, Marcus Neubauer, Joerg Wallaschek
- 2B14** Efficient Modeling of the Damping Performance of Piezoelectric Switching
Techniques Using Harmonic Balance Method
Marcus Neubauer, Joerg Wallaschek
- 2B15** Semi-active Vibration Control of Smart Structures with Sliding Mode Control
Takuji Itoh, Takashi Shimomura, Hiroshi Okubo
- 2B16** Adaptive Control of Wave Propagation in a Rectangular Panel Using a Smart
Wave Filter
Hiroyuki Iwamoto, Nobuo Tanaka
- 2B17** Adaptive Impedance Control with Compliant Body Balance for
Hydraulic-actuated Hexapod Robot
Addie Irawan, Hiroshi Ohroku, Yasunaga Akutsu, Kenzo Nonami

18 August, 2010

Room B 13:40-15:40

Manipulator and Personal Mobility Mechanism

Session Chair: Yongsheng Zhao, Chihiro Nakagawa

- 2B21** Kinematic Analysis of the Lifting Mechanism of One Forging Manipulator
Xu Yundou, Zhao Yongsheng
- 2B22** Kinematics and Singularity Analysis of a Novel 6-PUS/UPU Parallel
Mechnism
Yanbin Duan, Shunpan Liang, Junxiang Jiang, Daxing Zeng, Kuijing Zheng,
Yongsheng Zhao
- 2B23** An External Positioning Mechanism for Robotic Surgery
Ricardo Beira, Hannes Bleuler, Reymond Clavel
- 2B24** Evaluation Process of Digging Performance for Hydraulic Excavator by
Bucket Tip Trace
Takayuki Koizumi, Nobutaka Tsujiuchi, Tatsuya Yoshida, Hiroaki Andou
- 2B25** Motion Analysis and Control of Dual Wheel Vehicle as Human-machine
System
Seiji Komiya, Masao Ishihama, Takahiro Takahashi, Kazuya Kojima
- 2B26** Driving Control of a Two-wheeled Inverted Pendulum Vehicle with Human
Pedaling
Chihiro Nakagawa, Kimihiko Nakano, Yoshihiro Suda, Yuki Hirayama

18 August, 2010

Room B 16:00-18:00

Vision Systems

Session Chair: Heinz Ulbrich, Kenzou Nonami

- 2B31** Sliding Mode Controller for Stereo Vision Based Autonomous Hovering of Quad-rotor MAV
Dwi Pebrianti, Wei Wang, Daisuke Iwakura, Yuze Song, Kenzou Nonami
- 2B32** Obstacle Avoidance Control by Laser Range Finder for Hydraulic-driven Robot COMET-IV-preliminary study toward applying SLAM
Mohd Razali, Hiroshi Ohroku, Kenzo Nonami
- 2B33** Compact High Dynamic 3 DoF Camera Orientation System: Development and Control
Thomas Villgrattner, Erich Schneider, Philipp Andersch, Heinz Ulbrich
- 2B34** Dexterous Manipulation for Assembly Work Using Multilink Dual Arm Manipulator with Vision Sensors
Ahmad Shauri Ruhizan Liza, Shunsuke Toritani, Kotaro Saiki, Daisuke Nakagawa, Kenzo Nonami
- 2B35** Vision-based Object Tracking System by Micro-air Vehicle
Syaril Azrad, Farid Kendoul, Kenzo Nonami
- 2B36** Development of the 3 Axis Vision Stabilization System for Unmanned Mobile Robot
Sung-Soo Kim, Yong-Rae Im, Myoung-Ho Kim, Dong-Youm Lee, Sang-Cheol Park

18 August, 2010

Room C 10:20-12:20

Control Systems Design for Vehicle

Session Chair: Wan-Suk Yoo, Terumasa Narukawa

- 2C11** Autonomous control and Simultaneous Localization and Mapping (SLAM) of Unmanned Ground Vehicle
Duy Hinh Nguyen, Xiqian Wu, Daisuke Iwakura, Kenzo Nonami
- 2C12** Adaptive Cruise Control in Consideration of Trade-off between Following Capability to a Leading Vehicle and Reduction of Fuel Consumption
Yoshihiko Mikami, Masaki Takahashi, Hidekazu Nishimura
- 2C13** Control System Design for Occupant Lower Extremity Protection in Vehicle Frontal Collision
Terumasa Narukawa, Hidekazu Nishimura
- 2C14** Varying Horizon LQ Control for Vehicle Attitude Control in Rear-end Collisions
Dongho Kim, Youngjin Park, Youn-sik Park
- 2C15** Design on the Head Restraint Connection Structure to Reduce the Whiplash Injury in Rear-end Collisions
Youngshin Kim, Euysik Jeon
- 2C16** Maneuvering Speed of an Off-road Autonomous Vehicle
Wan-Suk Yoo, Du-Ho Cho, Jeong-Han Lee, Ki-Chang Yi

18 August, 2010

Room C 13:40-15:40

Simulator and Eco-drive

Session Chair: Shigehiro Toyama, Kimihiko Nakano

- 2C21** A Sliding Mode Controller of Rudder Angle Servomechanism in Electronic Controlled Steering System of Pleasure Boat
Shigehiro Toyama, Fujio Ikeda, Hiroaki Seta
- 2C22** Improvement of Steering Feeling on Maneuverability for Pleasure Boat
Fujio Ikeda, Shigehiro Toyama, Hiroaki Seta, Nobuo Ezaki
- 2C23** Drivers' Evaluation Based on Yaw Motion in Vehicle Turning via Driving Simulator
Daisuke Yamaguchi, Masaaki Onuki, Yoshihiro Suda
- 2C24** Arrangement of Actuators to Save Energy Consumed in Automotive Active Suspensions
Kimihiko Nakano, Keisuke Suzuki, Yoshihiro Suda
- 2C25** Muscle Fatigue Comparison of Eco-driving and Normal Driving
Shigeyuki Yamabe, Rencheng Zheng, Kimihiko Nakano, Yoshihiro Suda
- 2C26** Manufacture and Control of Independent Driving EV
Hack Sun Kim, Chan Se Jeong, Soon Yong Yang

18 August, 2010

Room C 16:00-17:40

Dynamics Analysis and Simulation

Session Chair: Masajiro Abe, Daisuke Yamaguchi

- 2C31** System Identification of Railway Trains Pantograph for Active Pantograph Simulation
Mohd Azman Abdullah, Yohei Michitsuji, Masao Nagai
- 2C32** Three-dimensional Dynamic Simulation Analysis of Snow Removal Characteristics of Rotary Equipment
Masajiro Abe, Toshikazu Fujino, Fumiyasu Saito, Keisuke Takahata
- 2C33** Estimation Method of Vertical Track Irregularity Using Independent Component Analysis
Hiroki Nakamura, Kimihiko Nakano, Masanori Ohori
- 2C34** Energy Saving Urban Transportation System "Eco-ride"
Yoshihiro Suda, Hisanori Omote, Yasuo Kanayama, Akihiro Sekiguchi, Kimihiko Nakano, Daisuke Yamaguchi

*2C35 is moved to session 3D (Actuators).

18 August, 2010

Room D 10:20-12:20

Sensor and Monitoring

Session Chair: Hong-Hee Yoo, Nobutaka Tsujiuchi

- 2D11** Proposal of Structural Optimization Method for a Six-axis Force/Moment Sensor Attached to a Prosthetic Limb
Yuichiro Hayashi, Nobutaka Tsujiuchi, Takayuki Koizumi, Hiroko Oshima, Akihito Ito, Youtaro Tsuchiya
- 2D12** A Design Method of Absolute Velocity and Displacement Sensors
Takashi Kai, Shinji Wakui
- 2D13** A Real-time Multi-channel Wireless Sensing Network for Structural Monitoring Applications
Sara Casciati, Lucia Faravelli, ZhiCong Chen
- 2D14** Fully Pre-stressed Parallel Structure Six-axis Force Sensor
Jiantao Yao, Zhijun Wang, Yulei Hou, Hang Wang, Yongsheng Zhao
- 2D15** Investigating the Potential of LPS in Structural Mechanics
Fabio Casciati, LiJun Wu
- 2D16** Analysis on Effects of Design Variable Uncertainty on the Performance of MEMS Gyroscope Based on Sample Statistics
Yong Woo Kim, Hong Hee Yoo

18 August, 2010

Room D 13:40-15:40

Fluid Related Dynamics and Control

Session Chair: Chong-Won Lee, Masahiro Watanabe

- 2D21** Active Feedback Control of a Leakage-flow-induced Vibration of Translational 1dof System by Flow Control
Hideaki Yamamoto, Noriyuki Nakano, Masahiro Watanabe, Kensuke Hara
- 2D22** Active Control of a Web Flutter by a Non-contact Control Device Using Pressure Wave
Ikubumi Yamada, Masahiro Watanabe, Kensuke Hara
- 2D23** Stability Analysis of Large-scale Wind Turbines Considering Non-symmetric Configuration of Rotor Blades
Kyung-Taek Kim, Chong-Won Lee, Jong-Po Park, Jeong-Hoon Lee
- 2D24** Fundamental Study on Aerodynamic Performance of Ornithopter
Hironori A Fujii, Masaru Takashi, Hiroki Endo, Kohyou Suzuki
- 2D25** Active Control of Annular Flow-induced Vibration of Axisymmetric Elastic Beam by the Local Gap Width Control
Shoji Takada, Atsuhiko Shintani, Tomohiro Ito, Katsuhisa Fujita
- 2D26** Basic Study on the Method to Control the Self-excited Combustion Oscillation
Atsuhiko Shintani, Tomoshi Yamasaki, Tomohiro Ito

18 August, 2010

Room D 16:00-18:00

Aerospace Systems

Session Chair: Hironori A. Fujii, Masatsugu Otsuki

- 2D31** Storage Strategy of a Long Tape Tether and Analysis of Deployment Behavior
Takeo Watanabe, Masahiro Sukegawa, Hirohisa Kojima
- 2D32** Emulation of Chaotic Librational Motion of Tethered Satellite System in
Elliptic Orbits by Ground-based Experimental Setup
Yoshiyasu Furukawa, Hirohisa Kojima
- 2D33** Steering Control Law of Adaptive Skew Pyramid Type CMGs for Fast Attitude
Maneuvers
Naoki Matsuda, Hirohisa Kojima, Kohei Takada
- 2D34** Compensation for Slippage and Vibration of Planetary Rover with Flexible
Structures
Masatsugu Otsuki, Sachiko Wakabayashi, Shinichiro Narita, Shinichiro
Nishida
- 2D35** Vibration and Stability Control for a Vehicle with Flexible Arms
Haruo Kimura, Yukinori Kobayashi, Yohei Hoshino, Takanori Emaru
- 2D36** Micro Tension Actuator for Vibration Suppression of Tethered Flexible Space
Structures -Experimental Study-
Jixiang Fan, Youki Yano, Hironori A. Fujii, Kazuki Ohhata

19 August, 2010

Room A 10:00-12:20

Riding Comfort

Session Chair: Masao Nagai, Masaki Takahashi

- 3A11** Gain-scheduling H-infinity Control to Improve Ride Comfort and Driving Stability of Vehicle Active Suspension
Shoichi Hiraoka, Takuma Suzuki, Masaki Takahashi
- 3A12** A Novel Empirical Model of Rubber Bushing in Automotive Suspension System
Yu Zengliang, Zhang Lijun, Yu Zhuoping
- 3A13** Evaluation of Ride Comfort with Electromyogram
Yuji Okamoto, Kimihiko Nakano, Masanori Ohori, Atsushi Tagaya, Yoshihiro Suda, Shigeyuki Hori
- 3A14** Control System Design of Electric Power Steering for a Full Vehicle Model with Active Stabilizer
Kei-ichi Yamamoto, Hidekazu Nishimura
- 3A15** Semi-active Suspension Control System Design for Vibration Reduction of Passenger's Body based on Lissajous Figure of Damping Force
Takuma Suzuki, Masaki Takahashi
- 3A16** Study on Vibration Characteristics of the Seats for High Speed Railway Vehicle by Using the Analytical Model
Masaya Sakamoto, Yuta Ichikura, Masao Nagai, Ryuzo Hayashi, Ryohei Shimamune, Yoshitaka Yasui, Yoshihiko Yokoyama,
- 3A17** Design on the Driving Mechanism for Optimization in a Sinking Rear Seat
Yunsik Yang, Euysik Jeon

19 August, 2010

Room B 10:00-12:20

Modeling

Session Chair: Jerzy T. Sawicki, Masahiko Aki

- 3B11** Uncertainty Range Estimation for μ -Synthesis Control of AMB Spindle
Alexander H. Pesch, Jerzy T. Sawicki
- 3B12** Combined Dual Plant Modeling and Controller Design with Verification for the
Nutator System
Yu-Cheng Lin, Po-Chien Chou, Stone Cheng, Homin Jiang, Ming Tang Chen
- 3B13** Integrated Input-output Selection Strategy for Robust Control of Complex
Parameter Varying Systems
Mark Hemedi, Alexander Schirrer, Christian Westermayer, Martin Kozek
- 3B14** Selection of Design Variables through the Sensitivity Analysis of a Detection
Algorithm of the Loss of Balance
Byoung Kyu Ko, Kwang Hoon Kim, Kwon Son
- 3B15** A Modification Technique of Component Modes for Vibration Control
Masahiko Aki, Kazuto Seto, Hiroshi Tajima
- 3B16** A Modeling Method of Coupled Flexible Bodies Taking the Change of
Coupling Angle into Consideration
Kiyoharu Nakagawa, Akihiro Negishi, Hiroshi Tajima, Toru Watanabe, Kazuto
Seto
- 3B17** Modeling and Vibration Analysis of Flexible Robot Arm under Fast Motion in
Consideration of Nonlinearity
Haibin Yin, Yukinori Kobayashi, Takanori Emaru, Yohei Hoshino

19 August, 2010

Room C 10:00-12:00

Sound and Vibration

Session Chair: Guangqiang Wu, Nobuo Tanaka

- 3C11** Control of Structural Sound Radiation and Vibration Using Shunt Piezoelectric Materials
Stanislaw Pietrzko, Qibo Mao
- 3C12** Theory and Method on the Prediction of Car Interior Noise Based on FEM and BEM
Guangqiang Wu, Yajuan Li, Yun Sheng
- 3C13** Non-contact Transportation Using Ultrasonic Levitation
Junpei Tanaka, Nobuo Tanaka
- 3C14** Damage Detection in Aircraft Composite Materials Using a Built-in Broadband Ultrasonic Propagation System
Yoji Okabe, Keiji Fujibayashi, Mamoru Shimazaki, Hideki Soejima
- 3C15** Cluster Control of Sound Transmission Loss Using Double-leaf Wall
Yusuke Takara, Nobuo Tanaka
- 3C16** Acoustic Power Mode Control Theory of a Double-wall Cavity
Shu Kanno, Nobuo Tanaka

19 August, 2010

Room D 10:00-12:20

Actuators

Session Chair: Hideo Utsuno, Jose Javier Bayod

- 3D11** Application of Elastic Wedge for Vibration Damping of Turbine Blade
Jose Javier Bayod
- 3D12** Enhancement of Equivalent Stiffness Ratio of a Piezoelectric Element
Attached to a Beam
Keisuke Yamada, Hiroshi Matsuhisa, Hideo Utsuno, Katsutoshi Sawada,
Yusuke Miura, Keiji Yamaguchi
- 3D13** Transparent Smart Film Actuator Using Conductive Polymer
Satoshi Yoneyama, Nobuo Tanaka
- 3D14** Positioning System Based on Twin Motor Cooperative Control with Gear
Backlash Compensation
Toyokazu Uchida, Akihito Ito, Nobuyuki Furuya, Tatsuya Oshima
- 3D15** Fabrication and Actuation of Linear Contraction Type Electro-active Ionic
Polymer Metal Composite Actuator
Chuan-Feng Chang, Stone Cheng
- 2C35** Seismic Response Mitigation of Medical Wagon with Casters by ER Brake
Takayoshi Kamada, Yasuhiro Ogata, Eiji Sato, Atsuo Kakehi

20 August, 2010

Room A 10:20-12:20

Rotor Dynamics

Session Chair: Shigehiko Kaneko, Lucas Bernhard Ginzinger

- 4A11** Control of Micro Gas Turbine Generator Fueled by Biomass Gas
Shigehiko Kaneko, Yudai Yamasaki
- 4A12** Design of Permanent Magnet Hybrid Magnetic Bearing with Minimum Salient Poles
Nobuyuki Kurita, Keisuke Ohshio, Takeo Ishikawa
- 4A13** Development of Fuel Flexible Engine Control System
Yudai Yamasaki, Yukihiro Nishizawa, Yoshitaka Suzuki, Shigehiko Kaneko
- 4A14** Vibration Localization of a Rotating Multi-packet Blade System with Random Mistuning
Seung Min Kwon, Hong Hee Yoo
- 4A15** Stability Improvement of a Flexible Rotor in Active Magnetic Bearings by Time-periodic Stiffness Variation
Fadi Dohnal, Richard Markert
- 4A16** Model-based Condition Monitoring of an Auxiliary Bearing Following Contact Events
Lucas Bernhard Ginzinger, Mehmet Necip Sahinkaya, Thorsten Schindler, Heinz Ulbrich, Patrick S Keogh

20 August, 2010

Room B 10:20-12:20

Vibration and Isolation

Session Chair: Jinhao Qiu, Brian Mace

- 4B11** Application of Feedforward Control to a Vibration Isolation System Using Negative Stiffness Suspension
Md. Emdadul Hoque, Takeshi Mizuno, Masaya Takasaki, Yuji Ishino
- 4B12** Research on Active Isolation System that Takes the Vibration Mode of Loaded Object into Consideration
Koji Okamoto, Keisuke Sudo, Toru Watanabe, Kazuto Seto
- 4B13** Development of a Three-axis Active Vibration Isolator Using Displacement Cancellation Technique
Mhia Md. Zaglul Shahadat, Takeshi Mizuno, Yuji Ishino, Masaya Takasaki
- 4B14** Active Vibration Isolation Using a Dielectric Electro-active Polymer Actuator
Rahimullah Sarban, Brian Mace, Richard Jones, Emiliano Rustighi
- 4B15** Control Law Design Based on the Polynomial Method for Active Damping of Oscillatory Modes
- The Application of the Delta Operator to the Polynomial Method -
Tatsu Aoki
- 4B16** Influence of Switching Phase and Frequency on the Control Performance of Synchronized Switching Damping Approaches
Hongli Ji, Jinhao Qiu, Daniel Guyomar

20 August, 2010

Room C 10:20-12:20

Manipulator and Pendulum Control

Session Chair: Robert Seifried, Stone Cheng

- 4C11** Force Sensorless Impedance Control of Dual Arm Manipulator-hand System
Kotaro Saiki, Shunsuke Toritani, Daisuke Nakagawa, Ruhizan Liza Ahmad
Shauri, Kenzo Nonami
- 4C12** A Seesaw Swivel Type Actuator with New Magnetic Array Design
Po-Chien Chou, Yu-Cheng Lin, Stone Cheng
- 4C13** Realization of Giant Swing Motions of a Two-link Horizontal Bar Gymnastic
Robot Using Delayed Feedback Control
Dasheng Liu, Hiroshi Yamaura
- 4C14** Control of the Interactive 3D-pendulum Presented at the World Exhibition
EXPO 2010
Robert Seifried, Thomas Gorius, Peter Eberhard
- 4C15** Feed-forward Robust Controller Design with ZPETC-PDF Method for Seesaw
Type Swing Arm Actuator
Billy Wu, Stone Cheng
- 4C16** Stabilization of a Cart-Inverted Pendulum with Interconnection and Damping
Assignment Passivity-Based Control Focusing on the Kinetic Energy Shaping
Kazuto Yokoyama, Masaki Takahashi