SESSION PROGRAM

Session 1-1 "Modal and Vibration Analysis"

9:00-10:15 Room 1, Co-chair: Jintai Chung, Takahiro Ryu

101 Analysis of Excavation Mechanism With Distinct Element Method and Model Experiment
Yasuhiro Kawamoto, Tetsuya Hamaguchi, Takashi Nishimura, Masayuki Nakao (Tokyo University)
Shinichi Muto (Komatsu Ltd.)

102 Frequency Analysis of a Tower-Cable Coupled System
Seockhyun Kim, insu Paek, (Kangwon National University)
Moo Yeol Park (Young Sin Precision Engineering Ltd.)
C.X. Cui (Yanbian University)

103 A Novel Finite Element Model for Computational Time Reduction in Gravity induced Brain Shift Analysis
Youhei Azuma, Kazuhiko Adachi, Atsushi Fujita, Eiji Kohmura (Kobe University)

104 How To Get Operating Deflection Shape (ODS) and Operational Modal Analysis (OMA) with Single Measurement Using Laser Scanning Vibrometer(LSV)
Semyung Wang, Jongsuh Lee (Gwangju institute of Science and Technology)
Yongsoo Kyong (Samsung Electronics)

105 Modal Expansion of Structural intensity for Flexural Vibration on Plates
Nozomu Numata, Toru Yamazaki (Kanagawa University)

Session 1-2 "Modeling, Formulation and Optimization"

10:30-11:45 Room 1, Co-chair: Seockhyun Kim, Yasuhiro Kawamoto

106 Stacking Sequence Optimization for Vibration of Twisted Composite Panels
Ryoji Aoki, Shinya Honda, Yoshihiro Narita (Hokkaido University)

107 Formulation of The Technique to Reinforce The Durability Performance of The Structure Using The Sensitivity information in FE Model

Sung Hun Kwon, Hong Hee Yoo (Hanyang University)

108 Stacking Sequence Optimization for Vibration of Arbitrarily Shaped Plates By Using Isoparametric Finite Elements
Kosuke Owatari, Eui Sup Shin, Yoshihiro Narita (Hokkaido University)

109 Measurements of Dynamic Characteristics of inkjet-Printed Thin Films on a Flexible Plastic Substrate
Junhong Park, Seung Joon Kim, Je Hoon Oh (Hanyang University)

110 Layerwise Optimization for Vibration of Automobile Composite Panels
Claire Couppie, Shinya Honda, Yoshihiro Narita (Hokkaido University)

Session 1-3 "Optimization and Evaluation"

13:00-14:00 Room 1, Co-chair: Junhong Park, Kazuhiko Adachi

111 Dynamic Behaviors of Tethered Satellites
Kyuho Lee, Jintai Chung (Hanyang University)

112 Vibration Optimization for Geometric Surface Shapes of Shallow Shells
Takeru Kato, Daisuke Narita, Yoshihiro Narita (Hokkaido University)

113 Optimization of Suspension Design of Light Rail Vehicle on a Tangent Track
Yonho Cho and Wootae Jeong, Jaeho Kwak (KRRI)

114 Layerwise Optimization for Vibration of Main Wing Composite Structures
Matthieu Micheletti, Shinya Honda, Yoshihiro Narita (Hokkaido University)

Session 2-1 "Modeling and Control"

9:00-10:15 Room 2, Co-chair: Sung Soo Kim, Hiroyuki Sugiyama

201 Basic Research on Semi-Active Connected Control System Using MR Dampers to Improve Its Practicability
Kosuke Matsumaru, Shigeru Inaba, Kazuto Seto, Toru Watanabe (Nihon University)

202 Beat Tuning Method in a Bell Type Structure

Seockhyun Kim (Kangwon National University)
C.X.Cui (Yanbian University)

203 Damping Characteristics of a Steel Framed Hyperbolic Paraboloidal Shell Structure in Chiba
Kiyoshi Shingu, Kitotoshi Hiratsuka, Masaki Yukawa (Nihon University)

204 Development of a Dynamic Simulation Technology for Railway Vehicles
Jae-Ik Cho, Tae-Won Park, Ji-Won Yoon, Sung-Pil Jung and Kab-Jin Jun
(Ajou University)

205 Seismic Response Analysis of a Two-Degree-of-Freedom System with Friction Based on Mass Ratio
Akinori Tomoda, Tetsuya Watanabe, Kihachiro Tanaka (Saitama University)

Session 2-2 "Multibody Dynamics"

10:30-12:00 Room 2, Co-chair: Tae Won Park, Masahiro Watanabe

206 Dynamic Analysis of a Rubber Tracked Vehicle using Parametric Generalized Coordinates
Chul-Ho Lee, Dae-Sung Bae (Hanyang University)
Hui-Je Cho (Virtual Motion)
Masashi Kawabata, Yoshimune Mori, Etsujiro Imanishi (Kobe Steel)

207 Gradient Deficient Curved Beam Element Using The Absolute Nodal Coordinate Formulation
Hiroyuki Sugiyama, Hirohisa Koyama, Hiroki Yamashita (Tokyo University of Science)

208 A Fuel Cell Vehicle Virtual Chassis Platform Using Multibody Vehicle Dynamics Model
Yongrae Im, Wanhee Jeong, Sung-Soo Kim (Chungnam National University)
Sang-Sup Kim (Kookmin University)
Tae-Oh Tak (Kangwon National University)

209 Wear Analysis of a Barrel Cam for a Paper Cup Forming Machine Using a Multibody Dynamic Model
Kab-Jin Jun, Tae-Won Park (Ajou University)
Hyun-Seok Song (Korea Automotive Technology Institute)

210 Dynamics of an Elastic Body by Using Extended Reduced-Order Physical Model
Masahiko Aki, Hiroshi Tajima (Tokyo University)
Kazuto Seto (Seto-Vibration Control)
Naoyuki Tanaka, Takanori Kamoshida, Toru Watanabe(Nihon University)

211 Dynamic Analysis for The Performance of The Wiper System Using Flexible Multibody Dynamic Formulation
Won Sun Chung, Do Hyun Jung, Hyun Seok Song, Young Kyo Seo (Korea Automotive Technology Institute)
Tae Won Park, Sung Pil Jung (Ajou University)

Session 3-1 "Identification, Estimation, Analysis and Modeling"

9:00-10:15 Room 3, Co-chair: Bong Jo Ryu, Masaya Takasaki

301 Study of Long Waves Excited By Peristalsis of Side Wall in Open Channel Using Cellular Automata
Hideo Utsuno, Takashi Nakamoto, Hiroshi Matsuhisa, Keisuke Yamada
(Kyoto University)

302 Damper Models Used in a Drum-Type Washing Machine
Wan-Suk Yoo, Jeong-Han Lee, Jin-Hong Park(Pusan National University)
Sung-Woon Jung, Bo-Sun Chung, Gyung-Hun Nho (LG Electronics)

303 Estimation of Disturbance of Railway Vehicles Using independent Component Analysis
Hiroki Nakamura, Kimihiko Nakano (Tokyo University)

304 Transient Characteristics Analysis of Structural Systems Undergoing Impact Employing Hilbert-Huang Transformation
Lee Seung Kyu, Yoo Hong Hee (Hanyang University)

305 Parameter Identification for Linear Dynamical System by Using Nonlinear Least Squares Curve Fitting - Application To Nuclear Medicine –
Osuke Kobayashi, Kazuhiko Adachi (Kobe University)

Session 3-2 "Sound and Vibraion"

10:30-12:00 Room 3, Co-chair: Semyung Wang, Hideo Utsuno

306 PID Control of Eigenfrequency for Smart Helmholtz Resonator
Wakae Kozukue, Hideyuki Miyaji (Kanagawa institute of Technology)

307 Sound Transmission Loss of The Honeycomb Composite Panel for a Tilting Train
Taegun Seo, Bong-gi Lim, Seockhyun Kim(Kangwon National University)
Jungtae Kim (Hongik University)

308 Fundamental Study of Brake Squeal Caused by In-Plane Vibration of Rotor
Takahiro Ryu, Yuichiro Hirai, Atsuo Sueoka, Takashi Nakae (Oita University)

309 Acoustic Characteristics of One-Dimensional Acoustic Tube with Finite Impedance at The End
Takehiro Maeda, Masanori Tsuji, Kunihiko Ishihara (Tokushima University)

310 Vibration Transmission of Floor Structure in Railway Vehicle
Bum-Sik Shin, Yeon-Sun Choi (Sungkyunkwan University)

311 Surface Acoustic Wave Excitation Using Pulse Wave
Ryo Tamon, Hiroyuki Kotani, Masaya Takasaki, Takeshi Mizuno (Saitama University)

Session 3-3 "Estimation, Analysis and Comparison"

13:00-14:00 Room 3, Co-chair: Jeong-Hyun Sohn, Wakae Kozukue

312 Statistical Estimation of Modal Charicteristics of a Structural System Based on Design Variable Samples
Yong Woo Kim, Hong Hee Yoo (Hanyang University)

313 Comparison Between Design of Experiments and Other Methods for Optimization of Vibrating Composite Plates
Yasuyuki Joko, Shinya Honda, Yoshihiro Narita (Hokkaido University)

314 Analysis of Dynamic Characteristic of the Forklift Applied PSD(Powershiftdrive)-Axle Using MATLAB/Simulink and ADAMS
Jin-Hee Lee, Tae-Won Park, Soo-Ho Lee, Kab-Jin Jun (Ajou University)

Joond Soon Park (Wooyoung Hydraulics Co.)

315 Development of a Benchimark Problem for Multiple Buildings Subjected to Wind and Earthquake Excitation
Toru Watanabe, Shunya Oda (Nihon University)
Yasuki Ohtori (Central Research Institute of Electric Power Industries)
Makoto Kanda, Kiyoaki Ono, Takashi NAKAMURA (Nihon University)
Kazuto Seto (Seto Vibration Control Laboratory)

Session 4-1 "Guidance and Control System Design"

9:00-10:15 Room 4, Co-chair: Jae-Bok Song, Koichi Oka

401 Nonlinear Adaptive Control in the Gantry-Moving Type Linear Motor via Estimating Friction and Ripple Forces
Sangoh Han, Inkeun Kim, Kunsoo Huh (Hanyang University)

402 Guaranteed Cost Control of the Uncertain System with Parameter Variations in an Output Matrix
Nobuya Takahashi, Michio Kono, Osamu Sato (Miyazaki University)

403 A Dynamic Control Methods of Railway Bogie for Reducing Derailment by Flange Wear in Curve
Wonhee You, Hyunmoo Hur, Junhyuk Park, Minsoo Kim, Nampo Kim (KRRI)

404 Robust Control for a Class of Nonlinear Systems with Unmatched Uncertainty
Keigo Fujimoto, Makoto Yokoyama, Yuji Tanabe (Niigata University)

Session 4-2 "Suspension and Isolation"

10:30-12:00 Room 4, Co-chair: Namcheol Kang, Nobuya Takahashi

406 Study on Control of Electromagnetic Suspension for Considering Vehicle Characteristics
Keisuke Suzuki, Kimihiko Nakano, Katsuhiko Hirayama, Yoshihiro Suda
(Tokyo University)

407 Effects on Vehicle Handling Performance Due to Camber Angle Control of Rear Suspension
Jeong-Hyun Sohn, Seong-Jun Park (Pukyong National University)

408 Noncontact Rotation Control for Suspended Iron Ball Using Disk Magnet
Feng Sun, Koichi Oka (Kochi University of Technology)

409 Development of a Module-Type Vibration Isolation System Using Zero-Power Control
Md Emdadul Hoque, Takeshi Mizuno, Sho Noda, Yuji Ishino,
Masaya Takasaki (Saitama University)

410 Statistical Method for Performance Estimation Based on Design Variable Samples in a Multibody System
Honghee Yoo, Chankyu Choi (Hanyang University)

411 Research on Active Isolation Table That Takes the Vibration Mode of Loaded Object into Consideration
Koji Okamoto, Kenta Yamazaki, Toru Watanabe (Nihon University)
Masahiko Aki (Tokyo University), Hiroyuki Tanaka (Showa Science co.)
Kazuto Seto (Seto-Vibration Control Laboratory)

Session 4-3 "Rotors and Bearings"

13:00-14:00 Room 4, Co-chair: Dae-Sung Bae, Kunihiko Ishihara

412 Stability of Flexible Corotating Disks in a Gas-Filled Enclosure
Namcheol Kang (Kyungpook National University)

413 Levitation and Multi-Mode Vibration Control of a Flexible Rotor by Using Magnetic Bearings
Naoki Uchiyama, Toru Watanabe (Nihon University)
Kazuto Seto (Seto Vibration Control Laboratory)

414 Torque Sensor Calibration Using Actual Sensing Frame for a Manipulator
Young-Loul Kim, Sang-Hyuk Lee, Jung-Jun Park, Jae-Bok Song (Korea University)

415 Development of a Flux Concentrated PM Type Magnetic Bearings
Hidetoshi Miyazawa, Yohji Okada, Ryou Kondo (Ibaraki University) Masato Enokizono (Oita University)

Session 5-1 "New Mechanism"

9:00-10:15 Room 5, Co-chair: Jeong Wan Lee, Osamu Nishihara

501 Active Generation of Traveling Wave for Aquatic Propulsion
Yusuke Hisada, Yuichi Matsumura, Hironori Natori (Yamanashi University)

502 Dynamic Characteristics Analysis and Control System Design of a Multi-MW Wind Turbine
Yoonsu Nam, Jonsik Park, Neungsoo Yoo (Kangwon National University)

503 Basic Study on a Vibration Control System Using Propellers for Crane Load
Noriyuki Takasaki, Toru Watanabe, Kazuto Seto (Nihon University)

504 An Empirical Study on the Anti-Overload Clutch for a Motorized Retractor
Bong-gi Lim, Seockhyun Kim (Kangwon National University)
Jong-gak Kim (Delphi Korea Ltd.)

505 Development of an Underwater Propulsion Mechanism Using a Self-Excited Oscillating Fin
Keishi Matsuda, Masahiro Watanabe, Kensuke Hara, Hideaki Tanaka
(Aoyama-Gakuin University)

Session 5-2 "Vehicle Modeling and Control (1)"

10:30-11:45 Room 5, Co-chair: Yoonsu Nam, Yuichi Matsumura

507 Maneuverability Improvement of Skid-Steering Vehicle
Makoto Yokoyama, Taiki Akamatsu (Niigata University)

508 Critical Speed Due to Hunting and Snake Motion in High-Speed Trains
Bum-Sik Shin, Sang-Won Lee, Ja-Choon Koo, Yeon-Sun Choi
(Sungkyunkwan University)

509 A Motion Simulator for Testing a Mobile Surveillance Robot
Jeong Joo Kwon, Yongrae Im, Sung-Soo Kim (Chungnam National University)
Sung-Ho Park (DoDaam Systems Ltd)

510 Experimental Study on Power Generation Performance Evaluation of Vibration Energy

Harvester with Piezocomposite
Tohru tanaka, Kazuhiko Adachi (Kobe University)

Session 5-3 "Vehicle Modeling and Control (2)"

13:00-14:00 Room 5, Co-chair: Wonhee You, Makoto yokoyama

511 Development of a Recliner Sensor for BIS Seat Belt System
Chang Hyun Baek, Kyoung Man Min, Won Seok Jung, Jeong Wan Lee, Seockhyun Kim, Chul Hyun Kim (Kangwon National University)

513 Redundancy in Vehicle integrated Control and Real-Time Optimization
Osamu Nishihara (Kyoto University)

514 The Optimization of the Tilting Train Suspension System Using a Design of Experiments
Su-in Lee , Tae-Won Park, Ji-Won Yoon (Ajou University)

515 Proposal for the Stabilization Control of the Personal Mobility Vehicle
Chihiro Nakagawa, Kimihiko Nakano, Yoshihiro Suda (Tokyo University)

Session 6-1 "Biological and Human Engineering"

9:00-10:15 Room 6, Co-chair: Nam Seo Goo, Masahiko Aki

601 Brain Tissue Retraction Simulation for Developing Neurosurgical Training System Using Haptic Device
Yu Hasegawa, Kazuhiko Adachi, Atsushi Fujita, Eiji Kohmura (Kobe University)

602 Gait Pattern Generation Algorithm Based on Dynamic Manipulability Ellipsoid for Lower Extremity Exoskeleton
Wan-Soo Kim, Seung-Hoon Lee, Seung-Nam Yu, Jung-Soo Han, Chang-Soo Han (Hanyang University)

603 Study on Propagation of Ultrasound in Biological Systems
Yusuke Iwaki, Toshihiko Shiraishi, Shin Morishita, Ryohei Takeuchi, Tomoyuki Saito, Yuko Mikuni-Takagaki (Yokohama National University)

604 Conformational Change Prediction of Protein Structure with Reduced Normal Modes

Jae In Kim, Kilho Eom, Sungsoo Na (Korea University)

605 Study on Kansei Reaction To Shapes of Pet Bottles
Muneatsu Yazawa, Yoshihiro Narita (Hokkaido University)

Session 6-2 "Robotics and Actuators"

10:30-12:00 Room 6, Co-chair: Wootae Jeong, Kimihiko Nakano

606 Positioning Control Considering Dynamics of Flexible Robot Arm
Yukinori Kobayashi, Sung-Wook Park, Yohei Hoshino, Takanori Emaru
(Hokkaido University)

607 Development of a Robot Optimal Design Toolkit
K.-S Lee, J.H. Hyun, C. W. Im, B.J. Ryu, C.J Lee (Hanbat National University)
T.J. Kim, S.W. Kim (Space Solution Ltd.)

608 Development of Circulated Progressive Wave Transducer for SAW Linear Motor
Hiroki Takano, Mitsuru Nakamura, Hiroyuki Kotani, Masaya Takasaki, Takeshi Mizuno
(Saitama University)

609 Basic Research on Dynamical Property of Acoustic Radiation Pressure By Ultrasound
Kazuhisa Fujimori, Takao Horiuchi, Toru Watanabe (Nihon University)

610 Simultaneous Control for Vision System Stabilization and Inverted Pendulum Position Tracking System
Jinseong Park, Youngjin Park, Youn-Sik Park (KAIST)

611 Development of a Wearable Thin-Type Four-Axis Force/Moment Sensor for a Robot Hand
Y. Hayashi, N. Tsujiuchi, T. Koizumi, H. Oshima, K. Masutani (Doshisha University)
A. Ito (University of Yamanashi)
Y. Tsuchiya (Tec Gihan Co., LTD)

Session 6-3 "Sensors and Actuators"

13:00-14:00 Room 5, Co-chair: Youngjin Park, Yukinori Kobayashi

612 Development of a Peristaltic Micropump with Lipca Membrane Valves

Nam Seo Goo My Pham, Anh Tuan Tran Le (Konkuk University)

613 Self-Powered Active Vibration Control by a Piezo-Electric Actuator

Kimihiko Nakano, Masataka Ohori, Atsushi Tagaya (Tokyo University)

614 Resonant Frequency Measurement of Micro-Cantilever Beams Using Flow-induced Vibration

Kyoung Hwan Kim, Byeong Hee Kim, Young Ho Seo (Kangwon National University)

615 Operating Point Adjustment of Electrostatic Actuator Control System Using a Variable Capacitor

Takaaki Kato, Yuji Ishino, Masaya Takasaki, Takeshi Mizuno (Saitama University)