

Session Program

August 29 (Tue.)

Room 5

15:00-16:20 JK-1-1 Motion and Vibration Control

Chairs: Toru Watanabe (Nihon Univ.) and Dongjun Lee (Seoul National Univ.)

J7 Vertical Vibration Control of an Active Vibration Isolation table loading Elastic Tower-like Object

Yuya Kobayashi and Toru Watanabe

J9 A Study on Aerodynamic Vibration Control System Utilizing Propeller to Increase Thrust

Yuhei Kimura, Hiroki Uda and Toru Watanabe

K4 Active vibration control of two-story building with Active Mass Damper actuated by linear servo motor

Ji Hwan Shin, Ezdiani Talib and Moon K. Kwak

K7 Experiment Results of Aerial Robot Actuated by Non-Aligned Rotors

Sangyul Park, Jeongseob Lee, Joonmo Ahn and Dongjun Lee

16:40-18:00 JK-1-2 Control for Vehicle

Chairs: Taichi Shiiba (Meiji Univ.) and No-Cheol Park (Yonsei Univ.)

J2 Evaluation of Robustness of Steering Control on Steer-by-Wire Vehicle

Yuri UMETSU, Fukiko TAKAGI and Taichi SHIIBA

J13 A Simple Control Technique for a Geared Wheel Drive System Applied to a Small Electric Vehicle

Masahiko ITOH

K6 Analysis of Semi-active suspension system for reduced transmitted force

Heechang Kim and Youngjin Park

K13 Engine Control Algorithm of Hybrid Electric Vehicle using Traffic Information for the Improvement of Fuel Economy

Ku Young Kang, Kyuhyun Sim and Sung-Ho Hwang

Room 6

15:00-16:20 JK-2-1 Design of Material and Energy Network

Chairs: Shinya Honda (Hokkaido Univ.) and Youngjin Park (KAIST)

J12 Optimization Simulation for Introducing Distributed Generation System Considering Disaster Risks

Akane Uemichi, Masaaki Yagi, Ryo Oikawa, Yudai Yamasaki and Shigehiko Kaneko

J6 Multidisciplinary Design Optimization for Vibration Control Performance of Fibrous Composites with Curvilinear Fibers

Yuji Homma and Shinya Honda

J15 A Study on Fabrication of Thermoplastic Composite by Tailored Fiber Placement Machine and its Vibration Characteristics

Daichi MURAKAMI and Shinya HONDA

K5 Analysis and Design of Elastic Metamaterials with Multi-Band Gaps

Joo Young Yoon, No-Cheol Park and Young-Pil Park

16:40-17:40 JK-2-2 Contact, Impact and Sliding

Chairs: Yuji Harata (Hiroshima Univ.) and Hyungpil Moon (Sungkyunkwan Univ.)

J4 Impact responses of double beams connected by a spring and dashpot

Ryuichi KATO, Yuji HARATA and Takashi IKEDA

K2 A Study of Contact Algorithm including Modal Reduction Flexible Body

Ho-Young Cha, Juhwan Choi and Jin Hwan Choi

K15 Preliminary Discussion on Gripper with Sliding Surfaces for Predictable Picking of Modex® Cables with Connectors

June-Sup Yi, Mahir Shfiyev and Hyungpil Moon

Room 7

15:00-16:20 JK-3-1 Human Dynamics

Chairs: Chihiro Nakagawa (Osaka Prefecture Univ.) and Hong Hee Yoo (Hanyang Univ.)

J5 Kansei Evaluation of Touch Panel with Vibrating Response Function

Jumpei Fujita and Shinya Honda

J21 Study of the evaluation system using the measurement of the face direction for parliamentary debate

Hayato Kusunoki, Chihiro Nakagawa, Atsuhiko Shintani and Tomohiro Ito

K1 A high sensitive, large-area tactile sensor for slip detection on the robot hand

Sung Joon Kim, Hyung Pil Moon, Hyouk Ryeol Choi and Ja Choon Koo

K10 Development of the multi flexible body dynamic model including skin tissue for non-penetrating impact analysis of a head

Moon Jeong Kang, Young Nam Jo and Hong Hee Yoo

16:40-18:00 JK-3-2 Biomechanics

Chairs: Satoshi Ishikawa (Kyushu Univ.) and Ja Choon Koo (Sungkyunkwan Univ.)

J24 The effect of sloshing of culture medium on cell proliferation

Taichi YAMAMOTO and Shin MORISHITA

J25 A Study of a Mechanism of Cell Proliferation Promotion by Mechanical Vibration

Akitoshi NISHIJIMA and Toshihiko SHIRAISHI

K16 Haptic Rendering of Simulation of Radial Artery Puncture

Chengjie Li, Heewon Min and Doo Yong Lee

K18 Prediction of Metabolic Energy consumption Depending on Excitation Frequency of Vertical Vibration Using a Human Vibration Model in a Chair

Young Nam Jo, Moon Jeong Kang and Hong Hee Yoo

August 30 (Wed.)

Room 5

9:00-10:20 JK-1-3 Magnetic Bearing and Levitation

Chairs: Koichi Oka (Kochi Univ. of Technology) and Myounggyu Noh (Choongnam National Univ.)

J1 Non-contact conveyance control system with self-identification function of the levitation object
Yuuichiroh Mitani, Ryosuke Tanaka, Yoshimitsu Kobayashi and Masaki Namie

J3 Magnetic Levitation System Using Wireless Power Supply and Lorentz force – Experimental Examination of Levitation Performance –
Masako Tanaka, Yuto Oguri, Koichi Oka and Akinori Harada

J10 Development of an Active Magnetic Bearing System Aiming Perfect Levitation of an Elastic Long Shaft
Tatsuya Ikeda, Yuhei Kimura and Toru Watanabe

K9 Development of Chiller Compressor Equipped with Active Magnetic Bearings
Myounggyu Noh, Nam Soo Lee and Jinhee Jeong

10:40-12:00 JK-1-4 Robot Arm and Link Mechanism

Chairs: Masahiko Aki (Nihon Univ.) and Jae-Bok Song (Korea Univ.)

K8 Development of 7 DOF Korea University Dexterous Robot Arm
Jae-Kyung Min, Kuk-Hyun Ahn and Jae-Bok Song

J8 Examination of a lightweight Astronautical Robot Arm Using Honeycomb Core on its Cross-Core Bending and Torsional Stiffness
Yuya Chikui and Toru Watanabe

K14 Experiments with a passivity-based control of stage-manipulator systems on vertical flexible beam
Changsu Ha, Hackchan Kim and Dongjun Lee

K21 The application of path generation Spatial Four-bar linkage synthesis
Jung Ryeol Hong and Hong Hee Yoo

Room 6

9:00-10:20 JK-2-3 Vibration and Acoustics

Chairs: Takumi Sasaki (Univ. of Kitakyushu) and Hyeong-Joon Ahn (Soongsil Univ.)

J14 In-plane squeal vibration generated in disc brake
Masaki Kanemoto, Yutaka Kurita, Yasunori Oura, Takashi Tanaka, Yukio Nishizawa, Yusuke Aoki, Yasuyuki Kanehira and Satoshi Obata

J22 Vibration Characteristics of Small Mass-Spring System
Shohei HAMADA and Shin MORISHITA

K3 A passive RFC (reaction force compensation) mechanism using adjustable piecewise linear stiffness of pre-compressed springs
Kim-Duc Hoang and Hyeong-Joon Ahn

K22 Vibration Characteristics of Circular Acoustic Black Hole Plate with Constrained Damping Layer
Dooho LEE, Sung-Jung KANG and Sun-Yong KIM

10:40-11:40 JK-2-4 Structural Vibration

Chairs: Yohei Hoshino (Kitami Institute of Technology) and Dooho Lee (Donggeui Univ.)

J17 Vibration Suppression Performance of Connected Control System for Building Divided into Four Internally

Taking Account of Applicability

HIROYUKI TAKAHASHI and TORU WATANABE

K17 Nonlinear Static and Dynamic Analyses of a Cantilever Beam Undergoing Large Deflection Employing the Extended Hamilton's Principle

Sinwoo Jeong and Hong Hee Yoo

K11 Dynamic Characteristic Analysis of Nuclear Reactor Internals of APR1400 Considering Fluid-structure Interaction

Eunho Lee, Jong-beom Park, Sang-jeong Lee, No-Cheol Park and Youngin Choi

Room 7

9:00-10:20 JK-3-3 Detection and Prediction

Chairs: Fumiyasu Kuratani (Univ. of Fukui) and Ho-Young Cha (Function Bay)

J11 Application of Neural Networks to Sound Source Separation Problems

Tomoki Doura and Toshihiko Shiraishi

J16 Defect detection in concrete using rotary hammering method

Wei WANG, Fumiyasu KURATANI, Tatsuya YOSHIDA, Makoto YOSHIMI

J18 Multistep Ahead Prediction of Greenhouse Climate by Integration of Recursive ARX and NARX Models

Purint Kaewlum, Shin Nakayama, Koichi Oka and Akinori Harada

K12 Dynamic model of electromagnetic energy harvester

Myounggyu Noh and Hyeonseok Lee

10:40-11:40 JK-3-4 Analysis and Experiment for Vehicle

Chairs: Shinya Kijimoto (Kyushu Univ.) and Sung-Ho Hwang (Sungkyunkwan Univ.)

J19 Basic experimental of an inverted pendulum vehicle and a driver with automatic braking system using ultrasonic sensor

Fumihiko Taniguchi, Chihiro Nakagawa, Atsuhiko Shintani and Tomohiro Ito

J20 Turnover analysis of human and three wheel sitting-type PMV during braking

Hiroki Nagaoka, Chihiro Nakagawa, Atsuhiko Shintani and Tomohiro Ito

K19 Detection of road areas and obstacles in dynamic road environment

GiSung Gwak, ChanHo Park, Dongyeon Yu, YoungGap Kim, SangUk Lee and Sung-Ho Hwang