

Wed, Nov 20	
Main conference room	
Opening ceremony	
9:30-9:50	
9:50-10:40	Keynote 1: "Efforts for high-efficiency cutting of difficult-to-machine materials" Akira Hosokawa (Komatsu university, JAPAN)
10:40-11:30	Special session: "NC Machining AI Diagnosis Based on Data Analytics" Tomoya Fujita (Mitsubishi electric Co.) "All-in-One SMART FACTORY(i) -Transformation to an automated system for your standard machine-"Takaaki Hayashi (Kitamura machinery Co.,Ltd)
11:30-13:00	Lunch

Wed, Nov 20	
Room A	
OS7-1 Production Systems	
13:00	13 Tomoki Hidai, Naoki Asakawa, Yuko Shimomura, Hiroki Wada and Keigo Takasugi Development of a Tactile Globe Maker for the Visually Impaired
13:20	16 Mamoto Miyata, Yuki Shirato, Masaki Imahashi, Masatoshi Boh and Keiichi Nakamoto Study on Augmented Reality-Based System to Support Workpiece Fixturing on a Machining Center
13:40	19 Keisuke Ishizuka, Keigo Takasugi and Naoki Asakawa Development of a Tailstock-Center with Magnetic Coupling for Chatter Vibration Suppression
14:00	24 Hideto Sairenchi, Hikaru Yokoyama and Keiichi Nakamoto Inference of Cognitive Load When Understanding Mechanical Drawings by Electroencephalography for Interviews: Toward Skill Acquisition
14:20-14:40	Break
OS7-2 Production Systems	
14:40	25 Kazuki Chida, Keiichi Nakamoto and Eisuke Sogabe Tool Path Generation by Modifying a CAD Model Based on Dimensional Tolerances
15:00	29 Yuta Mukaiyama, Keigo Takasugi, Naoki Asakawa and Tomoya Takahashi Automatic generation of painting path for industrial robot
15:20	34 Teerayut Cordkaew, Jun'ichi Kaneko and Takeyuki Abe Comparison of WAAM Combined with Copper and Aluminum Alloy FSW Tools on the Microstructure, Microhardness, and Pitting Corrosion of Austenitic Stainless Steel 316L
15:40-16:00	Break
OS7-3 Production Systems	
16:00	38 Shota Adachi, Hidetaru Kato and Shigehiko Sakamoto Study on cutting mechanism of hybrid machining combining rotary tool and hole cutting
16:20	39 Ryoichiro Kamiya, Jiang Zhu and Tomohiko Tanaka Burrishing processing of curved thin plates using a newly developed burrishing system
16:40	1 Ming Shyan Huang and Jia-Chen Chen Leveraging Transfer Learning for Injection Molded Part Quality Prediction

Wed, Nov 20	
Room B	
OS2 Robotics and AI	
13:00	21 Tran Bui Thanh Nguyen and Kyoung Kwan Ahn Kinematic Analysis and Motion Planning of 8-DOF Cable-Driven Flexible Robot
13:20	32 Tianhao Cui and Soichi Buraki Investigating the Posture Dependency on Positioning Error of a Six-Axis Industrial Robot
13:40	48 Shunsuke Tokunaga and Akio Yamamoto Study on Displaying Soft Tactile Sensations Using Pressure Distribution Control on The Palm
14:00	
14:20-14:40	Break
OS6-1 Precision Measuring Technology	
14:40	7 Fang-Jung Shion, Ming-Jun Xiao and Yuan-Te Chang Development of a New Triangulation Laser Probe with Multiple Sensors
15:00	12 Jung-Ho Park, Sang-Kyu Choi, Chang-Soo Woo, Young-Bog Ham, Hong-UK Kim, Hui-Sun Yang, Hyun-Suk Nam, Ji-Su Kim and Kwan-Geun Lee Improved Reliability in High-temperature Measurement of Weldable Strain Gauge
15:20	35 Daiju Hoya, Naoki Asakawa, Keigo Takasugi and Borja de la Maza Development of CAT system for 3D-CMM (Simulation for overlap detection)
15:40-16:00	Break
OS6-2 Precision Measuring Technology	
16:00	46 Daichi Inaki, So In, Kimbha Masamoto, Kenta Matsumoto and Kazuhide Kamiya Investigation of the effect of high-speed measurement on microprofiling systems
16:20	49 Ryo Nishishi, Naoki Asakawa and Keigo Takasugi Improving Positioning Accuracy of Industrial Robots
16:40	57 Junichi Kouguchi, Shingo Tajima and Hayato Yoshitaka Milling force estimation by combining servo information of feed axis and vibration behavior of tool spindle

Wed, Nov 20	
Room C	
OS4 Smart Actuators and Materials (2)	
13:00	40 Kenta Tabata, Jun Ito, Togo Yamai, Renato Miyagasaki and Kouichi Ozaki Manta Ray-Inspired Underwater Robot for Aquarium Experiments
13:20	22 Liang-Xuan Chen, Kuo-Ming Chang and Yung-Tien Liu Signal Acquisition Device for Large Voltage Waveform Using Low-cost Raspberry Pi Pico W
13:40	20 Thanh Ha Nguyen, Van Du Phan, Manh-Hung Nguyen and Kyoung Kwan Ahn Performance Analysis of a Novel Independent Metering Valve System Using a Neural Network Fractional Order PID Controller Versus Conventional Optimal Tuning Methods
14:00	
14:20-14:40	Break
OS3-2 Mechatronics Sensing and Control	
14:40	6 Van Du Phan, Thanh Ha Nguyen, Thi Son Dang, Quoc Cuong Phan, Van Chuong Le and Kyoung Kwan Ahn Trajectory Tracking Control for a Variable Stiffness Robot 1-DOF including Pneumatic Actuator Dynamics
15:00	56 Duc Thanh Phan, Kyoung Kwan Ahn and Manh Hung Nguyen High-Performance Voltage Regulation of DC-DC Converters Subject to Internal Uncertainties and Unknown Load Conditions
15:20	43 Lorenzo Baglieri, Daikoku Matsura, Yusuke Kobayashi and Giuseppe Quaglia Simulation of a Hand-Free HMI wheelchair
15:40-16:00	Break
OS3-3 Mechatronics Sensing and Control	
16:00	41 Simone Daretto, Giovanni Colucci and Giuseppe Quaglia Design and Preliminary Testing of a Tactile Sensing System for Robotic Manipulation
16:20	50 Adolfo Senatore Shifting control in two-speed dry clutch based gearbox for electric vehicles
16:40	54 Akira Okano and Akio Yamamoto Target Direction Detection in Long-Range Proximity Sensing using Capacitive Sensors

Thu, Nov 21	
Main conference room	
Keynote 2: AI-Empowered Mechatronics? Okay Kaynak, (Bogaziçi University and Turkish Academy of Sciences, TURKEY)	
9:50-10:40	Keynote 3: Motivation for Machine Motion Jun'ichi Kaneko (Saitama university, JAPAN)
10:40-11:30	
11:30-13:00	Lunch

Thu, Nov 21	
Room A	
OS7-4 Production Systems	
13:00	42 Gustavo Quadra Vieira dos Santos, Jun'ichi Kaneko and Takeyuki Abe Study on the Work-Hardening of Turned Wire-arc Direct Energy Deposition Inconel 718
13:20	45 Ping-Hsien Chen, Keiji Yamada, Shota Wada, Eisuke Sentoku, Ryojaro Tanaka and Katsuhiko Sekiya Improving Path Prediction Accuracy through Transfer Learning in Multi-Stage Laser Forming
13:40	53 Rika Fukazawa, Tadahiko Shimizu, Naohiro Sugita, Keisuke Maroh and Yoshihiro Sato Noise of Cylindrical Roller Bearings with Low Preload Assembly
14:00	55 Shunya Taguchi, Koji Teramoto and Naoki Shoji Research on estimation of clamping force decrease due to workpiece rigidity reduction in machining
14:20	
14:40-15:00	Break
OS11 Human Resource Development and Education on Mechatronics Technology	
15:00	4 Nobuyuki Inatoki, Yutaka Tanaka, Hidetsugu Terada and Yoshihito Kagawa 24 Years of Mechatronics System Design Competition among Laboratories in 4 Universities
15:20	11 Mika Letonsaari Enhancing Mechatronics Pedagogy: Integrating Gamified Storytelling Techniques in Robot Programming Instruction
15:40	47 Koiki Izumi, Naoki Asakawa, Yuko Shimomura, Hiroki Wada and Keigo Takasugi Development of Voice Guidance System in Vending Machine for the Visually Impaired People
16:00	33 Katsushi Furutani Practice Course on "Electronic Circuit Assembly" as Freshman Seminar
16:20	36 Toshiyuki Kinari, Akichika Nakashima, Yutaro Yoshimura and Lina Wakako Mechanism to Generate Contraction Force on Shape-Memory-Alloy Knitted Actuator

Thu, Nov 21	
Room B	
OS8 Renewable Energy and Smart Grid	
13:00	10 Quang-Tan Nguyen and Kyoung Kwan Ahn Tribo-Hygro-Electric Generator for Mechanical Energy Harvesting and Multiple Sensing
13:20	23 Md Fajal Rabbi and Kyoung Kwan Ahn Self-Powered Acid Rain Sensor Based on Triboelectric Nanogenerator made of Electrospun TiO2-PVDF Composite film
13:40	27 Young-Bog Ham, Jung-Ho Park and Hong-UK Kim Cryogenic plunger pump as a performance test equipment for lip seal
14:00	28 Tri Chung Do, Kyung Sin Kwak, Jeehwan Ahn and Kyoung Kwan Ahn Energy Management Strategy for Dual PEMFC and Battery Powered Tramway
14:20	58 Van Linh Tran, Kyoung Kwan Ahn and Huan An Trinh An enhanced soft actor-critic based energy management strategy for fuel cell hybrid electric vehicles using the Mixture Density Network
14:40-15:00	Break
OS1 Advanced Mechatronics Devices	
15:00	14 Yuma Nishida and Hiroaki Seki Center of gravity detection of crane load using lifting force and depth image
15:20	17 Su Jianheng, Chiki Tanuma and Yutaka Tanaka Additive Printing on Convex and Concave Surfaces with Slant Direct Drive Parallel Mechanism
15:40	18 Chang-Wen Hung, Chia-Jui Yang, Chun-Chieh Wang and Zheng-Jie Liao Mechatronics Gripper with Torque Control Function
16:00	51 Takumi Noraki, Renryo Takeda, Yoshitaka Morimoto, Akio Hayashi and Hidetaka Yamazaki Adaptive Control of Parallel Link Type Machine Tool by Observing Machining Load
16:20	52 Mayuka Kojima and Akio Yamamoto Application of pseudo-haptics using normal pressure and skin stretch on the palm

Thu, Nov 21	
Room C	
OS4 Smart Actuators and Materials	
13:00	5 Kazuhiro Yoshihara, Kazuhiro Yoshida and Joon-wan Kim Development of a soft microfinger having rigidity anisotropy
13:20	31 Kota Asamiyama, Hiroki Wada, Naoki Asakawa, Yuko Shimomura and Keigo Takasugi Development of Objects Recognition System for Children with Low Vision Using VR Technology (Haptic Device for Object Recognition)
OS5 MEMS/NEMS and Micro/Nano-Manufacturing	
14:00	26 Kuan-Lun Su, Tsung-Hai Tsai, Chia-Chang Chen and Chih-Cheng Lu Fabrication and Characterization of a Tungsten Dioxide Shock Probe as a Thermometer
14:20	30 Anshu Aoyagi, Yuta Tobe and Hideo Takino Investigation of Cutting Conditions for Precision Machining of Rubber Surfaces by Milling with Small End Mill
14:40-15:00	Break
OS9 Biomechatronics and Mechatronics Applications in Life Sciences	
15:00	8 Toan Nguyen Tan, Phuong Tran Nguyen Day Phuong, Tony Venditti, Thanh Truong Quoc and Dang Ngo Anh Design of a safety simulator for a hydraulic press brake
15:20	9 Son Ngo Hoang, Tony Venditti, Phuong Tran Nguyen Day, Dang Ngu Anh and Thanh-Truong Quoc Design of a Finger Rehabilitation Exoskeleton Robot for Post-Stroke Patients HRS2024
15:40	15 Trung Vu, Phuong Tran, Venditti Tony, Thanh Truong and Dang Ngu Design of a 7 DoFs Robot for Upper Limb Rehabilitation ILCPMP24
16:00	37 Zeqiang He and Tadahiko Shimizu A Single-drive Bearingless Motor for Percutaneous Axial Flow Pump
16:20	44 Rinka Matsui, Tadahiko Shimizu, Toshiro Takayama, Taisaku Fujii, Yosuke Yoneyama and Takamori Takebe An Intestinal Propulsion Soft Robot for Enteral Ventilation