

March 7th											
Lecture Room A											
Plenary Session: Dr. Shuji Kajita "Team AIST-NEDO in DARPA Robotics Challenge Final: Development, Lessons Learned, and the Next"											
Break											
Lecture Room E			Lecture Room F			Lecture Room D			Lecture Room C		
SS3: Intelligent Sensor Applications			TT8: Control Theory 2			TT6: Actuation and Driving			TT7: Vision-based Control		
Prof. Hiroshi Igarashi			Prof. Naoki Motai			Prof. Toshihisa Miyazaki			Prof. Naoki Motai		
Prof. Sota Shimizu			Prof. Makoto Iwasaki			Prof. Yuki Yokokura			Prof. Naoki Oda		
Title			Title			Title			Title		
First Author			First Author			First Author			First Author		
10:10-12:10	SS3-1	Design Strategy of MIMO System Based on Bidirectional Drivability Matrix	Yusuke Kawai (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Toshimasa Miyazaki (Nagaoka University of Technology)	TT8-1	Environment Reaction Torque Control Considering Current Control for Robot Joints	Junichi Itoh (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology)	TT6-1	Design and Analysis of a High-Torque Magnetic Geared Motor	Hirohisa Kitamura (Yokohama National University), Yasutaka Fujimoto (Yokohama National University)		
	SS3-2	Line Crossing Assistance Based on Situation Modulated Potentials Using Stereo Camera Detection	Baptiste Rouzier (Keio University), Toshiyuki Murakami (Keio University)	TT8-2	Vibration Suppression Control System Based on State Feedback Using Approximation Model of Two-Inertia System for Three-Inertia System	Akinori Yokubi (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Toshimasa Miyazaki (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology)	TT6-2	Harmonic Current Control for Interior Permanent Magnet Synchronous Machines Using Complex Vector Control	Yudai Okajima (Shibaura Institute of Technology), Kan Akatsu (Shibaura Institute of Technology)		
	SS3-3	Collision Avoidance Assistance for Power Assist Wheelchair by Fish-eye Vision	Takatoshi Okawa (Chitose Institute of Science and Technology), Naoki Oda (Chitose Institute of Science and Technology)	TT8-3	Load-side Acceleration Control Based on Partial State Feedback Using Load-side Encoder for Two-inertia System	Yasunori Murase (Nagaoka University of Technology), Yusuke Kawai (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology), Toshimasa Miyazaki (Nagaoka University of Technology)	TT6-3	Design Considerations for a Novel Wireless Resonant Actuator	John Ebot Besong (Yokohama National University), Yasutaka Fujimoto (Yokohama National University)		
	SS3-4	Pupil Size Sensing to Estimate Individuality of Students on E-learning	Seina Amae (Tokyo Denki University), Satoshi Suzuki (Tokyo Denki University)	TT8-4	Self Resonance Cancellation for Joint Torque Control Using Torque Sensor	Akiyuki Hasegawa (The University of Tokyo), Hiroshi Fujimoto (The University of Tokyo), Taro Takahashi (The Toyota Motor Corporation)	TT6-4	Temperature Control Using Multiple Heat Sources Considering Thermal Interference	Yuji Kimura (Keio University), Yukiko Osawa (Keio University), Seichiro Katsura (Keio University)		
	SS3-5	Back Pain Prevention for Professional Caregivers through Inverse Dynamics Analysis - Comparison of Sit-up Support Motion among Several Caregivers-	Yuichi Kobayashi (Keio University), Mika Tamegai (Keio University), Kouhei Ohnishi (Keio University), Sota Shimizu (Keio University)	TT8-5	Validation of Position Control Characteristics for Variable Mechanical Stiffness of Tendon Arms with Nonlinear Springs	Tatsuya Kageyama (Mie University), Satoshi Komada (Mie University), Daisuke Yashiro (Mie University), Kazuhito Yabe (Mie University)	TT6-5	Design and Analysis of Switched Reluctance Spiral Motor	Ryo Kakizaki (Yokohama National University), Yasutaka Fujimoto (Yokohama National University)		
	SS3-6	Skill Evaluation for Portable Input Interface with Subliminal Assist	Hiroshi Igarashi (Tokyo Denki University)	TT8-6	Time Scaling Changed by Force Information for High Speed Reproduced Motion of Two DoF Haptic Robot	Takuya Matsunaga (Keio University), Koyo Yu (Keio University), Kouhei Ohnishi (Keio University)	TT6-6	A Novel Technique to Reduce Capacitor Currents in DC Bus of PWM Double Inverters with Current Sensors in Series with Low-Side Switches	Tatsuya Mori (Mitsubishi Electric Corp.), Akira Furukawa (Mitsubishi Electric Corp.), Kichiro Yamamoto (Kagoshima University)		
Break & Demonstration (Lecture Room 207)											
Lecture Room E			Lecture Room F			Lecture Room 201/203			Lecture Room 201/203		
IS1: Emerging Technologies in Motion Control			TT7: Vision-based Control			V: Video and Interactive Session			V: Video and Interactive Session		
Prof. Kazuhiro Yubai			Prof. Yosuke Asano			Prof. Naoki Oda			Prof. Naoki Oda		
Prof. Kazuaki Ito			Prof. Naoki Oda			Prof. Naoki Oda			Prof. Naoki Oda		
Title			Title			Title			Title		
First Author			First Author			First Author			First Author		
13:00-15:00	IS1-1	Advanced Human-Robot Collaboration Systems for Recreating Artwork	Chowait Misantilik (Kansai University), Kiyoshi Ohishi (Nagaoka University of Technology)	TT7-1	Robust visual tracking control during target occlusion Using 3D localization estimate	Shyun Nakamura (Seikei University), Masaki Shibata (Seikei University)					
	IS1-2	Design of Balancing Platform with Reaction Force sensing Series Elastic Actuators	Hyunwook Lee (DGIST), Suhui Kwak (DGIST), Sehoon Oh (DGIST)	TT7-2	Image Based Visual Servo Application on Video Tracking with Monocular Camera Based on Phase Correlation Method	Yoshi Ri (The University of Tokyo), Hiroshi Fujimoto (The University of Tokyo)					
	IS1-3	Distributed and Parameter-Varying Friction Compensation for Ball-Screw Feed Drive Systems	Thomas Beaudin (The University of Tokyo), Hiroshi Fujimoto (The University of Tokyo)	TT7-3	Improvement of follow-up accuracy using Kalman filter by hand eye robot	Daigo Kobayashi (Seikei University), Masaki Shibata (Seikei University), Yuuki Ueyama (Seikei University)					
	IS1-4	FRIT of Linear Time Invariant Systems in 2DOF Control Architecture: Kalai Expansion Approach	Hrin Si (Kanagawa University), Osamu Kaneko (The University of Electro-Communications)	TT7-4	Visual Tracking and Approaching for Zero Impact Contact	Hayato Maki (Keio University), Seichiro Katsura (Keio University)					
	IS1-5	Examples of actuator uncertainties in environmental systems of mechatronic systems (SaMS)	Michael Ruderman (University of Agder), Hiroshi Fujimoto (The University of Tokyo), Shota Yamada (The University of Tokyo), Valentin Ivanov (Technical University Braunschweig)	TT7-5	Construction of real time system for image processing using SCHED_FIFO	Junki Kuriyama (Seikei University), Masaki Shibata (Seikei University)					
				TT7-6	Comparison of ICP and PSO in 3D Map Matching	Jiayi Wang (Yokohama National University), Yasutaka Fujimoto (Yokohama National University)					
Break											
IS2: New Actuation Technologies for Motion Systems			TT8: Force Control and Bilateral Control			TT9: Mobile Robot			TT9: Mobile Robot		
Prof. Yasutaka Fujimoto			Prof. Kenji Natori			Prof. Toshiyuki Murakami			Prof. Toshiyuki Murakami		
Prof. Tomoyuki Shimono			Prof. Seichiro Katsura			Prof. Akira Shimada			Prof. Akira Shimada		
Title			Title			Title			Title		
First Author			First Author			First Author			First Author		
15:30-17:30	IS2-1	Highly Backdrivable Actuators for Robotic Applications	Yasutaka Fujimoto (Yokohama National University), Daiji Kobuss (Yokohama National University)	TT8-1	Sensorless Force Control System Using Friction-Free First Order Disturbance Observer	Hiroshi Nakamura (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology), Toshimasa Miyazaki (Nagaoka University of Technology), Aikumi Tsukamoto (Hirata Corporation)	TT9-1	Study on Power Assist Control of Push Cart Robot with Wheel-Side Encoder	Wataru Akada (Tokyo University), Hiroshi Fujimoto (Tokyo University)		
	IS2-2	Micro Ultrasonic Motor Using One Cubic Millimeter Stator	Tomoki Mashimo (Toyoashi University of Technology)	TT8-2	Analysis and Enhancement of Bilateral Control for Linear Actuator in Current Saturation Condition	Pattawan Boonwong (Nagaoka University of Technology), Yuki Yokokura (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology), Yusuke Kawai (Nagaoka University of Technology)	TT9-2	Slip Ratio-Based Control Method for Riding over Obstacles for Lunar Rovers	Kasuke Izumi (The University of Tokyo), Hiroshi Fujimoto (The University of Tokyo), Shin-ichiro Saka (The University of Tokyo)		
	IS2-3	Robust Stability Analysis of Load-side Inertia Variation in Torsion Torque Control with a Resonance Ratio Controller	Yuki Yokokura (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology)	TT8-3	Decoupling Control Using Gain Scaling Based on Scaling Bilateral Control with Different Inertia	Daisuke Tomizuka (Keio University), Takuya Matsunaga (Keio University), Koyo Yu (Keio University), Kouhei Ohnishi (Keio University)	TT9-3	Movement Control Based on Model Predictive Control with Kalman Filter including Disturbance Estimation	Takashi Ohhira (Shibaura Institute of Technology), Akira Shimada (Shibaura Institute of Technology)		
	IS2-4	Surface Electrostatic Actuators for Computer-Human Interactions on Tablets	Akio Yamamoto (University of Tokyo)	TT8-4	Bilateral Control for Mobile Robot with Haptic Sense by Twin Lever Handle	So Tanaka (Yokohama National University), Kanagawa Academy of Science and Technology, Tomoyuki Shimono (Yokohama National University), Kanagawa Academy of Science and Technology	TT9-4	Design and Analysis of a Compact and High-Thrust Force Spiral Motor for Active-Knee Joint	Yutaro Hagino (Yokohama National University), Yasutaka Fujimoto (Yokohama National University)		
	IS2-5	Large Circular Linear Motor for Lower Limb Rehabilitation Robot	Tomoyuki Shimono (Yokohama National University), Hiroshi Arai (Yokohama National University), Takahiro Mizoguchi (Kanagawa Academy of Science and Technology), Takuya Matsunaga (Keio University), Kouhei Ohnishi (Keio University)	TT8-5	Balance Optimization Torque Distribution Control Method for considering Transmission Loss in Bi-articular Actuators Mechanism	Ngo Minh Tam (Nagaoka University of Technology), Toshimasa Miyazaki (Nagaoka University of Technology), Kiyoshi Ohishi (Nagaoka University of Technology)	TT9-5	Integration of distributed maps by multiple mobile robots based on received signal strength	Naoki Hida (Shibaura Institute of Technology), Yukihito Komai (Shibaura Institute of Technology), Sun Zeyuan (Shibaura Institute of Technology), Masayuki Nakatani (Shibaura Institute of Technology), Yutaka Uchimura (Shibaura Institute of Technology)		
				TT8-6	Motion Reproduction Using Linear Motor for Moving Object	Hiroaki Asai (Mie University), Daisuke Yashiro (Mie University), Kazuhito Yabe (Mie University), Satoshi Komada (Mie University)	TT9-6	An Experimental Study on Optimal Attitude Control System for Multi-legged Robot with Redundant Joint	Kaho Kuroiwa (National Institute of Technology, Gunma College), Naoya Yoshinaga (National Institute of Technology, Gunma College), Yoichi Shigematsu (National Institute of Technology, Gunma College), Nobuo Hirakoso (National Institute of Technology, Gunma College)		
Break											
The buses for the banquet will leave at 18:00											
Nagaoka Grand Hotel, 4th floor, Convention Hall, Asahi											
Banquet											
18:00-20:30											