

## Program of ICT-ROBOT2017 and the 36th SICE kyushu branch annual conference

Session	No	Title and Authors
Annual Conference Sensing theory and Sensor-based systems (domestic)	101A1	Indoor position measurement system based on time difference method by fixed sound source using ultrasonic wave ○Ryo Sakamoto, Eizou Uzu and Kiyotaka Kato (Tokyo University of Science)
	101A2	Acoustic Emission Source location using Taming ○Masato Uchida, Yasutake Koishi, Hiroyuki Miyamoto (Kyushu Institute of Technology), Shuichi Ishida and Tatsuo Tabaru (National Institute of Advanced Industrial Science and Technology)
	101A3	Obstacle Avoidance using Dynamic Window Approach for Omni Wheel Mobile Robot ○Yuto Yamamoto, Nobutomo Matsunaga and Hiroshi Okajima (Kumamoto University)
	101A4	Identification of nonlinear mechanical system ○Yukiya YOSHIKAWA, Hiroshi HARADA, Hiroshi KASHIWAGI (Kumamoto University), Yukio TOYOSAWA and Naoto SONODA (FANUC Corporation)
	101A5	Volcano Area Elastic Underground Probing System Using Huffman Sequence ○Yoshihiro Tanada, Masato Iguchi, Keigo Yamamoto, Haruhisa Nakamichi (Kyoto University), Yuichi Morita (University of Tokyo), Kiminori Sato (Kagoshima University) and Takayuki Toyohira (Kagoshima College of Technology)
	101A6	Evaluation of layered linear array multi-imaging system using living body model ○Takato Kishida and Akira Kimoto (Saga University)
Annual Conference Control method 1 (domestic)	102A1	PID Controller Design Tools Based on Interactive Modification of Graph ○S. Kuwaduru and M. Koga (Kyushu Institute of Technology)
	102A2	Model Predictive Control Based on Multistep Ahead Predictors by Discrete-Time Gaussian Process Models ○Taiki Sato and Tomohiro Hachino (Kagoshima University)
	102A3	Optimal digital control without overshoot for a constant reference input ○Shota Washinozu and Kazumi Horiguchi (The University of Kitakyushu)
	102A4	Modeling of CO2 Uptake of Multi-Cells in Crassulacean Acid Metabolism ○S. Hashizu, H. Suemitsu and T. Matsuo (Oita University)
	102A5	Study on Two Degree of Freedom Control Systems Considering Fault Tolerance ○K. Motoyama and S. Kunimatsu (Kumamoto University)
	102A6	Electric Load Forecasting for Kyushu District Using Gaussian Process Models ○Yoshihiro Okuya and Tomohiro Hachino (Kagoshima University)
Annual Conference Machine learning (domestic)	103A1	Discriminant Analysis by using the feature values in color space ○Jun Ishikawa, Junpei Eto and Atsunori Tayaoka (Kitakyushu National College of Technology)
	103A2	Influence of Chaotic Property on Reinforcement Learning Using a Chaotic Neural Network ○Yuki Goto and Katsunari Shibata (Oita University)
	103A3	Reinforcement Learning of a Memory Task using an Echo State Network with Multi-Layer Readout ○Toshitaka Matsuki and Katsunari Shibata (Oita University)
	103A4	Study on improvement of accuracy of Taming considering diversity ○Yasutake KOISHI, Hiroyuki MIYAMOTO (Kyushu Institute of Technology), Shuichi ISHIDA and Tatsuo TABARU (National Institute of Advanced Industrial Science and Technology)
	103A5	Introduction of Chaotic Neurons with Refractoriness in Reinforcement Learning using a Chaotic Neural Network ○Katsuki SATO, Yuki GOTO and Katsunari SHIBATA (Oita University)
ICT-ROBOT 2017 Image and recognition (international)	104A1	Development of Real-time Environment Recognition System using LiDAR for Autonomous Driving ○Naruaki Tokudome, Shuhei Ayukawa, Shun Ninomiya, Shuichi Enokida and Takeshi Nishida (Kyushu Institute of Technology)
	104A2	Image based Attention Estimation for Interaction Scene ○Rinko Komiya, Takeshi Saitoh and Kazutaka Shimada (Kyushu Institute of Technology)
	104A3	Scene Understanding Without Detection Area Using Deep Convolutional Encoder-decoder Architecture ○Husnu Baris Baydargil, Jangsik Park, Jong Kwan Song and Serkan Serdaroglu (Kyung Sung University)
	104A4	New Combination Method for Road Features Extraction ○Watcharin Tangsuksant and Chikamune Wada (Kyushu Institute of Technology)
	104A5	Attitude Control Algorithm of Quad Copter Robust to Disturbance ○Jiwook Choi, GyoungHoon Jang, JongWoo An and JangMyung Lee (Pusan national University)
	104A6	Simulation comparison between SMC and PID for architectural 3D printer simulator ○Jun Hyeok Seo and Min Cheol Lee (Pusan National University)
Annual Conference Image processing and Recognition 1 (domestic)	101B1	Automatic alignment of mirrored images for shape measurement using a movable mirror ○Daichi Nishiyama, Kotaro Sonoda and Senya Kiyasu (Nagasaki University)
	101B2	Object tracker combined Spatio-temporal differentiation with Kalman filter ○Ryota Hirakawa, Teruo Yamaguchi and Hiroshi Harada (Kumamoto University)
	101B3	Cancellation of light scattering in turbid water for 3D shape measurement ○Akira Miyahara, Kotaro Sonoda and Senya Kiyasu (Nagasaki University)
	101B4	Analysis Method of Swallowing Motion from Dental MR Imaging Based on AKAZE Local Features ○Kenta Suetani, Huimin Lu, Joo Kooi Tan, Hyoungeop Kim (Kyushu Institute of Technology), Tatsurou Tanaka, Shinji Kitou and Yasuhiro Morimoto (Kyushu Dental College)
	101B5	Detection of Moving Objects from a Vehicle Camera Video Based on Sequential Background Estimation ○Ryota Kameda, Takuya Matsuo, Joo Kooi Tan, Hyoungeop Kim and Seiji Ishikawa (Kyushu Institute of Technology)
	101B6	Optimal color wheel design and evaluation experiment for DLP projector ○Kyouhei Inomoto, Hiroshi Okajima, Koutaki Gou and Nobutomo Matsunaga (Kumamoto University)
Annual Conference Control method 2 (domestic)	102B1	Fault Tolerant Control Considering Uncertainty of Controlled System and Sensor Error ○Y. Kitajima and S. Kunimatsu (Kumamoto University)
	102B2	Identification of Hammerstein Systems Using Gaussian Process Models Based on Multiple Sets of Input and Output Data ○Akira Fukushima and Tomohiro Hachino (Kagoshima University)
	102B3	Minimize undershoot for non-minimum phase systems under CdbC constraints ○Sho Himeno, Hiroshi Okajima and Nobutomo Matsunaga (Kumamoto University)
	102B4	Momentum Method in Optimization and Its Application to MPPT Control ○Y. Sueyoshi, H. Suemitsu and T. Matsuo (Oita University)
	102B5	Robust stabilization of a robot balancing on cylindrical bar based on descriptor form ○Satoshi Sanada and Eiho Uezato (University of the Ryukyus)

Session	No	Title and Authors
Annual Conference	103B1	Provision of Progress Information in Simulation Calculation using Notification Function of Smart Terminals ○Akira Tsutsumi and Masanobu Koga (Kyushu Institute of Technology)
	103B2	Control of air classification for recycling of waste covered wires ○Koki Yamaguchi, Yui Nishikawa and Atsunori Tayaoka (Kitakyushu National College of Technology)
Industrial applications (domestic)	103B3	IoT Sensing Network using RaspberryPIs ○Yosuke Senta (Kurume Institute of Technology)
	103B4	Construction of Water Level Model for After Condenser in Spray Flash Desalination System Considering Dynamics of Freshwater Outlet Valve ○Yoshihiro Eishima, Yoshitaka Matsuda, Satoru Goto, Takenao Sugi, Takafumi Morisaki, Takeshi Yasunaga and Yasuyuki Ikegami (Saga University)
ICT-ROBOT 2017 Control theory and recognition (international)	104B1	Optimization of State Transition Matrix at Switching using Switching L2 Gain Analysis ○Kodai Nakano, Noboru Sebe (Kyushu Institute of Technology) and Koichi Suyama (Tokyo University of Marine Science and Technology)
	104B2	Grey-smith Algorithm for Manipulator's Control in Time Delayed Situation ○Dong-Eon Kim, Deok-Su Kim, Yu-dong Zhao and Jang-Myung Lee (Pusan National University)
	104B3	Signal Compression Method for Human Heart Rate Modeling on Treadmill Exercise ○HongyingLi and Min Cheol Lee (Pusan National University)
	104B4	Improvement of Driving Stability using Series Elastic Actuator ○Jin-Uk Bang, Byeong-Chan Choi, Ha-Nuel Yoon and Jang-Myung-Lee (Pusan National University)
	104B5	Impact of Training Data Distribution: Fine-Tuning Based SqueezeNet for Vehicle Classification ○Ali Suryaperdana Agoes, Zhencheng Hu and Nobutomo Matsunaga (Kumamoto University)
	104B6	Real-time Joint Based Human Activity Recognition using RGB-Depth Camera ○Omer Faruk Ince, Ibrahim Furkan Ince, Jang Sik Park and Jong-Kwan Song (Kyungsoong University)
Annual Conference Image processing and Recognition 2 (domestic)	101C1	Offline reconstruction of competition video ○Soichiro Hashitsume, Ryoji Oishi, Hiroshi Okajima (Kumamoto University) and Tomoyoshi Miyahara (diffeasy)
	101C2	Estimation of Steering Model depending on Gazing Distance and its Evaluation on Winding Road ○Daisuke Matsuno, Nobutomo Matsunaga, Hiroshi Okajima and Yuki Shida (Kumamoto University)
	101C3	Detection of a Rush-out Pedestrian Using MSC-HOG Features Considering Body Direction ○Yuta Ono, Joo Kooi Tan, Hyoungseop Kim and Seiji Ishikawa (Kyushu Institute of Technology)
	101C4	Estimation of angular displacement following the compensation of translation by a spatio-temporal method ○Yuta Hamada, Teruo Yamaguchi and Hiroshi Harada (Kumamoto University)
	101C5	Automatic Parking Space Searching System using Stereo Camera ○Shen Xiaoxin, Harutoshi Ogai and Hiroshi Inujima (Waseda University)
Annual Conference Robotics and System Control (domestic)	102C1	A Research of Grinding Robot Using Force Sensor Information ○Takashi MATSUMOTO, Hiroshi HARADA and Teruo YAMAGUCHI (Kumamoto University)
	102C2	A Design Method of Motion and Force Control Systems with Feedforward Compensations for Underwater Robotic Systems ○Yuichiro Taira (Sojo University), Shinichi Sagara and Masahiro Oya (Kyushu Institute of Technology)
	102C3	Swing-up and balancing control of rotary inverted pendulum using Lego Mindstorms ○Ryota Oshiro and Eiho Uezato (University of the Ryukyus)
	102C4	Construction of Simulated Remote Monitoring System with Anomaly Detection and History Display for Remote Energy System ○Tomohiro Ueno, Yoshitaka Matsuda, Takenao Sugi and Satoru Goto (Saga University)
	102C5	Development of Web Application for Real Time Remote Operation of an OTEC Plant Using Rankine Cycle ○Yoshitaka Matsuda, Satoru Goto, Takenao Sugi, Takafumi Morisaki, Takeshi Yasunaga, Yasuyuki Ikegami (Saga University), Naruto Egashira (National Institute of Technology, Kurume College)
Annual Conference Soft computing (domestic)	103C1	Control performance of NC optimized by DE method for rotary crane ○Musashi Watanabe, Kunihiko Nakazono and Hiroshi Kinjo (University of the Ryukyus)
	103C2	Emergence of speech recognition function through action learning by reinforcement learning using a neural network ○Seidai Egoshi and Katsunari Shibata (Oita University)
	103C3	Control of rotary crane using NC optimized by GA (Consideration of simulation conditions) ○Atsushi Matsuzawa, Kunihiko Nakazono and Hiroshi Kinjo (University of the Ryukyus)
	103C4	Steering Control of Four-wheeled Vehicle Using NC Optimized by GA (Consideration for threshold function) ○Hiroki Ito, Kunihiko Nakazono and Hiroshi Kinjo (University of the Ryukyus)
ICT-ROBOT 2017 Motion control and Mapping (international)	104C1	Multi-Layer Superpixel Cut for Stereo Matching ○Dong-Wook Seo (University of Ulsan), Hyun-Deok Kang (UNIST) and Kang-Hyun Jo (University of Ulsan)
	104C2	Inverse Kinematics of 5 DOF Robot Manipulator Using Numerical Method ○Min Gyu Jung and Min Cheol Lee (Pusan National University)
	104C3	Measurement of Grasping Force in Finger robot Using Air Pressure Sensor ○Jin-hyun Park, Ki-Seo Kim, Dong-Ju Park, Dong-Eon Kim and Jang-Myung Lee (Pusan National University)
	104C4	Autonomous Four-Axis Flight Control of Multi-Copter using only External USB Camera ○Tomoaki Yamashiro and Kazuya Sato (Saga University)
	104C5	Accuracy Improvement of Localization using Particle Filter and Kalman Filters Hyunhak Cho, Eun Kyeong Kim, OJongun Park and Sungshin Kim (Pusan National University)
	104C6	Simple Structured Gripper Using Electromagnet and Permanent Magnet ○Yusuke Tsugami and Takeshi Nishida (Kyushu Institute of Technology)

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Session	No	Title and Authors
Annual Conference Mobile robots (domestic)	202A1	Flight control of multicopter for shifted center of gravity ○M.Itabashi, R.Yanagihara, Y.Sato and K.Kato (Tokyo University of Science)
	202A2	Position Control of Multirotor Helicopter With A Wind Disturbance ○Naoki MATSUO (Kyushu Institute of Technology), Hideki WADA (Shin-Nippon Nondestructive Inspection Co. , Ltd), Katsuhiro OKUMURA (Fukuoka Industrial Technology Center) and Masahiro OYA (Kyushu Institute of Technology)
	202A3	Autonomous Flight Control of UAV using Machine Learning for Object Recognition ○Souma Fujiwara, Kenta Hidaka and Kazuya Sato (Saga University)
	202A4	Verification Experiment of Signal Limitation Filter using Compact Vehicle Robot ○Yuta Nakabayashi, Hiroshi Okajima and Nobutomo Matsunaga (Kumamoto University)
	202A5	Navigation Control of Autonomous Mobile Robot based on Omnidirectional Stereo Camera Image ○Takeshi Matsuoka (Fukuoka University)
Annual Conference Biological information (domestic)	203A1	Color indication system aiming to encourage psychological stability ○Sen Takematsu, Yuki Tagashira, Hara Takumi and Tatsushi Tokuyasu (Fukuoka Institute of Technology)
	203A2	Automatic detection of heart rate, respiratory rate and body movement using sheet-shaped body vibrometer during sleep ○Ryoji Kawahara, Takenao Sugi, Satoru Goto, Yoshitaka Matsuda (Saga University), Takamasa Kogure (PARAMOUNT BED CO., LTD.) and Shuichiro Shirakawa (Sleep Assessment & Research Institute)
	203A3	Artifacts discrimination from video-EEG monitoring in ICU ○Daiya Nakashima, Takenao Sugi, Yoshitaka Matsuda, Satoru Goto (Saga University), Haruhiko Nohira (Nihon Kohden Corporation) and Yuichi Kubota (Asakadai Central General Hospital, Tokyo Women's Medical University)
	203A4	Trial to increase palm writing speed of communication support device for deaf-blind people ○Sayaka Wada and Chikamune Wada (Kyushu Institute of Technology)
	203A5	Development of a simple system for the evaluation of human arm impedance properties in steering operations Wataru Okayama, Hideki Shimoyama, Yasuhiro Ueda and ○Yoshiyuki Tanaka (Nagasaki University)
Annual Conference Application of control (domestic)	202B1	Proposal of Model-Based Development Based on Robot Model Described in URDF ○Tatsuro Yunoki and Masanobu koga (Kyushu Institute of Technology)
	202B2	Study on skill acquisition mechanism of upper limb ○Hiroki Taniguchi and Tatsushi Tokuyasu (Fukuoka Institute of Technology)
	202B3	Evaluation of driving assistance using virtual platoon control by augmented reality technology Ryota Kimura, ○Toshihiro Koyanagi, Nobutomo Matsunaga, Hiroshi Okajima and Gou koutaki (Kumamoto University)
	202B4	Proposal of Distributed Control Method for Modular Robot with Dynamics ○Takuto Toyonaga, Hiroshi Harada and Teruo Yamaguchi (Kumamoto University)
	202B5	Autonomous driving of welfare vehicle using Real Time A* ○Naotsugu Hashiguchi, Nobutomo Matsunaga and Hiroshi Okajima (Kumamoto University)
Annual Conference Welfare technology/ Assistive technology (domestic)	203B1	Analysis of muscle activity about hold axillary pad during crutch walking by using musculoskeletal simulator ○Yoshiki Nishisako, Chikamune Wada (Kyusyu Institute of Technology) and Takayuki Nagasaki (Kyushu University of Nursing and Social Welfare)
	203B2	Identification of low load motion during transfer nursing care by using wearable sensors ○Tsuyoshi Uezono, Kodai Kitagawa, Chikamune Wada (Kyushu Institute of Technology), Takayuki Nagasaki and Sota Nakano (Kyushu University of Nursing and Social Welfare)
	203B3	Development of maxillofacial model for dental education ○Takahito Tsutsumi, Tsubasa Maruyama, Tatsushi Tokuyasu, Kazuhiko Toshimitsu (Fukuoka Institute of Technology), Kazutoshi Okamura and Kazunori Yoshiura (Kyusyu University)
	203B4	Prototype development of a boot-type hand-free-stick ○Naoki Oyama, Takazumi Takenaka, Yoshiyuki Tanaka (Nagasaki University)
	203B5	Improved Wrist Joint Dynamics with Myoelectric Signal inputs ○Keshiki Terada, Shu Inoue, Masahiro Oya, Hidetaka Ohta (Kyushu Institute of Technology)