

KS	Keynote Speech	March 27
Room D		10:10-11:30
Chair	Rong Zhang, Nishinippon Institute of Technology, Japan	
KS-1	<i>Acoustic Signal Extraction Relying on Spatial Cues</i> Mitsunori Mizumachi	
KS-2	<i>Development of a New Outlet Polarity Tester</i> Kazuya Amimoto	
GS1	Oral Presentation Session 1	March 27
Room A		13:00-14:20
Chair	Seiichi Serikawa, Kyushu Institute of Technology, Japan	
GS1-1	<i>Proposal of Cursor Operation Method by Facial Movements for the Handicapped</i> Shunya Mito, Lifeng Zhang	
GS1-2	<i>A Proposal for Creating Syllabic Datasets for Japanese Language Lipreading by Using Machine Learning</i> Rui Kitahara, Lifeng Zhang	
GS1-3	<i>Proposal of a System for the Visually Impaired to Identify Store Front Merchandise with no Assistance</i> Tomoyuki Zaizen, Lifeng Zhang	
GS1-4	<i>Stereo Matching Based on Features of Image Patch</i> Shi Zhou, He Li, Miaomiao Zhu, Zhen Li, Lifeng Zhang, Mitsunori Mizumachi	
OS1	Online Presentation Session 1	March 27
Room B		13:00-14:20
Chair	Shenglin Mu, Ehime University, Japan	
OS1-1	<i>Development of a Deep Learning System with Small Amount of Data for Bridges Health Monitoring</i> Kiyoshi Hayakawa, Syusaku Tomita, Kenta Matsunaga, Takeshi Wada, Takashi Obata	
OS1-2	<i>Speech Section Extraction Method Using Image and Voice Information</i> Etsuro Nakamura, Yoichi Kageyama, Satoshi Hirose	
OS1-3	<i>Development of Action-Recognition Technology Using LSTM Based on Skeleton Data</i> Hechen Yun, Etsuro Nakamura, Yoichi Kageyama, Chikako Ishizawa, Nobuhiko Kato, Ken Igarashi, Mamoru Suzuki	
OS1-4	<i>Face Detection and Analysis of Relationship between Degree of Emotion Arousal and Facial Temperature</i> Mana Yamada, Yoichi Kageyama	
GS2	Oral Presentation Session 2	March 27
Room A		15:00-16:20
Chair	Shiyuan Yang, Kyushu Institute of Technology, Japan	
GS2-1	<i>Development of Autoencoder-Based Status Diagnosis Method for Ball Bearing Tribology Status Monitoring</i> Ren-Chi Cheng, Kuo-Shen Chen, Yun-Hui Liu, Lien-Kai Chang, Mi-Ching Tsai	
GS2-2	<i>Performance Benchmark Characterization and Braking Maneuverability Evaluation of Antilock Braking System with a Self-Developed Test</i> Tsung-Huan Hsueh, Shu-Heng Guo, Shao-Hsuan Hung, Kuo-Shen Chen, Mi-Ching Tsai	
GS2-3	<i>Prediction and Simulation for Turning Chatter Control by Spindle Speed Variation</i> Huei-Min Lin, J.-J. Junz Wang, Kao-Shen Chen	
OS2	Online Presentation Session 2	March 27
Room B		15:00-16:20
Chair	Shota Nakashima, Yamaguchi University, Japan	
OS2-1	<i>Abstracting HW Communications with Channels for HDLRuby</i> Lovic Gauthier, Yohei Ishikawa, Ryota Sakai	
OS2-2	<i>Pre-Trained CNN for Classification of Time Series Images of Anti-Necking Control in a Hot Strip Mill</i> Samuel Latham, Cinzia Giannetti	
OS2-3	<i>Estimating the Position of a Student's Face from Classroom Video in a Low-Quality Environment</i> Haruya Murasaki, Akira Suganuma	
OS2-4	<i>Real-time Smart Situation Awareness based on Camera Array and Machine Learning</i> Fenghui Yao, Guifeng Shao	

GS3	Oral Presentation Session 3	March 28
Room A		10:00-11:40
Chair	Mitsunori Mizumachi, Kyushu Institute of Technology, Japan	
GS3-1	<i>Prevention of Forgetting Shopping Items in Response to Shopping List Ambiguity</i> Yoshihisa Igimi, Lifeng Zhang	
GS3-2	<i>Proposal of Information Addition Method to Existing Signs for Autonomous Driving</i> Koho Futatsuishi, Lifeng Zhang	
GS3-3	<i>Hardware Development of Skylight Estimation Processing in Haze Removing Using High-level Synthesis</i> Daiki Shirai, Akira Yamawaki	
GS3-4	<i>Development of a Projection-type Simple Stereoscopic Display with a Touch Panel Functionality</i> Ryosuke Sato, Akira Yamawaki	

SS	Assistive Technology and Biomedical Engineering	March 28
Room B		10:00-11:40
Chair	Eiji Nishiyama, National Institute of Technology, Kumamoto College, Kumamoto Campus, Japan	
SS-1	<i>Measurements of Body Movement in Chick Embryos During Early Stages</i> Kenji Moriya, Yuya Chiba	
SS-2	<i>Relationship between Creative Inspiration, Self-Evaluated Satisfaction and Brain Activity through Simplified Music Composition</i> Hiromu Sato, Yuya Chiba, Kenji Moriya, Masahiro Nakagawa	
SS-3	<i>Smartphone Apps for Visually Impaired that Detects Obstacles and Obtains those Distances</i> Manabu Shimakawa, Naho Minami, Chiharu Okuma, Kimiyasu Kiyota	
SS-4	<i>Application Example of Integrated Data Acquisition System to Effect Evaluation of Labor-saving Agricultural Work by Introducing Assist Suit</i> Kosei Nojiri, Daichi Arai, Hirofumi Ohtsuka	
SS-5	<i>Development of Training Game Application using Eye-gaze Control Technology to Support Employment of Physically challenged people</i> Ryoya Goto, Kimiyasu Kiyota, Manabu Shimakawa, Koichiro Watanabe, Chiharu Okuma	

GS4	Oral Presentation Session 4	March 28
Room A		13:00-15:00
Chair	Akira Yamawaki, Kyushu Institute of Technology, Japan	
GS4-1	<i>An FPGA Implementation of On-Chip Trainable Multilayer SAM Spiking Neural Network</i> Minoru Motoki, Ryuji Waseda, Terumitsu Nishimuta	
GS4-2	<i>Perception of Approaching Objects in Bilateral Control Using Proximity Sensor</i> Takumi Karato, Takahiro Nozaki, Hermano Igo Krebs, Toshiyuki Murakami	
GS4-3	<i>Development of a Novel Hydrostatic Continuously Variable Transmission with Fast Path Switching</i> Kei Sugihara, Takahiro Nozaki, Toshiyuki Murakami	
GS4-4	<i>Admittance-based Bilateral Control System Implementing Communication Traffic Reduction Method</i> Shuhei Kimura, Takahiro Nozaki, Toshiyuki Murakami	

VS	Video Presentation Session	March 28
Room B		13:00-15:00
Chair	Lifeng Zhang, Kyushu Institute of Technology, Japan	
VS-1	<i>Autonomous Drone System Development for Power Transmission Line Inspections</i> Nobuhiro Kishigaki, Norihiko Tsutsumi, Toshikazu Teshigawara, Daisuke Ota, Hiroyuki Miyoshi, Kensei Yamamoto, Fumito Minoura, Tomonori Shiraiishi, Tsuyoshi Chiba, Masayuki Kumada, Wiktor Piwowarczyk, Takayuki Dewa	
VS-2	<i>Tensile Shear Strength Characteristics for Adhesively Single-lap Joints Composed of Quasi-isotropic Laminated CFRPs and Aluminum Alloy</i> Jyo Shimura, Mutsumi Miyagawa, Shigeru Kurosaki	
VS-3	<i>Proposal of a Digital Switch for Easy Changes of Number and Types</i> Ryota Iwaizono, Mitsunori Mizumachi, Seiichi Serikawa	
VS-4	<i>Proposal of a Method for Real-time Detection of Obstacle Using Line Laser and Camera</i> Masaya Okamoto, Shiyuan Yang, Seiichi Serikawa	
VS-5	<i>A Method for Detecting Self-Position Using 3 Modulated LEDs and Photodiode</i> Takumi Matoba, Seiichi Serikawa	
VS-6	<i>Proposal of Speed-Up Method for Pulse Type of Digital Switch and Expansion of Application Scope to Them</i> Ryota Iwaizono, Mitsunori Mizumachi, Seiichi Serikawa	

PS	Poster Session	March 29
Room A		10:00-11:30
Chair	Yuhki Kitazono, National Institute of Technology, Kitakyushu College, Japan	
PS-1	<i>Performance Effect of I/O Peripheral Dynamic Reconfiguration on FPGA</i> Kazuki Hashimoto, Akira Yamawaki	
PS-2	<i>Development of Generic Software System Transparent to Any Flexible and Scalable Sensor Array</i> Ryota Nakamura, Akira Yamawaki	
PS-3	<i>An Investigation of Mobile Device Supporting Online Self-dynamic Partial Reconfiguration on a Testbed System</i> Yuma Chihara, Akira Yamawaki	
PS-4	<i>Dynamics Identification and Contact Force Estimation of Multi DoF Robot Based on Base Frame Force Sensor</i> Kaiki Fukutoku, Toshiyuki Murakami	
PS-5	<i>Obstacle Detection and Detour System Using Line Laser and Camera</i> Miki Suetsugu, Shiyuan Yang, Seiichi Serikawa	

GS5	Oral Presentation Session 5	March 29
Room A		13:00-14:20
Chair	Yuhki Kitazono, National Institute of Technology, Kitakyushu College, Japan	
GS5-1	<i>Proposal of Automatic Ventilation Support System Utilizing Carbon Dioxide Concentration</i> Toshimasa Noda, Yuhki Kitazono	
GS5-2	<i>Proposal of Automatic Trash System of Pet Litter Sheet</i> Airi Taniguchi, Yuhki Kitazono	
GS5-3	<i>Proposal of Automatic Dust Catcher Robot of Clothing</i> Natsuki Nakamoto, Yuhki Kitazono	

GS6	Oral Presentation Session 6	March 29
Room B		13:00-14:20
Chair	Akihiko Watanabe, Kyushu Institute of Technology, Japan	
GS6-1	<i>Proposal of a Method to Detect Position of Moving Object from a Camera Using LEDs and Markers</i> Takato Komori, Shiyuan Yang	
GS6-2	<i>Proposal of a Sensing Circuit for Detecting Physical Quantity Regardless of Electrical Units</i> Kei Sato, Seiichi Serikawa	
GS6-3	<i>Speech Sentiment Analysis Based on Basic Characteristics of Speech Signal</i> Zijun Yang, Lifeng Zhang, Seiichi Serikawa	
GS6-4	<i>Development of Primitive Circuit in a Scalable and Flexible PWM Mechanism Using FPGA</i> Soma Doi, Akira Yamawaki	