

SII 2011 Technical Program (Final)

※The allocated time for each presentation is 20 minutes including 5 minutes discussions.

December 20, Tuesday

Room	A	B	C	D	E	F
9:30-10:50	A1 Social Robotics Chairperson: Tetsuya Ogata (Kyoto University)	B1 Sensing system in bio production and food production (OS2-1) Chairperson: Naoshi Kondo (Kyoto University), Yuichi Ogawa (Kyoto University)	C1 Sensors and Actuators 1 Chairperson: MANOJ KUMAR MUKUL (Birla Institute of Technology Mesra)	D1 Swarm Robotics (OS5-1) Chairperson: Ryusuke Fujisawa (Hachinohe Institute of Technology)	E1 Assist Systems Chairperson: Keiko Homma (National Institute of Advanced Industrial Science and Technology (AIST))	F1 Service Robots 1 Chairperson: Ren Luo (National Taiwan University)
11:10-12:00	Keynote Speech 1 Prof. Marco Dorigo (IRIDIA, Université Libre de Bruxelles) Room A: Chairperson: Kazuhiro Ohkura (Hiroshima University)					
12:00-13:00	Lunch					
13:00-15:20		B2 Sensing system in bio production and food production (OS2-2) Chairperson: Naoshi Kondo (Kyoto University), Yuichi Ogawa (Kyoto University)	C2 Sensors and Actuators 2 Chairperson: Chiranut Sa-ngiamsak (Khon Kaen University)	D2 Swarm Robotics (OS5-2) Chairperson: Yoshiyuki Matsumura (Shinshu University)	E2 System Software Chairperson: Yasser Mohammad (Assiut University, Egypt/Kyoto University, Japan)	F2 Service Robots 2 Chairperson: Satoru Shibata (Ehime University)
15:20-15:50	Coffee Break					
15:50-18:10		B3 Human Monitoring (OS9) Chairperson: Joo-Ho Lee (Ritsumeikan University)	C3 Mobile Robot 1 Chairperson: Noritaka Sato (Nagoya Institute of Technology)	D3 Grasping Chairperson: Tetsuyou Watanabe (Kanazawa University)	E3 UAV Chairperson: Takaaki Matsumoto (Kyushu Institute of Technology)	F3 SLAM Chairperson: Takanori Emaru (Hokkaido University)

December 21, Wednesday

Room	A	B	C	D	E	F
9:00-10:40	A4 Vision 1 Chairperson: Wen-Chung Chang (National Taipei University of Technology)	B4 Semiotic Analysis and Design of Human-Environment Interactions (OS11) Chairperson: Tetsuo Sawaragi (Kyoto University), Hiroaki Nakanishi (Kyoto University)	C4 New Actuators and Motion Control Systems (OS3) Chairperson: Seiichiro Katsura (Keio University)	D4 Management and Supply Chains Chairperson: Chung-Ling Kuo (Taiwan Hospitality & Tourism College)	E4 Mechatronics and Control 1 Chairperson: Takahiro Endo (Gifu University)	F4 Rescue Robots Chairperson: Tetsushi Kamegawa (Okayama University)
11:00-11:50	Keynote Speech 2 Prof. Francis J. Pierce (Professor Emeritus, Washington State University and Principal in AgInformatcs, LLC) Room A: Chairperson: Naoshi Kondo (Kyoto University)					
11:50-12:50	Lunch					
12:50-13:40	Keynote Speech 3 Prof. Masashi Hayakawa (University of Electro-Communications, Professor Emeritus) Room A: Chairperson: Fumitoshi Matsuno (Kyoto University)					
14:00-14:50	Keynote Speech 4 Dr. Tariq Samad (Honeywell Automation and Control Solutions, Minneapolis, Minnesota, U.S.A.) Room A: Chairperson: Kenji Fujimoto (Nagoya University)					
15:10-16:30	A5 Vision 2 Chairperson: Koichi Hashimoto (Tohoku University)	B5 Kukanchi - interactive human-space design and intelligence (OS7) Chairperson: Kazuyoshi Wada (Tokyo Metropolitan University)	C5 Assistive Engineering (OS4) Chairperson: Sigeru SATO (AIST), Keiko HOMMA (AIST)	D5 Humanoid Robots 1 Chairperson: Yasushi Mae (Osaka University)	E5 Mechatronics and Control 2 Chairperson: Feifei Zhang (Tokyo Univ. of Marine Science and Technology)	F5 Learning Chairperson: Chyon Hae Kim (Honda Research Institute Japan)
16:30-17:00	Coffee Break					
17:00-18:20	A6 Vision 3 Chairperson: Kang-Hyun Jo (University of Ulsan)	B6 Robot Service and Platform Technology (OS6) Chairperson: Nobuto Matsuhira (Shibaura Institute of Technology), Tetsuo Kotoku (AIST)	C6 Mobile Robot 2 Chairperson: Ryusuke Fujisawa (Hachinohe Institute of Technology)	D6 Humanoid Robots 2 Chairperson: Koichi Hashimoto (Tohoku University)	E6 Mechatronics and Control 3 Chairperson: Takahiro Endo (Gifu University)	F6 Intelligent Control 1 Chairperson: Chia-Chang Tong (Chienkuo Technology University)
19:30 ~	Banquet					

December 22, Thursday

Room	A	B	C	D	E	F
9:00-11:20	A7 Human-Robot Interaction Chairperson: Yoshihiro Miyake (Tokyo Institute of Technology)	B7 Social Robotics and System Integration (OS10) Chairperson: Yanan Li (National University of Singapore)	C7 Mobile Robot 3 Chairperson: Tetsushi Kamegawa (Okayama University)	D7 Grey system theory, rough set and GA (OS1) Chairperson: Jee-Ray Wang (Chienkuo Technology University), Shu-Chen Huang (Asia University)	E7 Bio System Chairperson: Minoru Sasaki (Gifu University)	F7 Intelligent Control 2 Chairperson: Kiyotaka Izumi (Saga University)
11:40-12:30	Keynote Speech 5 Prof. Satoshi Tadokoro (Tohoku University / International Rescue System Institute) Room A: Chairperson: Minoru Sasaki (Gifu University)					
12:30-13:30	Lunch					
13:30-15:30	A8 Medical Robotics Chairperson: Chee-Kong Chui (National University of Singapore)	B8 Ambient Intelligence and its Applications (OS8) Chairperson: Takashi Nishiyama (Panasonic Electric Works Co., Ltd.), Mihoko Niitsuma (Chuo University)	C8 Mobile Robot 4 Chairperson: Daisuke Kurabayashi (Tokyo Institute of Technology)	D8 Micro-Nano Systems Chairperson: Minoru Sasaki (Gifu University)	E8 Network Systems 1 Chairperson: Xun Yi (Victoria University, Australia)	F8 Automation Systems and Control Chairperson: Takahiro Endo (Gifu University)
15:30-16:00	Coffee Break					
16:00-18:00		B9 Control Systems Chairperson: Takami Matsuo (Oita Univ.)	C9 Virtual Reality Chairperson: Katsutoshi Yoshida (Utsunomiya University)	D9 Space Application Chairperson: Hwa-Suk Oh (Korea Aerospace University)	E9 Network Systems 2 Chairperson: Essameddin Badreddin (Heidelberg University)	F9 Systems and Integration Platform Chairperson: Luca Ferrari (Politecnico di Milano, Italy)

December 20, Tuesday

A1 Social Robotics		Dec. 20 (Tue.) 9:30-10:50
		<i>Chairperson: Tetsuya Ogata (Kyoto University)</i>
	Title	Authors
A1-1	Investigation of Robot Behavior Model to Build Causality after Events	Shinichiro Iwakiri(The University of Electro-Communications) Mitsuharu Matsumoto(The University of Electro-Communications)
A1-2	Augmented Robot Hand to Represent What the Robot Will Handle	Sayako Hata(The University of Electro-Communications) Mitsuharu Matsumoto(The University of Electro-Communications)
A1-3	Discovering Causal Change Relationships between Processes in Complex Systems	Yasser Mohammad(Kyoto University, Assiut University) Tetsuya Ogata(Kyoto University)
A1-4	Predicting Listener Back-Channels for Human-Agent Interaction Using Neuro-dynamical Model	Shotaro Sano(Kyoto University) Shun Nishide(Kyoto University) Hiroshi Okuno(Kyoto University) Tetsuya Ogata(Kyoto University)

B1 Sensing system in bio production and food production (OS2-1)		Dec. 20 (Tue.) 9:30-10:50
		<i>Organizer : Naoshi Kondo (Kyoto University)</i>
		<i>Chairperson: Naoshi Kondo (Kyoto University), Yuichi Ogawa (Kyoto University)</i>
	Title	Authors
B1-1	Bovine RFID Tracing System with Livestock Safety Remote Sensing	Ferruccio Giametta(University of Molise) Pasquale Catalano(University of Molise) Giovanna La Fianza(University of Molise) Andrea Simoni(University of Molise)
B1-2	Shading Compensation Methods for Robots to Harvest Strawberries in Tabletop Culture	Rajendra Peter(Shibuya.Seiki Co.Ltd) Mitsutaka Kurita(Shibuya.Seiki Co.Ltd) Kazunori Ninomiya(Shibuya.Seiki Co.Ltd) Gosei Okazaki(Shibuya.Seiki Co.Ltd) Shigehiko Hayashi(Nisshin)
B1-3	Machine Vision Based Prediction of Serum Vitamin A Level in Japanese Black Cattle by Pupillary Light Reflex Analysis	Shuqing Han(Kyoto University) Naoshi Kondo(Kyoto University) Tateshi Fujiura(Kyoto University) Yuichi Ogawa(Kyoto University) Yoshie Takao(Kyoto University) Shinya Tanigawa(Kyoto University) Moriyuki Fukushima(Hyogo Prefectural Hokubu Agricultural Institute) Osamu Watanabe(Hyogo Prefectural Hokubu Agricultural Institute) Namiko Kohama(Hyogo Prefectural Hokubu Agricultural Institute)
B1-4	Correlation between Serum Vitamin A Level and Pupil Color of Beef Cattle	Yoshie Takao(Kyoto University) Naoshi Kondo(Kyoto University) Yuichi Ogawa(Kyoto University) Han Shuqing(Kyoto University) Shinya Tanigawa(Kyoto University) Tateshi Fujiura(Kyoto University) Moriyuki Fukushima(Hyogo Prefectural Hokubu Agricultural Inst) Osamu Watanabe(Hyogo Prefectural Hokubu Agricultural Inst) Namiko Kohama(Hyogo Prefectural Hokubu Agricultural Inst)

C1 Sensors and Actuators 1		Dec. 20 (Tue.) 9:30-10:50
		<i>Chairperson: MANOJ KUMAR MUKUL (Birla Institute of Technology Mesra)</i>
	Title	Authors
C1-1	Trajectory Detection Using Active Beacon Sensor(ABS)for Indoor Locationing	Tae-seok Jin(Dongseo University) Hyunsik Kim(Tongmyong university)
C1-2	Velocity and Acceleration Estimation of an Electric Throttle System by Adaptive Differential Filter	Tsuyoshi Nimiya(Oita University) Haruo Suemitsu(Oita University) Takami Matsuo(Oita University) Sawut Umerujan(NIKKI Co.,Ltd.) Kazushi Nakano(The University of Electro-Communications)
C1-3	A Method for Camera Type Touch Screen	Akinobu Shimoyama(Tokyo City University) Yue Bao(Tokyo City University) Fei Gu(Tokyo City University)
C1-4	Effects of ESD and EMI on TMR Heads during Bonding Process of Gold Ball Bonding Machines	Sarunya Puapairoj(Khon Kaen University) Chiranut Sa-ngiamsak(Khon Kaen University)

D1 Swarm Robotics (OS5-1)		Dec. 20 (Tue.) 9:30-10:50
		<i>Organizer : Kazuhiro Ohkura (Hiroshima University)</i>
		<i>Chairperson: Ryusuke Fujisawa(Hachinohe Institute of Technology)</i>
	Title	Authors
D1-1	Foraging Effectiveness of the Altruistic Plugging Behavior of the Army Ants	Sohei Hanamoto(Kyoto University) Fumitoshi Matsuno(Kyoto University)
D1-2	Reinforcement Learning Approaches for Acquiring Conflict Avoidance Behavior in Multi-Agent Systems	Kazuaki Yamada(Toyo University) Satoru Takano(Toyo University) Satomi Watanabe(Toyo University)
D1-3	Swarm Based Enclosure Model for Unspecified Number of Targets	Masao Kubo(National defense academy of Japan) Akihiro Yamaguchi(Fukuoka Institute of Technology) Hiroshi Sato(National Defense Academy of Japan)
D1-4	Cooperation among Multiple Robots by Collecting Broken Robots in Large-Scale Structure Assembly	Masayuki Otani(The University of Electro-Communications) Kiyohiko Hattori(The University of Electro-Communications) Hiroyuki Sato(The University of Electro-Communications) Keiki Takadama(The University of Electro-Communications)

E1 Assist Systems		Dec. 20 (Tue.) 9:30-10:50
		<i>Chairperson: Keiko Homma (National Institute of Advanced Industrial Science and Technology (AIST))</i>
	Title	Authors
E1-1	Design and Control for Collision Avoidance of Power-assisted Omni-directional Mobile Wheelchair System	Yuki Ueno(Toyohashi University of Technology) Hideo Kitagawa(Gifu National College of Technology) Kiyooki Kakiyama(KER CO., LTD.) Kazuhiko Terashima(Toyohashi University of Technology)
E1-2	Development of Intuitive Human-Machine Interface Based on Electromyography for Assistive Robot (KAAD)	Tomasz Marek Lubecki(National University of Singapore) Fengjun Bai(National University of Singapore) Chee-Meng Chew(National University of Singapore) Chee Leong Teo(National University of Singapore)
E1-3	Typical Risks and Protective Measures of Wearable Walking Assistant Robots	Cota Nabeshima(CYBERDYNE Inc.) Hiroaki Kawamoto(The University of Tsukuba) Yoshiyuki Sankai(The University of Tsukuba)

F1 Service Robots 1		Dec. 20 (Tue.) 9:30-10:50
<i>Chairperson: Ren Luo (National Taiwan University)</i>		
Title	Authors	
F1-1	Influence Analysis of Setting Thresholds on Dynamical Sequential Task Allocation and Reallocation Methodology	Guanghai Li(The University of Tokyo) Yusuke Tamura(The University of Tokyo) Hajime Asama(The University of Tokyo)
F1-2	Real-Time Image Processing of Human Face Identification for Home Service Robot	Ying-Hao Wang(National Cheng Kung Univ.) Yen-Te Shih(National Cheng Kung University) K. C. Cheng(National Cheng Kung University) Chih-Jui Lin(National Cheng Kung University) Tzuu-Hseng S. Li(National Cheng Kung University)
F1-3	An Actively Altruistic Mobile Robot System for Identifying Someone Who Looks Lost Using Head Pose Tracking	Anthony Isaac(The University of Tokyo) Hiroaki Yaguchi(The University of Tokyo) Tomoaki Yoshikai(The University of Tokyo) Kei Okada(The University of Tokyo) Masayuki Inaba(The University of Tokyo)
F1-4	A Middleware for Collaborative Research in Experimental Robotics	Johannes Wienke(Bielefeld University) Sebastian Wrede(Bielefeld University)

Keynote Speech 1		Dec. 20 (Tue.) 11:10-12:00
Swarm-bots and Swarmanoid: Two Experiments in Swarm Robotics		
Prof. Marco Dorigo <i>IRIDIA, Université Libre de Bruxelles</i>		
<i>Chairperson: Kazuhiro Ohkura (Hiroshima University)</i>		

Lunch 12:00-13:00

B2 Sensing system in bio production and food production (OS2-2)		Dec. 20 (Tue.) 13:00-15:20
<i>Organizer: Naoshi Kondo (Kyoto University)</i>		
<i>Chairperson: Naoshi Kondo (Kyoto University), Yuichi Ogawa (Kyoto University)</i>		
Title	Authors	
B2-1	The Relationship between Serum Vitamin A Level of Japanese Black Cattle and Light Reflection on the Pupil	Shinya Tanigawa(Kyoto University) Naoshi Kondo(Kyoto University) Yuichi Ogawa(Kyoto University) Tateshi Fujiura(Kyoto University) Han Shuqing(Kyoto University) Yoshie Takao(Kyoto University) Moriyuki Fukushima(Hyogo Prefectural Hokubu Agricultural Technology Institute) Osamu Watanabe(Hyogo Prefectural Hokubu Agricultural Technology Institute) Namiko Kohama(Hyogo Prefectural Hokubu Agricultural Technology Institute)
B2-2	Inspection of Milk Components by Terahertz Attenuated Total Reflectance (THz-ATR) Spectrometer Equipped Temperature Controller	Hiroataka Naito(Kyoto University) Yuichi Ogawa(Kyoto University) Keiichiro Shiraga(Kyoto University) Naoshi Kondo(Kyoto University) Tsunaao Hirai(Hokkaido Research Organization Agricultural Research Department) Ikuo Osaka(Hokkaido Research Organization Agricultural Research Department) Asuka Kubota(Hokkaido Research Organization Agricultural Research Department)
B2-3	Spectra Coupled with Color Features to Determine Sugar Content of Fragrant Pears Using LS-SVM	Huirong Xu(Zhejiang University) Yibin Ying(Zhejiang University)
B2-4	Prediction of Vitamin C Using FTIR-ATR Terahertz Spectroscopy Combined with Interval Partial Least Squares (iPLS) Regression	Diding Subandy(Kyoto University) Meinilwita Yulia(Kyoto University) Yuichi Ogawa(Kyoto University) Naoshi Kondo(Kyoto University)
B2-5	Evaluation of Maize Growth by Ground Based Multispectral Image	Hong Sun(China Agricultural University) Minzan Li(China Agricultural University) Lihua Zheng(China Agricultural University) Yane Zhang() Wei Yang()

C2 Sensors and Actuators 2		Dec. 20 (Tue.) 13:00-15:20
<i>Chairperson: Chiranut Sa-ngiamsak (Khon Kaen University)</i>		
Title	Authors	
C2-1	Pinned Layer Reversal Effect on Tunneling Magnetoresistive Heads Caused by Dynamic Fly Height Heater Voltage	Chiranut Sa-ngiamsak(Khon Kaen University) Sanchai Harnsoongnoen(Mahasarakham University) Duangporn Sompongse(Western Digital)
C2-2	Control of Offset Pressure for Pneumatic Robots	Naoki Igo(University of Tsukuba) Kiyoshi Hoshino(University of Tsukuba)
C2-3	Design and Fabrication of High Power Smart Actuator Module	Won-Je Choi(Seoul National University) Min-Keun Yoon(Seoul National University) Young-Bong Bang(Seoul National University) Han-Sam Cho(KOMOTek Co., LTD.)
C2-4	TDOA/AOA Localization in RFID System Using Dual Indirect Kalman Filter	D.K. Kim(Sungkyunkwan University) J.H. Ha(Sungkyunkwan University) P.J. Kim(Sungkyunkwan University) K.H. You(Sungkyunkwan University)
C2-5	Improvement of Novel Noninvasive Measurement of Endothelial Function: ezFMD	Teiji Ukawa(Nihon Kohden CO) Tsuneo Takayanagi(Nihon Kohden CO) Haruka Morimoto(Nihon Kohden CO) Yukihito Higashi(Hiroshima University) Naomi Idei(Hiroshima University) Ryosuke Kubo(Hiroshima University) Masao Yoshizumi(Hiroshima University) Toshio Tsuji(Hiroshima University)
C2-6	Analysis of Bias Effects for a Capacitive-Micro-Ultrasonic-Transducer	Fu-Shin Lee(Huafan University) Shao-Chin Tseng(Huafan University)
C2-7	Dynamic Analysis of a Series Elastic Torque Actuator Employing Bond Graph Approach	Ali Selk Ghafari(Sharif University of Technology) Seyyed Ali Hosseini Kazerooni(Sharif University of Technology) Sahba Safavi(Sharif University of Technology)

D2 Swarm Robotics (OS5-2)		Dec. 20 (Tue.) 13:00-15:20
<i>Organizer: Kazuhiro Ohkura (Hiroshima University)</i>		
<i>Chairperson: Yoshivuki Matsumura (Shinshu University)</i>		
Title	Authors	
D2-1	Connectivity and Stability in Robotic Swarm System with Anisotropic Neighbors	Keitaro Naruse(University of Aizu) Taku Kuwabara(University of Aizu) Tatsuya Sato(University of Aizu)

D2-2	Effectiveness of Tuning of Pheromone Trail Lifetime in Attraction of Robot Swarm	Ryusuke Fujisawa(Hachinohe Institute of Technology) Yusuke Shimizu(The University of Electro-Communications) Fumitoshi Matsuno(Kyoto University)
D2-3	Evolving Robot Controllers for a Homogeneous Robotic Swarm	Kazuhiro Ohkura(Hiroshima University) Toshiyuki Yasuda() Tomonori Sakamoto() Yoshiyuki Matsumura()
D2-4	Realization of Dynamic Interaction of Virtual Creatures with Neural Controller	Kenji Iwadate(Hokkaido University) Ikuo Suzuki(Hokkaido University) Masahito Yamamoto(Hokkaido University) Masashi Furukawa(Hokkaido University)

E2	System Software	Dec. 20 (Tue.) 13:00-15:20
<i>Chairperson: Yasser Mohammad (Assiut University, Egypt/Kyoto University, Japan)</i>		
	Title	Authors
E2-1	A Real-time Blind Source Separation for Speech Signals Based on the Orthogonalization of the Joint Distribution of the Observed Signals	Takara Katayama(Kumamoto National College of Technology) Takaaki Ishibashi(Kumamoto National College of Technology)
E2-2	Noise Value Differences of DSLR Video between Editing Programs after Rendering Process	Byungjoo Cho(Chung-Ang University) Hyung-Ju Park(Chung-Ang University) Dong Hwan Har(Chung-Ang university)
E2-3	Ontology-based Semantic Similarity Measures for Product-Service System Design	Suriati Akmal(Toyohashi University of Technology) Yusuke Tsujioka(Toyohashi University of Technology) Rafael Batres(Toyohashi University of Technology)
E2-4	On Comparing SSA-based Change Point Discovery Algorithms	Yasser Mohammad(Assiut University and Kyoto University) Toyoaki Nishida(Kyoto University)
E2-5	Expressing Implicit Figure-Ground Character Information from Explicit Literary Text Information	Eugene Kitamura(Kobe University) Yukio Pegio Gunji(Kobe University)
E2-6	Capturing Multiview 3D Using A Lenticular Lens	Tatsuya Haga(Tokyo City University) Yue Bao(Tokyo City University) Fei Gu(Tokyo City University)

F2	Service Robots 2	Dec. 20 (Tue.) 13:00-15:20
<i>Chairperson: Satoru Shibata (Ehime University)</i>		
	Title	Authors
F2-1	People and Clothes Recognition Based on Topic Model	Ryuhei Sakurai(Ritsumeikan University) Joo-Ho Lee(Ritsumeikan University)
F2-2	Impedance-Based Contact Control of a Free-Flying Space Robot with Respect to Coefficient of Restitution	Naohiro Uyama(Tohoku University) Daichi Hirano(Tohoku University) Hiroki Nakanishi(JAXA) Kenji Nagaoka(Tohoku University) Kazuya Yoshida(Tohoku University)
F2-3	Development of Environment and Task Motion Framework for Finishing Robot System - Arrangement and Usage of Information in the Environment -	Hajime Fujii(Shibaura Institute of Technology) Syouhei Shimoyama(Shibaura Institute of Technology) Takashi Yoshimi(Shibaura Institute of Technology) Makoto Mizukawa(Shibaura Institute of Technology) Yoshinobu Andou(Shibaura Institute of Technology) Masakazu Fujii(IHI Corporation) Hiroki Murakami(IHI Corporation)
F2-4	Proposed System of Unlocking Potentially Hazardous Function of Robot Based on Verbal Communication	Toshihiro Nishizawa(University of Tsukuba) Kazuki Kishita(University of Tsukuba) Yosuke Takano(NEC Corp.) Yoshihiro Hujita(NEC Corp.) Shin'ichi Yuta(University of Tsukuba)
F2-5	Mobile Robot Vision Tracking System Using Unscented Kalman Filter	Muhammad Muneeb Shaikh(Seoul National University) Wook Bahn(Seoul National University) Changhun Lee(Seoul National University) Tae-il Kim(Seoul National University) Tae-jae Lee(Seoul National University) Kwang-soo Kim(Hanbat National University) Dong-il Cho(Seoul National University)
F2-6	Tracking with Pointing Gesture Recognition for Human-Robot Interaction	Ren C. Luo(National Taiwan University) Shu-Ruei Chang(National Taiwan University) Yee-Pien Yang(National Taiwan University)
F2-7	Human-Robot Interface with Instruction of Neck Movement Using Laser Pointer	Satoru Shibata(Ehime University) Tomonori Yamamoto(Ehime University) Mitsuru Jindai(Okayama Prefectural University)

Coffee Break 15:20-15:50

B3	Human Monitoring (OS9)	Dec. 20 (Tue.) 15:50-18:10
<i>Organizers : Joo-Ho Lee (Ritsumeikan University), Kazuyuki Morioka (Meiji University)</i>		
<i>Chairperson: Joo-Ho Lee (Ritsumeikan University)</i>		
	Title	Authors
B3-1	Human Following Robot Based on Control of Particle Distribution with Integrated Range Sensors	Fumiaki Hoshino(Meiji University) Kazuyuki Morioka(Meiji University)
B3-2	Improvement of Person Identification Rules Based on Walking Behavior Association between Wearable Acceleration Sensors and Intelligent Space	Tomoyasu Takigawa(Meiji University) Kazuyuki Morioka(Meiji University)
B3-3	Robust Methods for Head Orientation Estimation and User Identification Based on HOG and Codebook	Dinh Tuan Tran(Ritsumeikan University) Yusuke Koizumi(Ritsumeikan University) Ryuhei Sakurai(Ritsumeikan University) Joo-Ho Lee(Ritsumeikan University)
B3-4	A Robust Finger Pointing Interaction in Intelligent Space	Yusuke Koizumi(Ritsumeikan University) Dinh Tuan Tran(Ritsumeikan University) Joo-Ho Lee(Ritsumeikan University)
B3-5	Relationship between Fractal Property of Gait Cycle and Severity of Parkinson's Disease	Leo Ota(Tokyo Institute of Technology) Kazuki Suzuki(Tokyo Institute of Technology) Hirota Uchitomi(Tokyo Institute of Technology) Michael J. Hove(Max Planck Institute) Satoshi Orimo(Kanto Central Hospital) Yoshihiro Miyake(Tokyo Institute of Technology)
B3-6	Movement Imagery Classification Based on Subband BSS	Manoj Mukul(Birla Institute of Technology Mesra) Fumitoshi Matsuno(Kyoto University)
B3-7	Relationship between Social Interaction and Mental Health	Eisuke Ono(Tokyo Institute of Technology.) Takayuki Nozawa(Tohoku University.) Taiki Ogata(The University of Tokyo, Tokyo Institute of Technology.) Masanari Motohashi(Tokyo Institute of Technology.) Naoki Higo(Tokyo Institute of Technology.) Yoshihiro Miyake(Tokyo Institute of Technology.)

C3 Mobile Robot 1		Dec. 20 (Tue.) 15:50-18:10
<i>Chairperson: Noritaka Sato (Nagoya Institute of Technology)</i>		
Title	Authors	
C3-1	Development and Evaluation of Autonomous Mobile Manipulator for Large Scale Outdoor Environment	Takeshi Ohki(Tohoku University) Kiichi Sato(Tohoku University) Keiji Nagatani(Tohoku University) Kazuya Yoshida(Tohoku University)
C3-2	A 75-Variable MIQP Solver Processor for Real-Time Autonomous Robot Control	Masanori Nishino(Kobe University) Hiroki Noguchi(Kobe University) Yusuke Shimai(Kobe University) Shintaro Izumi(Kobe University) Hiroshi Kawaguchi(Kobe University) Masahiko Yoshimoto(Kobe University)
C3-3	Dynamic Vehicle Routing in Distributed Manufacturing Environments	Christopher Möller(Hamburg University of Technology)
C3-4	Development of High Mobility in-Pipe Inspection Robot	Woongsun Jeon(Yonsei University) Jungwan Park(Yonsei University) Inho Kim(Yonsei University) Yoon-Koo Kang(Yonsei University) Hyunseok Yang(Yonsei University)
C3-5	Exploring Movable Space Using Rhythmical Active Touch in Disordered Obstacle Environment	Kenri Kodaka(Waseda University) Tetsuya Ogata(Kyoto University) Hirotaka Ohta(Waseda University) Shigeki Sugano(Waseda University)
C3-6	Washout Control for Inverted Pendulum Mobile Robots with Sensor Drifts	Wataru Hori(Kitakyushu National College of Technology) Takashi Takimoto(Kitakyushu National College of Technology)
C3-7	Modified Particle Petri Nets for Hybrid Dynamical Systems Monitoring Under Environmental Uncertainties	Leila Zouaghi(University of Heidelberg) Alexander Alexopoulos(University of Heidelberg) Achim Wagner(University of Heidelberg) Essam Badreddin(University of Heidelberg)

D3 Grasping		Dec. 20 (Tue.) 15:50-18:10
<i>Chairperson: Tetsuou Watanabe (Kanazawa University)</i>		
Title	Authors	
D3-1	From Analysis to Practice: Three-finger Caging of Planar Convex Objects	Weimei Wan(The University of Tokyo) Rui Fukui(The University of Tokyo) Masamichi Shimosaka(The University of Tokyo) Tomomasa Sato(The University of Tokyo)
D3-2	Multi-robot Cooperative Formation for Overweight Object Transportation	Gyuhoo Eoh(Seoul National University) Jae D Jeon(Seoul National University) Jeong S Choi(Samsung Electronics) Beom H Lee(Seoul National University)
D3-3	A Human Assistant Robot System for Handling Heavy Mechanical Parts in Assembly Lines	Songgi Lee(Tohoku University) Xin Jiang(Tohoku University) Koyu Abe(Tohoku University) Satoko Abiko(Tohoku University) Atsushi Konno(Tohoku University) Masaru Uchiyama(Tohoku University)
D3-4	A Study of Book Arrangement Task by Robot Arm - Book Insert Operation to Bookshelf -	Takashi Nakajima(Shibaura Institute of Technology) Takashi Yoshimi(Shibaura Institute of Technology) Makoto Mizukawa(Shibaura Institute of Technology) Yoshinobu Ando(Shibaura Institute of Technology)
D3-5	Mechanism of Tweezers Grasping System	Papat Fungtammasan(Kanazawa University) Tetsuou Watanabe(Kanazawa University)

E3 UAV		Dec. 20 (Tue.) 15:50-18:10
<i>Chairperson: Takaaki Matsumoto (Kyushu Institute of Technology)</i>		
Title	Authors	
E3-1	Dynamic State-Derivative Feedback Control for Quadrotor Helicopters	Takashi Shigekuni(Kitakyushu National College of Technology) Takashi Takimoto(Kitakyushu National College of Technology)
E3-2	Attitude Control of Quadrotor Helicopters with Sensor Offsets	Kento Yamasaki(Kitakyushu National College of Technology) Takashi Takimoto(Kitakyushu National College of Technology) Keiichi Yoshino(Kitakyushu National College of Technology)
E3-3	Control Translation Strategy for a Submersible Vehicle	Shane Pinder(Auckland University of Technology) Jo Borchsenius(Aker Clean Carbon AS)
E3-4	Sliding Mode Leader Following Control for Autonomous Air Robots	Touraj Soleymani(Sharif University of Technology) Fariborz Saghafi(Sharif University of Technology)
E3-5	A Path Following Control Method under Wind Disturbances for Outdoor Blimp Robots	Hitomu Saiki(Kobe University) Takanori Fukao(Kobe University) Taketeru Urakubo(Kobe University) Takashi Kohno(JAXA)
E3-6	Dense 3D Reconstruction Using a Rotational Stereo Camera	Takeshi Yoshida(Kobe University) Takanori Fukao(Kobe University)
E3-7	Design, Development and Flight Experiment of a Small Reusable Rocket that Glides Using Two-stage Parachute	Kyoshiro Itakura(Kyushu Institute of Technology) Takaaki Matsumoto(Kyushu Institute of Technology) Takahiro Kobayashi(Kyushu Institute of Technology) Gaku Sasaki(Kyushu Institute of Technology) Koki Ishibashi(Kyushu Institute of Technology) Shintaro Shigeoka(Kyushu Institute of Technology) Masahiro Sugii(Kyushu Institute of Technology) Naoya Ueta(Kyushu Institute of Technology) Yuki Nakachi(Kyushu Institute of Technology) Yuta Nakayama(Kyushu Institute of Technology) Tomohiro Narumi(Kyushu Institute of Technology) Shinichi Sagara(Kyushu Institute of Technology) Yasuhiro Akahoshi(Kyushu Institute of Technology) Toshiaki Kanemoto(Kyushu Institute of Technology) Koichi Yonemoto(Kyushu Institute of Technology)

F3 SLAM		Dec. 20 (Tue.) 15:50-18:10
<i>Chairperson: Takanori Emaru (Hokkaido University)</i>		
Title	Authors	
F3-1	Map Building from Laser Range Sensor Information Using Mixed Data Clustering and Singular Value Decomposition in Noisy Environment	Ankit Ravankar(Hokkaido University) Yohei Hoshino(Hokkaido University) Takanori Emaru(Hokkaido University) Yukinori Kobayashi(Hokkaido University)
F3-2	On Simulation and Analysis of Mobile Robot SLAM Using Rao-Blackwellized Particle Filters	Peng Qi(KTH Royal Institute of Technology) Lu Wang(KTH Royal Institute of Technology)

F3-3	DSM Update for Robust Outdoor Localization Using ICP-based Scan Matching with COAG Features of Laser Range Data	Yong-Hoon Ji(Korea University) Sung-Ho Hong(Korea University) Jae-Bok Song(Korea University) Ji-Hoon Choi(Agency for Defense Development)
F3-4	Multi-Robot Exploration Framework Using Robot Vision and Laser Range Data	Youssef Ktiri(University of Tokyo) Tomoaki Yoshikai(University of Tokyo)
F3-5	Robust Scan Matching with Curvature-based Matching Region Selection	Heon-Cheol Lee(Seoul National University) Seung-Hee Lee(Seoul National University) Jimin Kim(Seoul National University) Beom-Hee Lee(Seoul National University)

December 21, Wednesday

A4 Vision 1		Dec. 21 (Wed.) 9:00-10:40
<i>Chairperson: Wen-Chung Chang (National Taipei University of Technology)</i>		
Title	Authors	
A4-1	Vision-Based Robot Navigation and Map Building Using Active Laser Projection	Wen-Chung Chang(National Taipei University of Technology) Chun-Yi Chuang(National Taipei University of Technology)
A4-2	Camera Localization by CAD Model Matching	Chuantao Zang(Tohoku University) Koichi Hashimoto(Tohoku University)
A4-3	Application of Image Processing Technology for Unloading Automation of Robot Combine Harvester	Hiroki Kurita(Kyoto University) Michihisa Iida(Kyoto University) Masahiko Suguri(Kyoto University) Ryo Uchida(Kyoto University) Huaping Zhu(Kyoto University) Ryohei Masuda(Kyoto University)
A4-4	Improved Sub-block Encoder of Irregular LDPC Code for Image Transmission	Tanaporn Payommai(King Mongkut's University of Technology Thonburi) Werapon Chiracharit(King Mongkut's University of Technology Thonburi) Kosin Chamnongthai(King Mongkut's University of Technology Thonburi)
A4-5	Planar Flow-based Planar Region Extraction for Visual Navigation Using a Single On-board Camera	Zhongli Wang(Beijing Jiaotong University) Yunhui Liu(the Chinese University of Hong Kong) Bogen Cai(Beijing Jiaotong University)

B4 Semiotic Analysis and Design of Human-Environment Interactions (OS11)		Dec. 21 (Wed.) 9:00-10:40
<i>Organizers : Tetsuo Sawaragi (Kyoto University), Hiroaki Nakanishi (Kyoto University)</i>		
<i>Chairperson: Tetsuo Sawaragi (Kyoto University), Hiroaki Nakanishi (Kyoto University)</i>		
Title	Authors	
B4-1	Double Articulation Analyzer for Unsegmented Human Motion Using Pitman-Yor Language model and Infinite Hidden Markov Model	Tadahiro Taniguchi(Ritsumeikan University) Shogo Nagasaka(Ritsumeikan University)
B4-2	Identification of Self-body Based on Dynamic Predictability Using Neuro-Dynamical System	Harumitsu Nobuta(Kyoto University) Shun Nishide(Kyoto University) Hiroshi Okuno(Kyoto University) Tetsuya Ogata(Kyoto University)
B4-3	Menu System Design Based on Conceptual Dependency Structures between Functional Elements	Yukio Horiguchi(Kyoto University) Wataru Gejo(Kyoto University) Tetsuo Sawaragi(Kyoto University) Hiroaki Nakanishi(Kyoto University)
B4-4	Human Gait Control Suggested by the Evaluation of the Fluctuation of Synergy	Tetsuro Funato(Kyoto University) Shinya Aoi(Kyoto University) Nozomi Tomita(Doshisha University) Kazuo Tsuchiya(Doshisha University)
B4-5	Changes in Coordinative Structure through Human-Environmental Interaction and its Role in Estimation of Dynamics	Hiroaki Nakanishi(Kyoto University) Sayaka Kanata(Osaka Prefecture University) Tetsuo Sawaragi(Kyoto University) Yukio Horiguchi(Kyoto University) Hirofumi Hattori(Kyoto University)

C4 New Actuators and Motion Control Systems (OS3)		Dec. 21 (Wed.) 9:00-10:40
<i>Organizers : Hidetaka Ohno (Shonan Institute of Technology), Ken-ichiro Nonaka (Tokyo City University), Seiichiro Katsura (Keio University)</i>		
<i>Chairperson: Seiichiro Katsura (Keio University)</i>		
Title	Authors	
C4-1	Control of Bilateral Force Feedback System with Flexible Mechanism Based on Resonant Ratio Control	Eiichi Saito(Keio University) Seiichiro Katsura(Keio University)
C4-2	Investigation of Transport Layer Protocols for Wireless Haptic Communication System	Nozomi Suzuki(Keio University) Seiichiro Katsura(Keio University)
C4-3	Velocity Based Motion-Copying System for Grasping/Manipulation Motion Reproduction	Shunsuke Yajima(Keio University) Seiichiro Katsura(Keio University)
C4-4	Thermal Bilateral Control with Scaled Thermal Information Using Peltier Device	Hidetaka Morimitsu(Keio University) Seiichiro Katsura(Keio University)
C4-5	Threshold Test on Grasping Diameter for Evaluation of Passive Force Display Glove System Precision	Naohiro Sato(Toyama Prefectural University) Ken'ichi Koyanagi(Toyama Prefectural University) Tatsuo Motoyoshi(Toyama Prefectural University) Toru Oshima(Toyama Prefectural University)

D4 Management and Supply Chains		Dec. 21 (Wed.) 9:00-10:40
<i>Chairperson: Chung-Ling Kuo (Taiwan Hospitality & Tourism College)</i>		
Title	Authors	
D4-1	A Relaxation Method for the Three-dimensional Loading Capacitated Vehicle Routing Problem	Jidong Ren(Kyoto University) Yajie Tian(Kyoto University) Tetsuo Sawaragi(Kyoto University)
D4-2	An Integrated Model and its Extension for Disassembly Leveling and Lot-sizing for Multiple Product Types	Kyung-Wan Kang(LSIS, Ltd.) Hyoung-Ho Doh(Hanyang University) Jung-Hyeon Park(Hanyang University) Dong-Ho Lee(Hanyang University)
D4-3	A Heuristic for Multi-Period Disassembly Leveling and Scheduling	Dong-Hyun Kim(Hanyang University) Dong-Ho Lee(Hanyang University)
D4-4	The Management Performance Assessment of Taiwan's Camping Park Based on DEA Technique	Chung-Ling Kuo(Taiwan Hospitality & Tourism College) Chia-Li Lin(Taiwan Hospitality & Tourism College)
D4-5	New Integrated Hybrid Evaporative Cooling System for HVAC Energy Efficiency Improvement	Vahid Vakiloroaya(University of Technology, Sydney) Mina Khatibi(University of Technology, Sydney) Quang Ha(University of Technology, Sydney) Bijan Samali(University of Technology, Sydney)

E4 Mechatronics and Control 1		Dec. 21 (Wed.) 9:00-10:40
<i>Chairperson: Takahiro Endo (Gifu University)</i>		
Title	Authors	
E4-1	Improved Performance Using Discrete Rotating and Shifting Switching Manifolds of Single-Phase PWM Inverters	En-Chih Chang(I-Shou University) Fu-Juay Chang(National United University) Yen-Ku Lin(I-Shou University)
E4-2	A Roll Gap Adjustment For Uniform Thickness of Dough Sheets of Instant Ramen Noodles	Byung Kook Yoo(Nongshim Co. Ltd.) Dong Sang Yoo(Hankyong National University)
E4-3	Development of a Tweezers-type Device for a Multi-fingered Haptic Interface Robot	Takahiro Endo(Gifu University) Satoshi Tanimura(Gifu University) Haruhisa Kawasaki(Gifu University)
E4-4	Optimization of the Depth of Field for Enhanced 3D Images	Har DongHwan(Chung-Ang university) Chun KookJin(Chung-Ang university) Song KwangChan(Chung-Ang university)

E4-5	The Strategic Improvements of Social Networking Services Based on SIA-NRM	Chia-Li Lin(Taiwan Hospitality & Tourism College)
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F4 Rescue Robots		Dec. 21 (Wed.) 9:00-10:40
<i>Chairperson: Tetsushi Kamegawa (Okayama University)</i>		
Title	Authors	
F4-1	Hardware-Software Integration of a Practical Mobile Robot Platform	Hayato Shin(The University of Electro-Communications) Kazuyuki Kon(Kyoto University) Hiroki Igarashi(Kyoto University) Yuichi Anbe(Kyoto University) TaeHyon Kim(Kyoto University) Sohei Hanamoto(Kyoto University) Ryuta Yamasaki(Kyoto University) Satoshi Toyoshima(Kyoto University) Noritaka Sato(Nagoya Institute of Technology) Tetsushi Kamegawa(Okayama University)
F4-2	A Hybrid Localization Approach for UAV in GPS Denied Areas	Sherine Rady(University of Heidelberg) Amr Kandil(University of Heidelberg) Essam Badreddin(University of Heidelberg)
F4-3	CASSANDRA - Heterogeneous Reconnaissance Robotic System for Dangerous Environments	Ludek Zalud(Brno University of Technology) Lukas Kopecky(Brno University of Technology) Frantisek Burian(Brno University of Technology) Tomas Florian(Brno University of Technology)
F4-4	A Study of Operational Liability of the Medical Rescue Robot under Disaster	Taku Sahashi(Nagaoka University of technology) Akira Sahashi(Project-I Co. Ltd.) Hisashi Uchiyama(Nagaoka University) Ichiro Fukumoto(Nagaoka University of Technology)
F4-5	An Analysis about a Possibility of Continuous Walk for a Quadruped Robot Using Leg-grope Movement	Kazuyuki Ishida(Okayama University) Tetsushi Kamegawa(Okayama University) Akio Gofuku(Okayama University)

Keynote Speech 2		Dec. 21 (Wed.) 11:00-11:50
Towards a Sensor Based Precision Agricultural System		
Prof. Francis J. Pierce Professor Emeritus, Washington State University and Principal in AgInformatcs, LLC		
<i>Chairperson: Naoshi Kondo (Kyoto University)</i>		

Lunch 11:50-12:50

Keynote Speech 3		Dec. 21 (Wed.) 12:50-13:40
Earthquake prediction by integrated measurements of electromagnetic phenomena		
Prof. Masashi Hayakawa University of Electro-Communications, Professor Emeritus		
<i>Chairperson: Fumitoshi Matsuno (Kyoto University)</i>		

Keynote Speech 4		Dec. 21 (Wed.) 14:00-14:50
Smart Grids as Systems of Systems: Addressing Global Energy and Environmental Challenges		
Dr. Tariq Samad Honeywell Automation and Control Solutions, Minneapolis, Minnesota, U.S.A.		
<i>Chairperson: Kenji Fujimoto (Nagoya University)</i>		

A5 Vision 2		Dec. 21 (Wed.) 15:10-16:30
<i>Chairperson: Koichi Hashimoto (Tohoku University)</i>		
Title	Authors	
A5-1	Tracking in Presence of Total Occlusion and Size Variation Using Mean Shift and Kalman Filter	Oscar Ramos Ponce(University of Paris) Mohammad Ali Mirzaei(University of Paris)
A5-2	Pretest Gap Mura on TFT LCDs Using the Interference Pattern Method	Rong-Seng Chang(National Central University) Tung-Yen Li(National Central University) Li-Wei Ho(HY Neural Technologies, Ltd.) Jang-Zern Tsai(National Central University) Ching-Fu Yang(National Central University)
A5-3	Distant Object Recognition with Grabcut for an Active-Zooming Camera	Doojin Kim(Seoul National University) Kyung Sik Park(Seoul National University) Heon Cheol Lee(Seoul National University) Kong Woo Lee(Seoul National University) Beom Hee Lee(Seoul National University)
A5-4	Kinect-based Obstacle Detection for Manipulator	Panjawee Rakprayoon(Kasetsart University) Miti Ruchanurucks(Kasetsart University) Ada Coundoul(ESIREM, U De Bourgogne)

B5 Kukanchi - interactive human-space design and intelligence (OS7)		Dec. 21 (Wed.) 15:10-16:30
<i>Organizer : Kazuyoshi Wada (Tokyo Metropolitan University)</i>		
<i>Chairperson: Kazuyoshi Wada (Tokyo Metropolitan University)</i>		
Title	Authors	
B5-1	Proposal of Object Management System for Applying to Existing Object Storage Furniture	Katsuhiko Mayama(Shibaura Institute of Technology) Weerachai Skulkittiyut(Shibaura Institute of Technology) Yoshinobu Ando(Shibaura Institute of Technology) Takashi Yoshimi(Shibaura Institute of Technology) Makoto Mizukawa(Shibaura Institute of Technology)
B5-2	Architecture of Kukanchi Middleware: The Second Report	Yuhki Ishiguro(Shibaura Institute of Technology) Yoshio Maeda(Shibaura Institute of Technology) Ngo Trung(Shibaura Institute of Technology) Takeshi Sakamoto(Shibaura Institute of Technology) Makoto Mizukawa(Shibaura Institute of Technology) Takashi Yoshimi(Shibaura Institute of Technology) Yoshinobu Ando(Shibaura Institute of Technology)
B5-3	Path Planning for Bedroom Type Robot Module	Kazuyoshi Wada(Tokyo Metropolitan University) Eiji Kubo(Tokyo Metropolitan University) Nobukazu Nakashio(Tokyo Metropolitan University) Keisuke Takayama(Tokyo Metropolitan University) Toshihiko Suzuki(Kogakuin University)

B5-4	Interactive System for Sharing Objects Information by Gesture and Voice Recognition between Human and Robot with Facial Expression	Zhen Jiguo(Tokyo Metropolitan University) Hirotaka Aoki(Tokyo Metropolitan University) Eri sato-Shimokawara(Tokyo Metropolitan University) Toru Yamaguchi(Tokyo Metropolitan University)
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C5 Assistive Engineering (OS4) Dec. 21 (Wed.) 15:10-16:30

*Organizer : Sigeru SATO (Agency of Industrial Science and Technology)
Chairperson: Sigeru SATO (AIST), Keiko HOMMA (AIST)*

	Title	Authors
C5-1	Development of Training Games of Physical Posture Control for People with Developmental Disorders	Sigeru Sato(AIST) Osamu Morikawa(AIST) Katsuhiko Kanamori(NISE) Mari Umeda(NISE) Hirotsugu Ota(Shiga Prefectural Mikumo School for the Physically and Mentally Impaired) Masako Nara(psychotherapist) Emi Nakazawa(physical therapist) Tomomi Hakomori(University of Tsukuba Education Bureau of Laboratory Schools and Senior High School at Otsuka, University of Tsukuba) Yujiro Ono(NAMCO BANDAI Games Inc.)
C5-2	Recognition of Moving Objects by Image Processing and its Applications to a Guide	Katsumi Moriwaki(Daido University)
C5-3	Effects of Passive Motion Using Mechatronic System on Improvement of Peripheral Circulation	Keiko Homma(National Institute of Advanced Industrial Science and Technology (AIST)) Mariko Usuba(Tsukuba University of Technology)
C5-4	Identification of Pedestrian Characteristics for Assistive Systems	Mata Khalil(University of Versailles) Eric Monacelli(University of Versailles) Yasuhisa Hirata(Tohoku University)

D5 Humanoid Robots 1 Dec. 21 (Wed.) 15:10-16:30

Chairperson: Yasushi Mae (Osaka University)

	Title	Authors
D5-1	Cooperative Object Transportation by Multiple Humanoid Robots	Meng-Hung Wu(Tohoku University) Atsushi Konno(Tohoku University) Masaru Uchiyama(Tohoku University)
D5-2	Construction of an Anthropomorphic Robot and Its Intelligent Control for Vision-Guided Feeding Tasks	T. I. James Tsay(National Cheng Kung University) Y. M. Liu(National Cheng Kung University)
D5-3	Separation of Tactile Information from Multiple Sources Based on Spatial ICA and Time Series Clustering	Kyuhee Lee(ATR/Osaka University) Tetsushi Ikeda(ATR) Takahiro Miyashita(ATR) Hiroshi Ishiguro(ATR/Osaka University) Norihiko Hagita(ATR)
D5-4	Personal Space of Humans in Relation with Humanoid Robots Depending on the Presentation Method	Mika Yasumoto(Osaka University) Hiroko Kamide(Osaka University) Yasushi Mae(Osaka University) Koji Kawabe(Honda R&D Co., Ltd.) Satoshi Shigemitsu(Honda R&D Co., Ltd.) Masato Hirose(Honda R&D Co., Ltd.) Tatsuo Arai(Osaka University)

E5 Mechatronics and Control 2 Dec. 21 (Wed.) 15:10-16:30

Chairperson: Feifei Zhang (Tokyo Univ. of Marine Science and Technology)

	Title	Authors
E5-1	Steering Assist Control for Stabilization of a Motorcycle during Braking (Verification of the Control System on Cornering Simulations)	Shintaroh Murakami(Keio University) Hidekazu Nishimura(Keio University) Shaopeng Zhu(Zhejiang University)
E5-2	Collision Avoidance of Two Manipulators Using RT-Middleware	Zhou Jianing(University of Tsukuba) Kazuyuki Nagase(University of Tsukuba) Shinya Kimura(University of Tsukuba) Yasumichi Aiyama(University of Tsukuba)
E5-3	Development of Inverter-less FPP Electric Propulsion System	Masanori Ito(University of Marine Science and Technology) Feifei Zhang(University of Marine Science and Technology) Hiroshi Sato(Daiichi Electric Co. LTD.) Shigeo Mita(University of Marine Science and Technology) Kyoko Narukawa(University of Marine Science and Technology)
E5-4	OpenVR: A Software Tool Contributes to Research of Robotics	Wei Wang(Waseda University) Yuki Suga(Waseda University) Hiroyasu Iwata(Waseda University) Shigeki Sugano(Waseda University)

F5 Learning Dec. 21 (Wed.) 15:10-16:30

Chairperson: Chyon Hae Kim (Honda Research Institute Japan)

	Title	Authors
F5-1	Entropy-weighted Bayesian Approach to Edge Finding for Object Perception	Chun-Shun Tseng(National Taiwan Ocean University) Jung-Hua Wang(National Taiwan Ocean University)
F5-2	Robust Localization System Using Online / Offline Hybrid Learning	Yuto Fujii(Meiji University) Yoji Kuroda(Meiji University)
F5-3	Learning Attentive-Depth Switching While Interacting with an Agent	Chyon Hae Kim(Honda Research Institute Japan) Hiroshi Tsujino(Honda Research Institute Japan) Hiroyuki Nakahara(Integrated Theoretical Neuroscience RIKEN Brain Science Institute)
F5-4	Caterpillar Robot Locomotion Based on Q-Learning using Objective/Subjective Reward	Ryota Yamashina(Yokohama National University) Masafumi Kuroda(Yokohama National University) Tetsuro Yabuta(Yokohama National University)

Coffee Break 16:30-17:00

A6 Vision 3 Dec. 21 (Wed.) 17:00-18:20

Chairperson: Kang-Hyun Jo (University of Ulsan)

	Title	Authors
A6-1	Facial Recognition Using Partial Log-Polar Transformation	Yue Bao(Tokyo City University) Bin Qi(Toshiba Corporations) Fei Gu(Tokyo City University)
A6-2	Brick Path Detection from Shape Pattern and Texture Feature	Byung-Seok Woo(University of Ulsan) Sung-Min Yang(University of Ulsan) Kang-Hyun Jo(University of Ulsan)
A6-3	Significant Edge Finding in View of Human Perception	Chun-Shun Tseng(National Taiwan Ocean University) Jung-Hua Wang(National Taiwan Ocean University)

A6-4	Robot Localization under Perceptual Aliasing Conditions Based on Laser Reflectivity Bsing Particle Filter	Dong Xiang Zhang(Kyushu University) Ryo Kurazume(Kyushu University) Yumi Iwashita(Kyushu University) Tsutomu Hasegawa(kyushu university, Japan)
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B6	Robot Service and Platform Technology (OS6)	Dec. 21 (Wed.) 17:00-18:20
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<i>Organizers : Nobuto Matsuhira (Shibaura Institute of Technology), Tetsuo Kotoku (AIST)</i>		
<i>Chairperson: Nobuto Matsuhira (Shibaura Institute of Technology), Tetsuo Kotoku (AIST)</i>		

	Title	Authors
B6-1	Verification of the Effectiveness of Robots for Sales Promotion in Commercial Facilities	Yoshihiko Murakawa(Fujitsu Laboratories Limited) Keiju Okabayashi(Fujitsu Laboratories Limited) Shinji Kanda(Fujitsu Laboratories Limited) Miwa Ueki(Fujitsu Laboratories Limited)
B6-2	Research and Development Environments for Robot Services and its Implementation	Yuka Kato(Advanced Institute of Industrial Technology) Toru Izui(Advanced Institute of Industrial Technology) Yoshihiko Murakawa(Fujitsu Laboratories Ltd.) Keiju Okabayashi(Fujitsu Laboratories Ltd.) Miwa Ueki(Fujitsu Laboratories Ltd.) Yosuke Tsuchiya(Advanced Institute of Industrial Technology) Masahiko Narita(Advanced Institute of Industrial Technology)
B6-3	Rapid Data Processing Pipeline Development Using OpenRTM-aist	Geoffrey Biggs(AIST) Noriaki Ando(AIST) Tetsuo Kotoku(AIST)
B6-4	The Ubiquitous Network Robot Platform: Common Platform for Continuous Daily Robotic Service	Miki Sato(ATR) Keji Kamei(ATR) Shuichi Nishio(ATR) Norihiro Hagita(ATR)

C6	Mobile Robot 2	Dec. 21 (Wed.) 17:00-18:20
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<i>Chairperson: Ryusuke Fujisawa(Hachinohe Institute of Technology)</i>		
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	Title	Authors
C6-1	Minimum-Time Motion Planning of Autonomous Mobile Robots Using Iterative Dynamic Programming	Tae Hyoung Park(Chungbuk National University) Hee Sang Yoon(Chungbuk National University)
C6-2	Project-Based Learning Using LabVIEW and Embedded Hardware	Yucel Ugurlu(National Instruments Japan) Tatsuro Nagano(National Instruments Japan)
C6-3	Multi-Robot Enclosing Formation for Moving Target Capture	Jimin Kim(Seoul National University) Heon-Cheol Lee(Seoul National University) Beom-Hee Lee(Seoul National University)
C6-4	A Visual Landmark Design Method for High Speed Multiple Robots	Tae-Seok Lee(Seoul National University, ASRI) Jae-Guk Lee(Seoul National University) Beom-Hee Lee(Seoul National University, ASRI)

D6	Humanoid Robots 2	Dec. 21 (Wed.) 17:00-18:20
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<i>Chairperson: Koichi Hashimoto (Tohoku University)</i>		
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	Title	Authors
D6-1	Initial Study of Bipedal Robot Locomotion Approach on Different Gravity Levels	Aiman Omer(Waseda University) Kenji Hashimoto(Waseda University) Hun-ok Lim(Kanagawa University) Atsuo Takanishi(Waseda University)
D6-2	Grasp Observation and Reproduction by Humanoid Robots Using Color Camera and 3D Sensor	Tien Cuong Kieu(The University of Tokyo) Kimitoshi Yamazaki(The University of Tokyo) Ryo Hanai(The University of Tokyo) Kei Okada(The University of Tokyo) Masayuki Inaba(The University of Tokyo)
D6-3	Learning of Tool Affordances for Autonomous Tool Manipulation	Raghvendra Jain(The Graduate University for Advance Studies) Tetsunari Inamura(The Graduate University for Advance Studies)

E6	Mechatronics and Control 3	Dec. 21 (Wed.) 17:00-18:20
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<i>Chairperson: Takahiro Endo (Gifu University)</i>		
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	Title	Authors
E6-1	Proposal of Redundant Drive Wire Mechanisms for Producing Motions with High Acceleration and High Precision	Kiyoshi Nagai(Ritsumeikan University) Le Nhat Tam(Ritsumeikan University)
E6-2	Transferring and Tilt Motion Control of the Liquid Container to Suppress Sloshing by Using Generalized Predictive Control Method	Ryota Shibuya(Toyohashi University of Technology) Hisashi Okatsuka(Toyohashi University of Technology) Yoshiyuki Noda(Toyohashi University of Technology) Kazuhiko Terashima(Toyohashi University of Technology)
E6-3	Swing-Up Control of a Inverted Pendulum by Two Step Control Strategy	Junichi Yokoyama(Oita University) Kotaro Mihara(Oita University) Haruo Suemitsu(Oita University) Takami Matsuo(Oita University)
E6-4	Residual Vibration Suppression Conditions for Mechanical System Motion Using Simple Trajectory	Huimin Ouyang(Toyohashi University of Technology) Naoki Uchiyama(Toyohashi University of Technology) Shigenori Sano(Toyohashi University of Technology)

F6	Intelligent Control 1	Dec. 21 (Wed.) 17:00-18:20
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<i>Chairperson: Chia-Chang Tong (Chienkuo Technology University)</i>		
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	Title	Authors
F6-1	Firmware Implementing of a Dual-wheel Drive Electrical Bicycle	Chia-Chang Tong(Chienkuo Technology University) Wu-Shun Jwo(Chienkuo Technology University) Jih-Yu Lin(Chienkuo Technology University) Shih-Fan Li(Chienkuo Technology University) Yau-Jeng Tsai(Chienkuo Technology University)
F6-2	Modeling, Control and Implementation of a Pedaled, Self-balanced Unicycle	Chun-Feng Huang(National Tsing Hua University) T.-J. Yeh(National Tsing Hua University)
F6-3	Design and Simulation and Development of a Ping-Pong Robot Arm	Xiaowen Yu(Tsinghua University) Yu Zhao(Tsinghua University) Chenglong Fu(Tsinghua University) Ken Chen(Tsinghua University)
F6-4	Smooth Tilting Motion Control of a Train Using Two Hydraulic Actuators	Manh-Tuan Ha(Konkuk University) Chul-Goo Kang(Konkuk University) Ho-Yoen Kim(Shalom Engineering Co.) Joon-Hwan Lee(Shalom Engineering Co.) Nam-Jin Lee(Hyundai Rotem Co.) Jun-Ho Lee(Korea Railroad Research Institute) Sung-Ho Han(Korea Railroad Research Institute)

Banquet 19:30 -

December 22, Thursday

A7 Human-Robot Interaction		Dec. 22 (Thu.) 9:00-11:20
<i>Chairperson: Yoshihiro Miyake (Tokyo Institute of Technology)</i>		
Title	Authors	
A7-1	Adaptive Nonlinear Principle Component Analysis Based Multilayer Neural Network for P300 Detection	Arjon Turnip(Pusan National University) Keum-Shik Hong(Pusan National University) Sukhyun Yoon(Pusan National University)
A7-2	Temporal Relationship between Pauses and Utterance Durations in Speech of Short Sentence	Kazuto Kamoi(Tokyo Institute of Technology) Tomohito Yamamoto(Kanazawa Institute of Technology) Yumiko Muto(Tokyo Institute of Technology) Yoshihiro Miyake(Tokyo Institute of Technology)
A7-3	Clarification of Transition Conditions for Eye Movement While Generating a Trajectory Using the Upper Limb	Nozomi Toyoda(Yokohama National University) Ryohei Yamamoto(Yokohama National University) Tetsuro Yabuta(Yokohama National University)
A7-4	Experimental Studies on Prediction in Air Hockey Games	Yusuke Arai(Tohoku University) Shingo Kagami(Tohoku University) Koichi Hashimoto(Tohoku University)
A7-5	A Novel, MRI Compatible Hand Exoskeleton for Finger Rehabilitation	Zhen Jin Tang(Waseda University) Shigeki Sugano(Waseda University) Hiroyasu Iwata(Waseda University)
A7-6	Gait Measurement System to Develop Control Model of Intelligently Controllable Ankle-Foot Orthosis	Takehito Kikuchi(Yamagata University) Toshimasa Tanaka(Yamagata University) Akihito Shoji(Yamagata University) Sousuke Tanida(Bukkyo University) Morimasa Kato(Yonezawa Women's College)
A7-7	A Functional Near-infrared Spectroscopy Based Lie Detector	Xiao-Su Hu(Pusan National University) Keum-Shik Hong(Pusan National University) Shuzhi Ge(The National University of Singapore)

B7 Social Robotics and System Integration (OS10)		Dec. 22 (Thu.) 9:00-11:20
<i>Organizer : Shuzhi GE (National University of Singapore)</i>		
<i>Chairperson: Yanan Li (National University of Singapore)</i>		
Title	Authors	
B7-1	Mechanical Design of Social Robot Nancy	Shuzhi Sam Ge(National University of Singapore) Mohammad Reza Safizadeh(National University of Singapore) Yanan Li(National University of Singapore)
B7-2	An Integrated Kinetic Energy Recovery System for Peak Power Transfer in 3-DOF Mobile Crane Robot	Jiakai Xu(Zhejiang University) Jiaqiang Yang(Zhejiang University) Jian Gao(Zhejiang University)
B7-3	System Design and Hardware Integration of Social Robot Nancy	Shuzhi Sam Ge(National University of Singapore) Chun Fui Liew(National University of Singapore) Yanan Li(National University of Singapore)
B7-4	Dynamic Modeling and System Identification for the Lower Body of a Social Robot with Flexible Joints	Shuzhi Sam Ge(National University of Singapore) Jie Zhang(National University of Singapore) Wei He(National University of Singapore)
B7-5	A Survey of Biologically Inspired Chemical Plume Tracking Strategies for Single Robot in 2-D Turbulence Dominated Flow Environments	Siqi Zhang(Northwestern Polytechnical University) Demin Xu(Northwestern Polytechnical University)

C7 Mobile Robot 3		Dec. 22 (Thu.) 9:00-11:20
<i>Chairperson: Tetsushi Kamagawa (Okavama University)</i>		
Title	Authors	
C7-1	A Sensor Fusion System Using Enhanced Extended Kalman Filter with Double Fuzzy Logics for Autonomous Robot Guidance	Seung-Hwan Lee(ASRI and Seoul National University) Tae-Seok Lee(ASRI and Seoul National University) Beom-Hee Lee(ASRI and Seoul National University)
C7-2	Robust Projection Method for a Mobile Robot with Camera and Projector Based on a Structured-Environment Approach	Tomohiro Izumi(Hiroshima City University) Satoshi Iwaki(Hiroshima City University) Kazuya Tsuji(Hiroshima City University) Takatoshi Sugiyama(Hiroshima City University)
C7-3	FPGA-Based Control Architecture Integration for Multiple-Axis Tracking Motion Systems	Nguyen Khanh Quang(University of Technology Sydney) Ying Shieh Kung(Southern Taiwan University) Q. P. Ha(University of Technology Sydney)
C7-4	Autonomous Mobile System Unaffected by Moving Obstacles in Urban Environments	Yuya Nagata(Meiji University) Masahito Mitsuhashi(Meiji University) Yoji Kuroda(Meiji University)
C7-5	Trajectory Generation of a Mobile Robot Using Inertial Sensors and Vision	Quoc Khanh Dang(University of Ulsan) Young Soo Suh(University of Ulsan)
C7-6	Factorial Analysis to Improve the Travel Time of a Wheeled Mobile Robot Operated via Internet	Gerson Beristain(UPAEP) Emilio Gabino(OSU) Hector Vargas(UPAEP) Luis Cuatle(UPAEP)
C7-7	The Use of Splines for Robot Environment Modeling and Path Planning	Hadjira Belaidi(umbb) H. BenTarzi(umbb) A. Belaidi(umbb)

D7 Grey system theory, rough set and GA (OS1)		Dec. 22 (Thu.) 9:00-11:20
<i>Organizer : Kun-Li Wen (Chienkuo Technology University)</i>		
<i>Chairperson: Jee-Ray Wang (Chienkuo Technology University), Shu-Chen Huang (Asia University)</i>		
Title	Authors	
D7-1	Applying Rough Set Method to Analyze the Weighting of Influence Factor in Resource Recycling	Ying-Yi Lyu(Chienkuo Technology University) Mei-Li You(Chienkuo Technology University) Kun-Li Wen(Chienkuo Technology University) Huei-Chu Wen(National Taiwan Ocean University)
D7-2	The Study of Stress Relieving Essential Oils by Aromatherapy in Autonomic Nervous by Rough Set Method	Ya-Ting Lee(Chienkuo Technology University) Li-Nuo Wu(Chienkuo Technology University) Tsai-Fong Tan(Ching Kuo Institute of Management and Health) Hsiao-Chin Chen(Chienkuo Technology University)
D7-3	Apply the Optimal Design of Assessment Performed on Bike Lamp	Jung-Chin Liang(Ling Tung University) Yung-Hu Lee(Dahan Institute of Technology) Wei-Ling Liu(Chienkuo Technology University) Masatake Nagai(National Taichung University of Education)
D7-4	Applying Semantic Method to Windows Detection in Façade	Xi Wang(University of Science & Technology Beijing) Kun-Li Wen(Chienkuo Technology University) Xiang-Hua Ying(Peking University) Jee-Ray Wang(Chienkuo Technology University) Huo-Cheng Chen(Chienkuo Technology University)

D7-5	Apply GM(0,N) to Analyze the Weighting of Influence Factor in the Feminization of Poverty-An Example in Taiwan	Mei-Chuan Wei(Chienkuo Technology University) Mei-Hui Chen(Chienkuo Technology University) Wen-Hui Fang(Chienkuo Technology University) Shu-Chen Huang(Asia University)
D7-6	Applying ANN to Analyze the Influence on the Recovery of Chrome After Silicon and Aluminums' Melting of 15-5PH(V) in EAF	Jee-Ray Wang(Chienkuo Technology University) Pin-Yu Hsueh(Chienkuo Technology University) Ping-You Zeng(Chienkuo Technology University) Pin-Hung Chu(Chienkuo Technology University)

E7	Bio System	Dec. 22 (Thu.) 9:00-11:20
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Chairperson: Minoru Sasaki (Gifu University)

	Title	Authors
E7-1	Wireless Multi-Channel Near-Infrared Spectroscopy for Monitoring Middle Cerebral Artery Occlusion	Ming-Hsien Chang(National Chiao Tung University) Chih-Lun Cheng(National Chiao Tung University) Han-Ming Huang(National Chiao Tung University) Jinn-Rung Kuo(Chi-Mei Medical Center) Bor-Shyh Lin(National Chiao Tung University)
E7-2	Identification and Control of Temperature in a Zero Energy Cool Chamber for Fruits and Vegetables	Md. Parvez Islam(Ehime University) Tetsuo Morimoto(Ehime University)
E7-3	Control of Biological Clock in Crassulacean Acid Metabolism Using Nullcline Design	Akira Goto(Oita University) Yusuke Totoki(Oita University) Haruo Suemitsu(Oita University) Takami Matsuo(Oita University)
E7-4	Parameter and Input Estimation in Hindmarsh-Rose Neuron by Adaptive Observer	Jun Mukae(Oita University) Yusuke Totoki(Oita University) Haruo Suemitsu(Oita University) Takami Matsuo(Oita University)
E7-5	Comparing Intra- and Inter-Personal Coordination Systems: Perceptual Effect on Stability of Finger Tapping Movement	Kentaro Kodama(The Graduate University For Advanced Studies (SOKENDAI)) Nobuhiro Furuyama(National Institute of Informatics, Tokyo Institute of Technology, The Graduate University For Advanced Studies (SOKENDAI))
E7-6	Hybrid GMDH-type Neural Network Using Artificial Intelligence and its Application to Medical Image Diagnosis of Liver Cancer	Tadashi Kondo(The University of Tokushima) Junji Ueno(The University of Tokushima) Shoichiro Takao(The University of Tokushima)
E7-7	Medical Image Diagnosis of Lung Cancer by Revised GMDH-type Neural Network Self-selecting Optimum Neuron Architectures	Tadashi Kondo(The University of Tokushima) Junji Ueno(The University of Tokushima) Shoichiro Takao(The University of Tokushima)

F7	Intelligent Control 2	Dec. 22 (Thu.) 9:00-11:20
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Chairperson: Kiyotaka Izumi (Saga University)

	Title	Authors
F7-1	Motion Control of the Electric Wheelchair Powered by Rim Motors Based on Event-based Cross-coupling Control Strategy	Shin-Hung Chen(National Taiwan University) Jui-Jen Chou(National Taiwan University)
F7-2	A Novel Dual-arm Motion Discrimination Method Using Recurrent Probability Neural Networks for Automatic Gesture Recognition	Yuki Hiramatsu(Hiroshima University) Taro Shibasaki(Hiroshima University) Keisuke Shima(Hiroshima University) Toshio Tsuji(Hiroshima University)
F7-3	Emergent Functions of HDL-based Controller of Inverted Pendulum in Consideration for Disturbance	Kazuyuki Kojima(Saitama University)
F7-4	Design of Fuzzy Switching Control for An Underactuated Planar Manipulator	Kiyotaka Izumi(Saga University) Takeshi Tsujimura(Saga University) Keigo Watanabe(Okayama University)
F7-5	Intelligent MPPT Control for Wind Energy Conversion System Using Neural Network with Grey System Modeling Approach	Whei-Min Lin(National Sun Yat-Sen University) Chih-Ming Hong(National Kaohsiung Marine University) Chia-Sheng Tu(National Sun Yat-Sen University) Kai-Hung Lu(National Sun Yat-Sen University) Chih-Kai Chang(National Sun Yat-Sen University)
F7-6	Control of Autonomous Bicycle System with ZMP Tracking	Mei-Wen Fang(National Taiwan University) Yen-Ting Chen(National Taiwan University) Jui-Jen Chou(National Taiwan University)
F7-7	A Highly Re-Configurable Instruments-in-Matlab Software-Defined Radio Platform for 4G SC-FDMA Signal Measurements and Analysis	Jeng-Kuang Hwang(Yuan Ze University) Yu-Tai Tsai(Yuan Ze University) Jeng-Da Li(Yuan Ze University)

Keynote Speech 5	Dec. 22 (Thu.) 11:40-12:30
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Robotic Response in East Japan Earthquake
Prof. Satoshi Tadokoro
Tohoku University / International Rescue System Institute

Chairperson: Minoru Sasaki (Gifu University)

Lunch 12:30-13:30

A8	Medical Robotics	Dec. 22 (Thu.) 13:30-15:30
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Chairperson: Chee-Kong Chui (National University of Singapore)

	Title	Authors
A8-1	Wearable ECG Terminal and its Telemedicine-Health Services	Jun Dong(Chinese Academy of Sciences) Hong-hai Zhu(Chinese Academy of Sciences)
A8-2	Transformable Lung Positioner for Thoracoscopic Surgery	Mikio Osaki(Tokyo Institute of Technology) Toru Omata(Tokyo Institute of Technology) Toshio Takayama(Tokyo Institute of Technology) Hiroyuki Ohizumi(Yamagata University)
A8-3	Parallel Processing for Object Oriented Robotic Simulation of Tracheal-Oesophageal Puncture	Chee-Kong Chui(National University of Singapore) Chin-Boon Chng(National University of Singapore) David PC Lau(Singapore General Hospital)
A8-4	A Novel Handheld Device for Tracheo-esophageal Puncture and Prosthesis Insertion	Chin Boon Chng(National University of Singapore) Chee Kong Chui(National University of Singapore) David PC Lau(DeSingapore General Hospital)
A8-5	Assemblable Hand for Laparoscopic Surgery with Ultrasound Probes	Mikio Osaki(Tokyo Institute of Technology) Toru Omata(Tokyo Institute of Technology) Toshio Takayama(Tokyo Institute of Technology) Tadashi Sawanobori(Toshiba Medical Systems Corp.)
A8-6	Design of a Gough-Stewart Platform for Micro-surgical Operations	Sung Mok Kim(Korea University) Joono Cheong(Korea University) Byung Ju Yi(Hanyang University) Whee Kuk Kim(Korea University)

B8 Ambient Intelligence and its Applications (OS8)		Dec. 22 (Thu.) 13:30-15:30
<i>Organizers : Takashi Nishiyama (Panasonic Electric Works Co., Ltd.), Mihoko Niitsuma (Chuo University)</i>		
<i>Chairperson: Takashi Nishiyama (Panasonic Electric Works Co., Ltd.), Mihoko Niitsuma (Chuo University)</i>		
Title	Authors	
B8-1 A Decision-making Modeling for Home Ambient Intelligent System and its Extension to Multi-agent Modeling	Takashi Nishiyama(Panasonic Electric Works Co., Ltd.) Tetsuo Sawaragi(Kyoto University)	
B8-2 Recognizing Participants in Interaction from Observation of Office Environments	Yuki Kizumi(Kwansei Gakuin University) Koh Kakusho(Kwansei Gakuin University) Takeshi Okadome(Kwansei Gakuin University) Takuya Funatomi(Kyoto University) Masaaki Iiyama(Kyoto University)	
B8-3 Benefit of Inconvenience for Ambient Interface	Hiroshi Kawakami(Kyoto University)	
B8-4 Human Daily Behavior Accumulation in Real Home Environment via Distributed Sensors in a Long Term	Hiroshi Noguchi(The University of Tokyo) Taketoshi Mori(The University of Tokyo) Tomomasa Sato(The University of Tokyo)	
B8-5 Ambient Intelligence for Energy Conservation	Keisuke Kobayashi(University of Tsukuba) Mina Tsukahara(University of Tsukuba) Akira Tokumasu(University of Tsukuba) Kousuke Okuyama(University of Tsukuba) Kouhei Saitou(University of Tsukuba) Yasushi Nakauchi(University of Tsukuba)	

C8 Mobile Robot 4		Dec. 22 (Thu.) 13:30-15:30
<i>Chairperson: Daisuke Kurabayashi (Tokyo Institute of Technology)</i>		
Title	Authors	
C8-1 Forming an Artificial Pheromone Potential Field Using Mobile Robot and RFID Tags	Piljae Kim(Tokyo Institute of Technology) Daisuke Kurabayashi(Tokyo Institute of Technology)	
C8-2 Jacobian-Matrix-Based Motion Control of an Omni-Directional Mobile Robot with Three Active Caster	Ahmad Yasser Afaghani(University of Tsukuba) Shin'ichi Yuta(University of Tsukuba) Jae Hoon Lee(University of Ehime)	
C8-3 Vision System for Mobile Robots for Tracking Moving Targets, Based on Robot Motion and Stereo Vision Information	Tae-Il Kim(Seoul National University) Wook Bahn(Seoul National University) Changhum Lee(Seoul National University) Tae-jae Lee(Seoul National University) Muhammad Shaikh(Seoul National University) Kwang-soo Kim(Hanbat National University) Dong-il "Dan" Cho	
C8-4 Hybrid Electro-Pneumatic Robotic Arm - Integration of Pneumatic Muscle Actuator	Lukas Kopečný(Brno University of Technology) Ludek Zalud(Brno University of Technology)	
C8-5 Integrated Path Planning for Partially Unknown Outdoor Environments	Joon-Hong Seok(KAIST) Changmok Oh(KAIST) Ju-Jang Lee(KAIST) Ho Joo Lee(ADD)	

D8 Micro-Nano Systems		Dec. 22 (Thu.) 13:30-15:30
<i>Chairperson: Minoru Sasaki (Gifu University)</i>		
Title	Authors	
D8-1 Iterative Feedback Tuning of Optical Proximity Correction Mask in Lithography	Yifan Qu(National University of Singapore) Arthur Tay(National University of Singapore) Tong Heng Lee(National University of Singapore)	
D8-2 Automatic Pickup and Release of Particle by Depth Estimation Method with Micromanipulators for Particle Sorting System	Shigeji Osawa(Utsunomiya University) Koichi Ozaki(Utsunomiya University)	
D8-3 Development of an Active Micro Catheter Using a Conducting Polymer Actuator and Silicone Tube	Yuu Hanayama(Wakayama University) Shigeiki Tsuchitani(Wakayama University) Kunitomo Kikuchi(Wakayama University)	
D8-4 Motion Simulator for a Multi-Degree-of-Freedom Magnetically Levitated Robot	Susumu Tarao(Tokyo National College of Technology) Moein Mehrtaah(University of Waterloo) Naoki Tsuda(Wakayama National College of Technology) Behrad Khamesee(University of Waterloo)	
D8-5 Oscillatory MHD Gas Flows in the Slip Flow Regimes	Alireza Taklifi(MAPNA GROUP) Abbas Aliabadi(MAPNA GROUP)	

E8 Network Systems 1		Dec. 22 (Thu.) 13:30-15:30
<i>Chairperson: Xun Yi (Victoria University, Australia)</i>		
Title	Authors	
E8-1 HACC: Heterogeneous-Aware Cooperative Clustering Hierarchy for Wireless Sensor Networks	Md. Abdullah-al Mamun(Iwate University) Naoshi Nakaya(Iwate University) Yuji Koi(Iwate University) Yukari Hagihara(Iwate University)	
E8-2 Practical Mobile Electronic Election	Xun Yi(Victoria University) Eiji Okamoto(Tsukuba University)	
E8-3 Organize Metadata Servers by Using Quorum System	Tzong-Jye Liu(Feng Chia University) Wei-Chan Wang(Feng Chia University) Chuan-Mu Tseng(Feng Chia University)	
E8-4 Feasibility of a Watermark Application for Real-Time-Encoding Video-On-Demand Service	Takaaki Yamada(Hitachi, Ltd.) Michiro Maeta(Hitachi Government & Public Corporation System Engineering) Fuminori Mizushima(Hitachi Government & Public Corporation System Engineering)	

F8 Automation Systems and Control		Dec. 22 (Thu.) 13:30-15:30
<i>Chairperson: Takahiro Endo (Gifu University)</i>		
Title	Authors	
F8-1 A Study on a High Quality CAE Analysis Approach Model -Automotive Bolts Tightening Analysis Using Contact Stress Simulation-	Takehiro Onodera(Aoyama Gakuin University) Kakuro Amasaka(Aoyama Gakuin University)	
F8-2 A CAE Method of Design Optimization for Quality Assurance: Analyzing Cavitation Caused by Metal Particles in the Transaxle	Yasuaki Nozawa(Aoyama Gakuin University) Ryosuke Yamashita(Aoyama Gakuin University) Kakuro Amasaka(Aoyama Gakuin University)	
F8-3 Sway Suppression of an Offshore Container Crane	Quang Hieu Ngo(Pusan National University) Giyong Hong(Pusan National University) Keum-Shik Hong(Pusan National University)	
F8-4 Aggregated Hierarchical Sliding-Mode Motion Control of Automatic 3D Overhead Cranes	Ching-Chih Tsai(National Chung Hsing University) Kun-Hsien Chuang(National Chung Hsing University) Hsiao Lang Wu(National Chung Hsing University)	

Coffee Break 15:30-16:00

B9 Control Systems		Dec. 22 (Thu.) 16:00-18:00
<i>Chairperson: Takami Matsuo (Oita Univ.)</i>		

	Title	Authors
B9-1	A New Control Design for Nonholonomic Systems Based on Controllability of Linear Systems	Tomoaki Kobayashi(Osaka Prefecture University) Tomoaki Ozaki(Osaka Prefecture University) Joe Imae(Osaka Prefecture University)
B9-2	Flatness Based Design Method for Nonlinear Control Systems	Joe Imae(Osaka Prefecture University) Naoyuki Suido(Osaka Prefecture University) Tomoaki Kobayashi(Osaka Prefecture University)
B9-3	Stochastic Evaluation of Dissipative Observer for Multivalued Nonlinear System with Coulomb Friction	Tepei Hiroshige(Oita University) Haruo Suemitsu(Oita University) Takami Matsuo(Oita University)
B9-4	Genetic Programming Based Output Regulation via Optimal Inversion for Nonlinear Systems	Tomoaki Kobayashi(Osaka Prefecture University) Takaya Kimoto(Osaka Prefecture University) Joe Imae(Osaka Prefecture University)

C9 Virtual Reality		Dec. 22 (Thu.) 16:00-18:00
<i>Chairperson: Katsutoshi Yoshida (Utsunomiya University)</i>		
	Title	Authors
C9-1	The Effect of Voluntary Movement on Audio-Haptic Temporal Order Judgment - A Fundamental Study for Timing Control in Human-machine Interaction	Atsuhiko Nishi(Tokyo Institute of Technology) Masanori Yokoyama(Tokyo Institute of Technology) Taiki Ogata(The University of Tokyo, Tokyo Institute of Technology) Takayuki Nozawa(Tohoku University) Yoshihiro Miyake(Tokyo Institute of Technology)
C9-2	Identification of Physical Properties of Swine Liver for Surgical Simulation Using a Dynamic Deformation Model	Xiaoshuai Chen(Tohoku University) Masano Nakayama(Tohoku University) Tepei Tsujita(Tohoku University) Xin Jiang(Tohoku University) Satoko Abiko(Tohoku University) Koyu Abe(Tohoku University) Atsushi Konno(Tohoku University) Masaru Uchiyama(Tohoku University)
C9-3	Psychological Measurement of Coupled Human Balancing Tasks	Atsushi Higeta(Utsunomiya University) Katsutoshi Yoshida(Utsunomiya University) Shinichi Watanabe(Utsunomiya University) Aki Nakatsuka(Tohoku Electric Power Co., Inc.)
C9-4	Hybrid Inpainting Algorithm with Superpixels and Hash Table for Inpainting the 3D Model	Kalaivani Thangamani(University of Tsukuba) Tomoya Ishikawa(AIST) Koji Makita(AIST) Takeshi Kurata(University of Tsukuba / AIST)

D9 Space Application		Dec. 22 (Thu.) 16:00-18:00
<i>Chairperson: Hwa-Suk Oh (Korea Aerospace University)</i>		
	Title	Authors
D9-1	An Averaging Algorithm for Speed Measurement of SCL/KAU Reaction Wheel	Dong-Ik Cheon(Korea Aerospace University) Jichul Kim(Korea Aerospace University) Ilgyu Choi(Korea Aerospace University) Daegyun Choi(Korea Aerospace University) Hwa-Suk Oh(Korea Aerospace University)
D9-2	Traveling Performance Estimation for Planetary Rovers over Slope	Masataku Sutoh(Tohoku University) Ryosuke Yajima(Asahikawa National College of Technology) Keiji Nagatani(Tohoku University) Kazuya Yoshida(Tohoku University)
D9-3	Static Closed Loop Test System for Attitude Control System of Micro Satellite RISING-2	Kazufumi Fukuda(Tohoku University) Yuji Sakamoto(Tohoku University) Toshinori Kuwahara(Tohoku University) Kazuya Yoshida(Tohoku University) Yukihiro Takahashi(Hokkaido University)
D9-4	Satellite System Integration Based on Space Plug and Play Avionics	Toshinori Kuwahara(Tohoku University) Kazuya Yoshida(Tohoku University) Yuji Sakamoto(Tohoku University) Yoshihiro Tomioka(Tohoku University) Fukuda Kazufumi(Tohoku University)

E9 Network Systems 2		Dec. 22 (Thu.) 16:00-18:00
<i>Chairperson: Essameddin Badreddin (Heidelberg University)</i>		
	Title	Authors
E9-1	A Unified Design Approach for Component-Based Dynamic Systems Monitoring	Achim Wagner(Heidelberg University) Leila Zouaghi(Heidelberg University) Florian Barth(Mannheim University) Colin Atkinson(Mannheim University) Essameddin Badreddin(Heidelberg University)
E9-2	A Minimum Transmission Energy Consumption Routing Protocol for User-Centric Wireless Networks	Chuan-Chi Weng(Feng Chia University) Ching-Wen Chen(Feng Chia University) Chang-Jung Ku(Feng Chia University)
E9-3	Hybrid Artificial Neural Networks for TBM Performance Prediction in Complex Underground Conditions	Hai V. Pham(Ritsumeikan University) Yuji Fujita(Enzan Kobou Co.) Katsurari Kamei(Ritsumeikan University)
E9-4	A Study in Multicast Traffic Characteristic Analysis on the Intra-Domain Network	Annop Monsakul(Rangsit University) Pisit Charnkeitkong(Panyapiwat Institute of Management) Sanon Chimmanee(Rangsit University)
E9-5	Dynamic Computing Resource Adjustment for Enhancing Energy Efficiency of Cloud Service Data Centers	Cheng-Jen Tang(Tatung University) Miau-Ru Dai(Tatung University)

F9 Systems and Integration Platform		Dec. 22 (Thu.) 16:00-18:00
<i>Chairperson: Luca Ferrarini (Politecnico di Milano, Italy)</i>		
	Title	Authors
F9-1	A Hardware Design Approach of Sorting for FlexRay-based Clock Synchronization	Chang-Ming Wu(Chung Yuan Christian University) Chia-Yu Lu(Chung Yuan Christian University)
F9-2	An Integrated Approach for Specification and Design of Automated Production Systems	Luca Ferrarini(Politecnico di Milano) Giancarlo Mantovani(Politecnico di Milano) Massimo Allevi(Politecnico di Milano) Alessio Dedè(Politecnico di Milano)
F9-3	Using the Current Control for Dynamic Voltage Scaling to Reduce the Power Consumption of PC Systems	Ying-Wen Bai(Fu Jen Catholic University) Feng-Hua Chang(Fu Jen Catholic University)