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**Technical Program for
Wednesday September 14, 2011**

WePL 63-201/202

Plenary Talk I

Chair: Toshiyuki Tanaka Keio University

9:00-10:00

Current Unmanned Technology Research for the Military Robots in Korea

Ju-Jang Lee

Korea Advanced Institute of Science and Technology

WeA02 63-03
**Advanced Position and Shape Measurement using
Laser Rangefinder and/or Ultrasonic Sensor Array
(Organized Session)**

Organizer: Kozo Ohtani Hiroshima Inst. of Tech.
Organizer: Mitsuru Baba Ibaraki University
Chair: Kozo Ohtani Hiroshima Inst. of Tech.
Chair: Mitsuru Baba Ibaraki University

10:30-10:45 WeA02-01
*An Ultrasonic Local Positioning System Using Four
Base Stations* 1

Kozo Ohtani Hiroshima Inst. of Tech.
Mitsuru Baba Ibaraki University
Yosuke Tanii Ibaraki University

10:45-11:00 WeA02-02
*Target Classification of a Pillar-like Object Located at
Any Free Position by Ultrasonic Sensor Array* 6

Kozo Ohtani Hiroshima Inst. of Tech.
Mitsuru Baba Ibaraki University
Syunya Omori Ibaraki University

11:00-11:15 WeA02-03
*3D Reconstruction of Concave Surface of the Specular
Object with Inter-reflection* 11

Li Li Ibaraki University
Mitsuru Baba Ibaraki University

11:15-11:30 WeA02-04
*3D shape measurement of a transparent object with un-
known refractive index by inverse ray tracing method* 16

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Mitsuru Baba Ibaraki University
Kozo Ohtani Hiroshima Inst. of Tech.

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Takahiro Ugajin Ibaraki University
Mitsuru Baba Ibaraki University

WeA03	63-04
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Chair: Yoshihiro Mitani Ube National College of Tech.
Chair: Toshiaki Kondo Thammasat University

10:30-10:45 WeA03-01
Automatic Image Captioning System Using Integration of N-cut and Color-based Segmentation Method 28
May The Yu
University of Computer Studies, Yangon
Myint Myint Sein
University of Computer Studies, Yangon

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Yoshitaka Murata Ube National College of Tech.
Yoshihiro Mitani Ube National College of Tech.

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Toshiaki Kondo Thammasat University

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Yue Bao Tokyo City University

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Kitti Koonsanit Kasetsart University
Chuleerat Jaruskulchai Kasetsart University

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Masahiko Ozaki Kyushu Inst. of Tech.
Joo Kooi Tan Kyushu Inst. of Tech.
Hyoungseop Kim Kyushu Inst. of Tech.
Seiji Ishikawa Kyushu Inst. of Tech.

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Analytical Measurement	

Chair: Takeshi Hatanaka Tokyo Inst. of Tech.

10:30-10:45 WeA04-01
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Yutaka Ohkubo Okayama University
Makoto Moriwaka Okayama University
Takehito Hayami Okayama University

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Atsuo Murata Okayama University
Yusuke Matsuda Okayama University
Makoto Moriwaka Okayama University
Takehito Hayami Okayama University

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Taiki TOMOO Ritsumeikan University BKC

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Ryo WATABE Ritsumeikan University BKC
Shigeru TAKAYAMA Ritsumeikan University BKC

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Kanae Nishizaki University of Yamanashi
Reiji Nanba Daiichi Inst. of Tech.
Masakazu Takahashi University of Yamanashi

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Shouhei Koyama Shinshu University
Yuki Miyauchi Shinshu University
Hiroaki Ishizawa Shinshu University

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Chair: Kenji Kawashima	Tokyo Inst. of Tech.
Chair: Toshihiro Shinohara	Kinki University
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Haider Abbas F. Almurib	
The University of Nottingham Malaysia Campus	
Masood Askari	University of Malaya
Mahmoud Moghavvemi	University of Malaya
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Akihiro Murata	Yokogawa Electric Corporation
Yoshitaka Yuki	Yokogawa Electric Corporation
Eiro Yoshimura	Yokogawa Electric Corporation
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Akio Nakabayashi	Yokogawa Electric Corporation
Hidehiko Wada	Yokogawa Electric Corporation
Tetsuya Ohtani	Yokogawa Electric Corporation
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King Mongkut's Inst. of Tech. Ladkrabang	
Sawai Pongswatd	
King Mongkut's Inst. of Tech. Ladkrabang	
Amphawan Julsereewong	
King Mongkut's Inst. of Tech. Ladkrabang	
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King Mongkut's Inst. of Tech. Ladkrabang	
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Akio Ito	Yokogawa Electric Corp.
Etsutarou Koyama	Yokogawa Electric Corp.
Takashi Kawano	Yokogawa Electric Corp.

WeA06	52-102
[TraFST-SICE Joint OS] Pedestrian and Disaster Model	
(Organized Session)	
Organizer: Keiki TAKADAMA	
The University of Electro-Communication	
Chair: Kiyoshi Izumi	The University of Tokyo
Chair: Keiki TAKADAMA	
The University of Electro-Communication	
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Kiyoshi Izumi	The University of Tokyo
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Toshiyuki Kaneda	Nagoya Inst. of Tech.
Hiroaki Mizuno	Nagoya Inst. of Tech.
Mingji Cui	Nagoya Inst. of Tech.
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Masaki Onishi	AIST
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Kana Egawa	Kogakuin University
Hiroki Shimora	AIST
Ikushi Yoda	AIST
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Aya Fusano	National Defense Academy
Hiroshi Sato	National Defense Academy
Akira Namatame	National Defense Academy

11:45-12:00 WeA06-06
Support System for Transportation under Disaster Circumstance ~~ACM~~ ~~F~~ ~~I~~
 Takahiro Majima National Maritime Research Inst.
 Daisuke Watanabe
 Tokyo University of Marine Science and Tech.
 Keiki Takadama
 The University of Electro-Communications
 Mitujiro Katuhara SocioTechData

WeA07 52-103
Computational Intelligence

Chair: Kazuhiro Shin-ike
 Maizuru National College of Tech.
 Chair: Shingo Mabu Waseda University

10:30-10:45 WeA07-01
Trading Rules on Stock Markets Using Genetic Network Programming-Sarsa Learning with Plural Subroutines ~~ACM~~ ~~F~~ ~~I~~ H
 Yunqing Gu Waseda University
 Shingo Mabu Waseda University
 Yang Yang Waseda University
 JianHua Li Waseda University
 Kotaro Hirasawa Waseda University

10:45-11:00 WeA07-02
An Adaptive Ensemble Method for Quantitative Rain-fall Forecast ~~ACM~~ ~~F~~ ~~I~~ J
 Sirajum Monira Sumi Kyushu Inst. of Tech.
 Md. Faisal Zaman Kyushu Inst. of Tech.
 Hirose Hideo Kyushu Inst. of Tech.

11:00-11:15 WeA07-03
Analysis of Crossover Rate in Variable Size Genetic Network Programming with Binomial Distribution ~~ACM~~ ~~F~~ ~~I~~ I
 Bing Li Waseda University
 Xianneng Li Waseda University
 Shingo Mabu Waseda University
 Kotaro Hirasawa Waseda University

11:15-11:30 WeA07-04
A Method for Determining Classroom Seating Arrangements by Using a Genetic Algorithm ~~ACM~~ ~~F~~ ~~I~~ F
 Kazuhiro Shin-ike Maizuru National College of Tech.
 Hitoshi Iima Kyoto Inst. of Tech.

11:30-11:45 WeA07-05
Multi-Subroutines in Genetic Network Programming-Sarsa for Trading Rules on Stock Markets ~~ACM~~ ~~F~~ ~~I~~ I
 Yang Yang Waseda University
 Shingo Mabu Waseda University
 Yunqing Gu Waseda University
 Kotaro Hirasawa Waseda University

11:45-12:00 WeA07-06
Guided Genetic Relation Algorithm on the Adaptive Asset Allocation ~~ACM~~ ~~F~~ ~~I~~ H
 Victor Parque Waseda University
 Shingo Mabu Waseda University
 Kotaro Hirasawa Waseda University

WeA08	52-201
The Interaction between Human and Machines	
(Organized Session)	

Organizer: Genya Abe

Japan Automobile Research Inst.

Chair: Makoto Itoh University of Tsukuba

Chair: Genya Abe Japan Automobile Research Inst.

10:30-10:45 WeA08-01

Visual distraction when driving and its influence on driver response to a forward collision warning system ~~ACI~~ J

Genya Abe Japan Automobile Research Inst.

Makoto Itoh University of Tsukuba

Tomohiro Yamamura Nissan Motor Co., Ltd.

10:45-11:00 WeA08-02

Forward Obstacles Collision Warning System Based on Deceleration for Collision Avoidance ~~ACI~~ I

Shota Takada Kyoto University

Toshihiro Hiraoka Kyoto University

Hiroshi Kawakami Kyoto University

11:00-11:15 WeA08-03

Analysis of Motion Sensation of Car Drivers and Its Application to Posture Control Device ~~ACI~~ JG

Hiroyuki Konno Kagawa University

Satoru Fujisawa Kagawa University

Takahiro Wada Kagawa University

Shun'chi Doi Kagawa University

11:15-11:30 WeA08-04

A model of trust in automation: Why humans over-trust? ~~ACI~~ JI

Makoto Itoh University of Tsukuba

11:30-11:45 WeA08-05

Influences of coloration of touch panel interface on the several generation operators ~~ACI~~ EG

Mayuko Nambu Muroran Inst. of Tech.

Makiba Sakamoto Muroran Inst. of Tech.

Hidetsugu Suto Muroran Inst. of Tech.

11:45-12:00 WeA08-06

A Study of Communication Scheme for Media Biotope ~~ACI~~ EI

Hidetsugu Suto Muroran Institute of Tech.

Tadahiro Taniguchi Ritsumeikan University

Hiroshi Kawakami Kyoto University

WeA09	52-202
System Analysis and Optimization	
(Organized Session)	

Organizer: Tung-Kuan Liu

Natl. Kaohsiung First University of Sci. and Tech.

Chair: Jyh-Horng Chou

Natl. Kaohsiung First University of Sci. and Tech.

Chair: Tung-Kuan Liu

Natl. Kaohsiung First University of Sci. and Tech.

10:30-10:45 WeA09-01

Optimization of the Health Examination Scheduling Problems Using Multi-objective Genetic Algorithms ~~ACI~~ E

Tung-Kuan Liu

Natl. Kaohsiung First University of Sci. and Tech.

Ching-Ming Tu

Natl. Kaohsiung First University of Sci. and Tech.

Che-Lun Chang

Natl. Kaohsiung First University of Sci. and Tech.

Fu-An Chen

Natl. Kaohsiung First University of Sci. and Tech.

Chiu-Hung Chen

Natl. Kaohsiung First University of Sci. and Tech.

10:45-11:00 WeA09-02

Support Vector Regression Based LTS-CPBUM Neural Networks ~~ACI~~ I

Jin-Tsong Jeng National Formosa University

Chen-Chia Chuang National Ilan University

Chi-Ta Chuang National Formosa University

11:00-11:15 WeA09-03

Adaptive Noise Repression Based on Orthogonal Empirical Mode Decomposition and Correlation Detection ~~ACI~~ G

Fu-I Chou National Dong Hwa University

Yu-Hsiang Yu National Dong Hwa University

Tzu-Ying Lai National Dong Hwa University

Tsung-Ying Sun National Dong Hwa University

11:15-11:30 WeA09-04

Application of artificial neural networks for the prediction of quality of life in breast cancer patients ~~ACI~~ I

Hon-Yi Shi Kaohsiung Medical University

Jinn-Tsong Tsai

National Pingtung University of Education

Wen-Hsien Ho Kaohsiung Medical University

Ming-Feng Hou Kaohsiung Medical University

11:30-11:45 WeA09-05
Criterion for Controllability Analysis of Fuzzy Singular Model Systems ~~WJG~~

Shinn-Horng Chen

National Kaohsiung University of Applied Sciences

Wen-Hsien Ho Kaohsiung Medical University

Fu-I Chou National Dong Hwa University

Chun-Hsiung Fang

National Kaohsiung University of Applied Sciences

Jyh-Horng Chou

National Kaohsiung First University of Science and Tech.

11:45-12:00 WeA09-06
Automatic feature selection and failure diagnosis for bearing faults ~~WJG~~

Haw-Ching Yang

National Kaohsiung First University

Hao Tieng National Cheng Kung University

Shih-Fang Chen

National Kaohsiung First University

12:00-12:15 WeA09-07
The Discussion on Type-1 and Interval Type-2 Fuzzy Logical Systems with Stewart Platform ~~WJG~~ €

Chin-I Huang

National Kaohsiung First University of Science and Tech.

Meng-Shiuan Shen

National Kaohsiung First University of Science and Tech.

WeA10 52-203
Sensing, Control and Safety System for Intelligent Vehicle
 (Organized Session)

Organizer: Masatoshi Hatano

Nihon University

Organizer: Naoki Suganuma

Kanazawa University

Chair: Masatoshi Hatano

Nihon University

Chair: Naoki Suganuma

Kanazawa University

10:30-10:45 WeA10-01
Research on Self Climbing Maintenance Robots for Elevators ~~WJG~~ H

Masatoshi Hatano

Nihon University

10:45-11:00 WeA10-02
Development of preceding vehicle recognition algorithm for lead vehicle of autonomous platooning system based on multi sensor fusion and digital map ~~WJG~~ I

Tadayuki Okada

Kanazawa University

Naoki Suganuma

Kanazawa University

11:00-11:15 WeA10-03
Platooning Method for Multiple Mobile Robots Using Laser-Based SLAM ~~WJG~~ F

Yuta Esaka

Graduate School of Doshisha University

Hiroshi Enomoto

Graduate School of Doshisha University

Masafumi Hashimoto

Doshisha University

Kazuhiko Takahashi

Doshisha University

11:15-11:30 WeA10-04
Motion Representation of Walking/Slipping/Turnover for Humanoid Robot by Newton-Euler Method ~~WJG~~ I

Tomohide Maeba

Okayama University

Geng Wang

Okayama University

Fujia Yu

Okayama University

Mamoru Minami

Okayama University

Akira Yanou

Okayama University

11:30-11:45 WeA10-05
Global Reconfiguration Capability Evaluation and On-line Preview Control ~~WJG~~ F

Yosuke Kobayashi

Okayama University

Mamoru Minami

Okayama University

Akira Yanou

Okayama University

WeA11	52-301
Multivariable Control	
Chair: Masami Saeki	Hiroshima University
Chair: Yoshitaka Matsuda	Saga University
10:30-10:45	WeA11-01
<i>A Note on Mutual Conversion between Linear Time-Invariant Delay-Differential Equations and Time-Delay Feedback Systems</i>	
Tatsuya Yamazaki	Kyoto University
Tomomichi Hagiwara	Kyoto University
10:45-11:00	WeA11-02
<i>A Method for Generating and Displaying a Free View 3D Image</i>	
Fei Gu	Tokyo City University
Takayuki Nakata	Toiyama Prefectural University
Yue Bao	Tokyo City University
11:00-11:15	WeA11-03
<i>Output Feedback Stabilization of Sampled-Data Systems by First-Order Hold Input</i>	
Syota Yamagishi	Aoyama Gakuin University
Yuzu Uchida	Aoyama Gakuin University
Jun Yoneyama	Aoyama Gakuin University
11:15-11:30	WeA11-04
<i>Capability of Two-Stage Compensator Designs - Single-Input Single-Output Case -</i>	
Kazuyoshi MORI	The University of AIZU
11:30-11:45	WeA11-05
<i>Sampled-data model for nonlinear coupled Van der Pol oscillators</i>	
Masatoshi Nishi	Kumamoto University
Mitsuaki Ishitobi	Kumamoto University
Sadaaki Kunimatsu	Kumamoto University
11:45-12:00	WeA11-06
<i>Synthesis of PD-type Anti-windup Compensators for LTI Systems with Input and Output Saturations</i>	
Yoshitaka Matsuda	Saga University
Satoru Goto	Saga University
Takenao Sugi	Saga University

WeA12	52-302
Vehicle Control I	
Chair: Jia-Sheng Hu	National University of Tainan
10:30-10:45	WeA12-01
<i>Ride Comfort Evaluations on Electric Vehicle Conversion and Improvement Using Magnetorheological Semi-Active Suspension System</i>	
Saiful Anuar Abu Bakar	Tokai University
Ryosuke Masuda	Tokai University
Hiromu Hashimoto	Tokai University
Takeshi Inaba	Tokai University
Hishamuddin Jamaluddin	Universiti Teknologi Malaysia
Roslan Abd. Rahman	Universiti Teknologi Malaysia
Pakharuddin Mohd. Samin	Universiti Teknologi Malaysia
10:45-11:00	WeA12-02
<i>MTTE-based Motion Stabilization Control for In-wheel Motor Electric Vehicles</i>	
Jia-Sheng Hu	National University of Tainan
Dejun Yin	Keio University
11:00-11:15	WeA12-03
<i>Development of a Simulation Program for Conceptual design of Hybrid Excavators</i>	
Bong Soo Yoo	Changwon National University
Jeongmok Cho	Texas A&M University
Cheol Min Hwang	Changwon National University
Joongseon Joh	Changwon National University
11:15-11:30	WeA12-04
<i>Tracking Control of a four-wheeled vehicle in response to changes in road conditions</i>	
Misawa Kasahara	Tokyo Metropolitan College of Industrial Tech.
Yasuchika Mori	Tokyo Metropolitan University
11:30-11:45	WeA12-05
<i>Design of Generalized Minimum Variance Control for Improving Ship's Steering Performance on Low Speed</i>	
Kenichi Idenawa	Tokyo Metropolitan University
Masayoshi Doi	Hiroshima Inst. of Tech.
Kazuhisa Nagamoto	Yuge National College of Maritime Tech.
Yasuchika Mori	Tokyo Metropolitan University

Experiment of Integrated Steering and Driving Force Controller with Embedded CPU for Front Wheel Steering Vehicles

Tokyo City University
Tokyo City University

Robot Control I

Osaka Prefecture University

Circular motion generation for mobile robots using
limit cycle systems -application to a circular formation
control-
M. G

Osaka Prefecture University

Relaxation Times in Motion of Group Robots Without Specific Sensors For Mutual Information

Hiroshima International University

Development of a Platooning Control Algorithm Based on RoboCar III G

Waseda University

Analyzing macroscopic behavior in a swarm robotic system based on clustering

Shinshu University

Control and Integration of a Fuel-Cell Powered Wheel-chair

National Taiwan University

An Approach to Wind Harness Control on Blimp Robots

Shibaura Inst. of Tech.

WeA14	52-304
Nonlinear Control I	

Chair: Wonhee Kim	Hanyang University
Chair: Masami Iwase	Tokyo Denki University

10:30-10:45	WeA14-01
<i>An Algebraic Approach to Hamilton's Canonical Equations</i>	
Yu Kawano	Osaka University
Toshiyuki Ohtsuka	Osaka University

10:45-11:00	WeA14-02
<i>Optimal Controller Designs Satisfying State Constraints</i>	
Hiroki Umeda	Nagoya University
Yosuke Maeyama	Nagoya University
Noboru Sakamoto	Nagoya University
Yoshio Umemura	AISIN AW CO., LTD.

11:00-11:15	WeA14-03
<i>Receding Horizon Nash Game Approach for Distributed Nonlinear Control</i>	
Yoshiaki Azuma	Osaka University
Toshiyuki Ohtsuka	Osaka University

11:15-11:30	WeA14-04
<i>Function Projective Synchronization for a class of Uncertain Chaotic Systems using Robust Adaptive Backstepping Design</i>	
Jinwoo Lee	POSTECH
Seongcheol Jeong	POSTECH
Baeyoung Koo	POSTECH
Yujin Jang	POSTECH
Sangchul Won	POSTECH

11:30-11:45	WeA14-05
<i>A Search Algorithm for Control Lyapunov Functions Using Radial Basis Function Networks</i>	
Takayuki Tsuzuki	Shimane University
Taiki Yagi	Shimane University
Kazunobu Yoshida	Shimane University
Yuh Yamashita	Hokkaido University

11:45-12:00	WeA14-06
<i>Switching output utilizing time-varying output function - Applying to standing posture control of Acrobot -</i>	
Kazuma Sekiguchi	Tokyo Inst. of Tech.
Mitsuji Sampei	Tokyo Inst. of Tech.

WeL01	63-201/202
Life Engineering - New Frontier of SICE	

13:20-13:50
<i>Message from the President of SICE</i>
Masatoshi Ishikawa
President of SICE, The University of Tokyo
<i>Aim and Scope of Life Engineering</i>
Masaki Yoshida
Osaka Electro-Communication University

WeB01 63-201/202
Life Engineering I
(Tutorial Session)

14:00-14:30

1) *Introduction to Electrophysiology and Kinesiology*
Toshio MORITANI Kyoto Univ.

14:30-14:45

2) *Multi-Time Scale Evaluation of Fatigue for Electric Torque-Assisted Bicycles*
Tohru KIRYU Niigata Univ.

14:45-15:00

3) *Brain Computer Interface of Today and Tomorrow*
Abbas ORAND Keio Univ.

15:00-15:15

4) *Introduction to Integrative Biophysical Engineering and Informatics*
Yutaka FUKUOKA Tokyo Medical and Dental Univ.

15:15-15:30

5) *Information Technology Infrastructure for Promoting Integrative Bioscience and Engineering*
Taishin NOMURA Osaka Univ.

WeB02 63-03
Recent Progress in Mechanical Metrology I
(Organized Session)

Organizer: Tokihiko Kobata NMIJ/AIST
Chair: Takanori Yamazaki

Oyama National College of Tech.
Chair: Tokihiko Kobata NMIJ/AIST

14:00-14:15

WeB02-01
Automatic rotation equipment for tensile force transducers applying to 3 kN dead-weight type force standard machine

Toshiyuki Hayashi
National Metrology Inst. of Japan (NMIJ), AIST
Yoshihisa Katase
National Metrology Inst. of Japan (NMIJ), AIST
Hiroshi Maejima
National Metrology Inst. of Japan (NMIJ), AIST
Yukio Yamaguchi
National Metrology Inst. of Japan (NMIJ), AIST
Kazunaga Ueda
National Metrology Inst. of Japan (NMIJ), AIST

14:15-14:30

WeB02-02
Measuring the center of gravity with Truck Scale
Yoshitaka Mikata Yamato Scale Co., Ltd.
Masami Yamanaka Yamato Scale Co., Ltd.
Kouichi Kameoka Hyogo University
Akinari Okunosono Yamato Scale Co., Ltd.
Toshiaki Kinoshita Yamato Scale Co., Ltd.

14:30-14:45

WeB02-03
Calibration of a torque wrench tester using a reference torque wrench
Koji Ogushi NMIJ / AIST
Atsuhiko Nishino NMIJ / AIST
Koji Maeda NMIJ / AIST
Kazunaga Ueda NMIJ / AIST

14:45-15:00

WeB02-04
Positioning performance of moving table with reducer unit
Yoshitaka Morimoto Kanazawa Inst. of Tech.

WeB03	63-04
Image Processing II	
Chair: Kohji Kamejima	Osaka Inst. of Tech.
Chair: Mamoru Saito	Osaka Municipal Technical Research Inst.
14:00-14:15	WeB03-01
<i>Saliency Pattern Detection via Simulated Saccade in Naturally Complex Scenes</i> AAA GH	
Kohji Kamejima	Osaka Inst. Tech.
14:15-14:30	WeB03-02
<i>A study of facial feature detection by image processing techniques using color information</i> AAA GJ	
Masashi Fukuda	Ube National College of Tech.
Kazuki Miyamoto	Ube National College of Tech.
Yoshihiro Mitani	Ube National College of Tech.
14:30-14:45	WeB03-03
<i>Buildings Recovery Employing Manhattan-world Constraint</i> AAA HF	
Yasuhiro Ohyama	Kyushu Inst. of Tech.
Joo Kooi Tan	Kyushu Inst. of Tech.
Hyoungseop Kim	Kyushu Inst. of Tech.
Seiji Ishikawa	Kyushu Inst. of Tech.
14:45-15:00	WeB03-04
<i>People Detection and Tracking from Fish-eye Image Based on Probabilistic Appearance Model</i> AAAA HI	
Mamoru Saito	Osaka Municipal Technical Research Inst.
Katsuhisa Kitaguchi	Osaka Municipal Technical Research Inst.
Gun Kimura	Doshisha University
Masafumi Hashimoto	Doshisha University
15:00-15:15	WeB03-05
<i>Welding Inspection with GrabCut</i> AAA IF	
Akihiro Daito	DENSO CORPORATION
Takashi Murosaki	DENSO CORPORATION
Katsumi Nagasaka	DENSO CORPORATION
Kyosuke Ishikawa	DENSO CORPORATION
Shinnosuke Ohira	DENSO CORPORATION
Fumiaki Sugiura	System One Co., Ltd.

15:15-15:30	WeB03-06
<i>3-D Recovery of a Non-rigid Object from a Single Camera View</i> AAA IJ	
Shota Ishikawa	Kyushu Inst. of Tech.
Joo Kooi Tan	Kyushu Inst. of Tech.
Hyoungseop Kim	Kyushu Inst. of Tech.
Seiji Ishikawa	Kyushu Inst. of Tech.

WeB04 63-05
Recent advances in temperature measurement
 (Organized Session)

Organizer: Tamba Jun AIST
 Chair: Tamba Jun AIST
 Chair: Takahiko Oshige JFE Steel Corporation

14:00-14:15 WeB04-01
Study on the reliability of comparison method for thermocouples in industry around 1324 °C

Hideki Ogura AIST
 Haruhiko Numajiri
 Tokyo Metropolitan Industrial Tech. Research Inst.
 Tadashi Kobayashi Chino Corporation

14:15-14:30 WeB04-02
Low temperature behavior of fluorescent inorganic materials

Hiroaki Aizawa Toyo University
 Tooru Katsumata Toyo University
 Shuji Komuro Toyo University

14:30-14:45 WeB04-03
Direct In Situ Measurements of Sound Speed and Water Temperature Profiles: The Example of North Lake Biwa

Takaharu Kitamura Doshisha University
 Takao Tsuchiya Doshisha University
 Yoshiaki Watanabe Doshisha University
 Shin-ichi Sakamoto University of Shiga Prefecture

14:45-15:00 WeB04-04
Temperature dependence of p-polarized transmittance of a semitransparent silicon wafer and its application to non-contact temperature measurement

Yuki Toyoda Toyo University
 Tohru Iuchi Toyo University

15:00-15:15 WeB04-05
A study of cooling system of a spark ignition engine to improve thermal efficiency


Tatsuya Kuboyama Chiba University
 Yasuo Moriyoshi Chiba University
 Mitsuru Iwasaki Calsonic Kansei
 Junichiro Hara Calsonic Kansei

15:15-15:30 WeB04-06
Radiation Thermometry for High-temperature Liquid Metal Stream at Blast Furnace


Masato Sugiura Nippon Steel Corporation
 Youhei Ootani Nippon Steel Corporation
 Masato Nakashima Nippon Steel Corporation

WeB07	52-103
Computational Intelligence and Its Applications I (Organized Session)	


Organizer: Mamoru Minami	Okayama University
Organizer: Junichi Murata	Kyushu University
Organizer: Akira Yanou	Okayama University
Chair: Junichi Murata	Kyushu University
Chair: Yoshihiro Mori	Kyoto Inst. of Tech.

14:00-14:15	WeB07-01
<i>Simultaneous Localization and Mapping using a Robot Partner in Dynamic Environment</i> 	


Jinseok Woo	Tokyo Metropolitan University
Naoyuki Kubota	Tokyo Metropolitan University

14:15-14:30	WeB07-02
<i>On the Memorization Accuracy of Autoassociative Memory Models</i> 	

Kazuaki Masuda	Kanagawa University
Eitaro Aiyoshi	Keio University

14:30-14:45	WeB07-03
<i>A study on use of prior information for acceleration of reinforcement learning</i> 	

Kento Terashima	Kyushu University
Junichi Murata	Kyushu University

14:45-15:00	WeB07-04
<i>Synthesis Method of Gene Regulatory Networks Having Cyclic Expression Pattern Sequences -Realization by Introducing Poincare Map-</i> 	

Yoshihiro Mori	Kyoto Inst. of Tech.
Yasuaki Kuroe	Kyoto Inst. of Tech.

WeB08	52-201
Legged Robot	


Chair: Masakazu Suzuki	Tokai University
Chair: Koichi Osuka	Osaka University

14:00-14:15	WeB08-01
<i>Vertical Jumping Motion Control for 4-link Robot</i> 	


Daichi Kato	Tokyo Inst. of Tech.
Kazuma Sekiguchi	Tokyo Inst. of Tech.
Mitsuji Sampei	Tokyo Inst. of Tech.

14:15-14:30	WeB08-02
<i>Compositional Action Development for A Type of Artificial Muscle Based Robots</i> 	

Masakazu Suzuki	Tokai University
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14:30-14:45	WeB08-03
<i>A Machine Learning Approach to Falling Detection and Avoidance for Biped Robots</i> 	


Jeong-Jung Kim	KAIST
Yeoun-Jae Kim	KAIST
Ju-Jang Lee	KAIST

14:45-15:00	WeB08-04
<i>Design of the Force Sensing Module and Its Application to Balancing Control of Biped Robots</i> 	

Chun-Ming Su	Southern Taiwan University
Ming-Yuan Shieh	Southern Taiwan University
Chen-Hsin Chuang	Southern Taiwan University
Jeng-Han Li	Industrial Tech. Research Inst.

15:00-15:15	WeB08-05
<i>Control of Four-legged Robot</i> 	

Tetsuo Kinoshita	Hosei University
Yosuke Kurihara	Seikei University
Kazuyuki Kobayashi	Hosei University
Kajiro Watanabe	Hosei University

15:15-15:30	WeB08-06
<i>Development of Super-multi-legged Passive Dynamic Walking Robot ``Jenka-III''</i> 	

Yasuhiro Sugimoto	Osaka University
Hidetaka Yoshioka	Kobe University
Koichi Osuka	Osaka University

WeB10	52-203
Haptics	

Chair: Yuki Yokokura Keio University
Chair: Hiroyuki Shinoda The University of Tokyo

14:00-14:15 WeB10-01
Midair Input-Output Interface Consisting of Depth Camera and Noncontact Tactile Display ^{AAA} ^E
Takayuki Hoshi Nagoya Inst. of Tech.

14:15-14:30 WeB10-02
M-sequence Random Number Based Control for Pen Interface Using Surface Acoustic Wave Tactile Display ^{AA} ^{FE}
Ryo Tamon Saitama University
Hiroyuki Kotani Saitama University
Masaya Takasaki Saitama University
Takeshi Mizuno Saitama University

14:30-14:45 WeB10-03
Design and Implementation of Transmission System of Initial Haptic Impression ^{AAAA} ^F
Katsunari Sato Keio University
Hiroyuki Shinoda The University of Tokyo
Susumu Tachi Keio University

14:45-15:00 WeB10-04
Identical-Coordinate Bilateral Control for Master-Slave Type Power-Assisted System ^{AAA} ^{GG}
Shunsuke Yajima Keio University
Seiichiro Katsura Keio University

15:00-15:15 WeB10-05
A Study on Power Assist Suit Using Pneumatic Actuators Based on Calculated Retaining Torques for Lift-up Motion ^{AAA} ^G
Motonobu Sato Wakayama University
Eiichi Yagi Wakayama University

15:15-15:30 WeB10-06
Switching Bilateral Control System for Haptic Training ^{AA} ^{HH}
Takumi Ishii Keio University
Seiichiro Katsura Keio University

WeB11	52-301
Dynamic Control	
(Organized Session)	

Organizer: Fu-Kuang Yeh Chung Chou Inst. of Tech.
Chair: Fu-Kuang Yeh Chung Chou Inst. of Tech.
Chair: Chao-Shu Liu
National Kaohsiung University of Applied Sciences

14:00-14:15 WeB11-01
Integrated Design of Ballistic Missile Guidance and Autopilot Using Adaptive Sliding Control with 5 DOF Inputs ^{AAA} ^{HU}
Fu-Kuang Yeh Chung Chou Inst. of Tech.
Jian-Ji Huang Chung Chou Inst. of Tech.
Chia-Wei Huang Chung Chou Inst. of Tech.

14:15-14:30 WeB11-02 ^{AA}
Adaptive Fuzzy Sliding-Mode Control for a Mini-UAV with Propellers ^{AA} ^I
Fu-Kuang Yeh Chung Chou Inst. of Tech.
Chia-Wei Huang Chung Chou Inst. of Tech.
Jian-Ji Huang Chung Chou Inst. of Tech.

14:30-14:45 WeB11-03
The Implementation of Tracking Controls for an Automobile Robot Based on Wire Magnetic Induction ^{AA} ^I ^F
Chao-Shu Liu
National Kaohsiung University of Applied Sciences
Chao-Chung Liu
Chung Chou University of Science and Tech.
Chi-Wei Wang
National Kaohsiung University of Applied Sciences

14:45-15:00 WeB11-04
A Fuzzy Normalized Sliding Mode Learning Scheme for the Trajectory Tracking Controls of a Two-Linkage Robot Arm ^{AAA} ^I ^I
Chao-Shu Liu
National Kaohsiung University of Applied Sciences
Guan-Zhi Lin
National Kaohsiung University of Applied Sciences
Zhong-Yuan Zhao
National Kaohsiung University of Applied Sciences

15:00-15:15 WeB11-05
*Hardware and Software Integration for Domestic Stairs
 Cleaning Robot* ⅢⅠ H
 Chao-Chung Liu
 Chung Chou University of Science and Tech.
 Yu-Ping Kang
 Chung Chou University of Science and Tech.
 Sun-Nien Yu
 Chung Chou University of Science and Tech.

15:15-15:30 WeB11-06
*Constraint-combined Force/Position Hybrid Control
 Method with Lyapunov Stability* ⅢⅠ F
 Fujia Yu Okayama University
 Mamoru Minami Okayama University
 Tomohide Maeba Okayama University
 Akira Yanou Okayama University

WeB12 52-302
Vehicle Control II

Chair: Haider Abbas F. Almurib
 The University of Nottingham Malaysia Campus
 Chair: Toru Namerikawa Keio University

14:00-14:15 WeB12-01
*Diesel Engine Dynamics Modeling Based on Heat Re-
 lease Rate Identification* ⅢⅠ Ⅰ
 Khin Hnin Thu Zar Toyohashi University of Tech.
 Naoki Uchiyama Toyohashi University of Tech.
 Taro Unno Toyohashi University of Tech.
 Shigenori Sano Toyohashi University of Tech.
 Susumu Noda Toyohashi University of Tech.
 Yoji Fujita ECS Co., Ltd.

14:15-14:30 WeB12-02
*Experiments on Transportation Support System using
 Multi-Vehicle's Formation* ⅢⅠ G
 Yasunori Kawai Ishikawa National College of Tech.
 Kentarou Nagashima
 Ishikawa National College of Tech.
 Toru Namerikawa Keio University

14:30-14:45 WeB12-03
*Vehicle Dynamics Control for Collision Avoidance Con-
 sidering Physical Limitations* ⅢⅠ Ⅰ
 Masashi Nanao Osaka University
 Toshiyuki Ohtsuka Osaka University

14:45-15:00 WeB12-04
*Cooperative Conveyance by Vehicle Swarms with Dy-
 namic Network Topology* ⅢⅠ JI
 Koji Ishimura Keio University
 Toru Namerikawa Keio University

15:00-15:15 WeB12-05
*Control and Path Planning of Quadrotor Aerial Ve-
 hicles for Search and Rescue* ⅢⅠ €€
 Haider Abbas F. Almurib
 The University of Nottingham Malaysia Campus
 Premeela T. Nathan
 The University of Nottingham Malaysia Campus
 Nandha T. Kumar
 The University of Nottingham Malaysia Campus

15:15-15:30 WeB12-06
Data Analysis of Signal Control along the Route 54 in Hiroshima City ~~AAA~~ ~~E~~
 Haruko Masuda
 Yuge National College of Maritime Tech.
 Hikaru Shimizu Fukuyama University

WeB13 52-303
Power Systems Control I

Chair: Kohji Higuchi
 The University of Electro-Communications

14:00-14:15 WeB13-01
Daily Solar Radiation Prediction based on Wavelet Analysis ~~AAA~~ ~~FG~~
 Peng Zhang Kyushu University
 Hirotaka Takano Kyushu University
 Junichi Murata Kyushu University

14:15-14:30 WeB13-02
Development of PSoC microcontroller based solar energy storage system ~~AAA~~ ~~FI~~
 Ryouzuke Namba Hosei University
 Kazuyuki Kobayashi Hosei University
 Tomoyuki Ohkubo Hosei University
 Yosuke Kurihara Seikei University

14:30-14:45 WeB13-03
A novel control system for microgrid operation and protection ~~AAA~~ ~~GG~~
 Chen-Min Chan Inst. of Nuclear Energy Research
 Yih-Der Lee Inst. of Nuclear Energy Research
 Yung-Ruei Chang Inst. of Nuclear Energy Research

14:45-15:00 WeB13-04
Grid-Connected CSI for Hybrid PV/Wind Power Generation System ~~AAA~~ ~~G~~
 Damrong Amorndechaphon University of Phayao
 Suttichai Premrudeepreechacharn Chiangmai University
 Kohji Higuchi
 The University of Electro-Communications

15:00-15:15 WeB13-05
A Simplified Fuel Sensor-less Control Algorithm for Direct Methanol Fuel Cells ~~AAA~~ ~~HH~~
 Kuang-Yow Lian National Taipei University of Tech.
 Chih-Min Yang National Taipei University of Tech.

WeB14	52-304
Nonlinear Control II	
Chair: Mitsuaki Ishitobi	Kumamoto University
Chair: Takayuki Tsuzuki	Shimane University
14:00-14:15	WeB14-01
<i>Link Lengths Search Using Genetic Algorithm for Stabilization of Quintuple Inverted Pendulum</i> 山崎 浩二	
Yoki Onishi	Tokyo Denki University
Masaki Izutu	Tokyo Denki University
Masami Iwase	Tokyo Denki University
14:15-14:30	WeB14-02
<i>Position Tracking and Flatness Controller with Disturbance Observer in Hydraulic Servo Systems</i> 山崎 浩二	
Wonhee Kim	Hanyang University
Donghoon Shin	Hanyang University
Daehee Won	Hanyang University
Chung Choo Chung	Hanyang University
14:30-14:45	WeB14-03
<i>Passivity-Based Hierarchical Consensus for Nonlinear Multi-Agent Systems</i> 山崎 浩二	
Naotsuna Fujimori	University of Tokyo
Lu Liu	University of Nottingham
Shinji Hara	University of Tokyo
14:45-15:00	WeB14-04
<i>Stabilization of a Magnetic Levitation System by Backstepping and High-Gain Observers</i> 山崎 浩二	
Hitoshi Katayama	Shizuoka University
Takumi Oshima	Shizuoka University
15:00-15:15	WeB14-05
<i>Vibration Control Design Considering Quantization Error for an On-Off Control System Including Input Time-Delay</i> 山崎 浩二	
Masakazu Koike	Shinshu University
Yuichi Chida	Shinshu University

WeC01	63-201/202
Life Engineering II (Tutorial Session)	
16:00-16:30	
<i>1) International Activities and Scope of Neuroinformatics</i>	
Shiro USUI	RIKEN
16:30-16:50	
<i>2) Why Do We Need an Ubiquitous Healthcare? Aim and Scope</i>	
Toshiyo TAMURA	Chiba Univ.
16:50-17:10	
<i>3) Behavior Monitoring System using FLASH</i>	
Masayuki NAMBU	Osaka Electro-Communication Univ.
Daiki TAKEUCHI	Osaka Electro-Communication Univ.
17:10-17:30	
<i>4) Smart Capacitive Sensing of Vital Signals for Ubiquitous Healthcare Applications</i>	
Akinori UENO	Tokyo Denki Univ.

WeC02	63-03
Recent Progress in Mechanical Metrology II (Organized Session)	

Organizer: Tokihiko Kobata NMIJ/AIST
Chair: Yoshitaka Morimoto Kanazawa Inst. of Tech.
Chair: Koji Ogushi NMIJ/AIST

16:00-16:15 WeC02-01
Improvement of pressure generating system for low pressure calibration $\hat{\mathbb{A}} \hat{\mathbb{I}} \hat{\mathbb{I}}$

Momoko Kojima
National Metrology Inst. of Japan, AIST
Tokihiko Kobata
National Metrology Inst. of Japan, AIST

16:15-16:30 WeC02-02
Flow Rate Estimation Using Unscented Kalman Filter in Automatic Pouring Robot $\hat{\mathbb{A}} \hat{\mathbb{I}} \hat{\mathbb{J}}$

Yoshiyuki Noda Toyohashi University of Tech.
Markus Birkhold University Stuttgart
Kazuhiko Terashima Toyohashi University of Tech.
Oliver Sawodny University Stuttgart
Alexander Verl University Stuttgart

16:30-16:45 WeC02-03
Calibration system for high gas pressure measuring devices $\hat{\mathbb{A}} \hat{\mathbb{I}} \hat{\mathbb{I}}$

Tokihiko Kobata
National Metrology Inst. of Japan, AIST
Momoko Kojima
National Metrology Inst. of Japan, AIST
Hiroaki Kajikawa
National Metrology Inst. of Japan, AIST
Sakae Kimura
National Metrology Inst. of Japan, AIST

16:45-17:00 WeC02-04
Newly developed method for measuring jacket pressure coefficient of controlled-clearance piston-cylinders $\hat{\mathbb{A}} \hat{\mathbb{I}} \hat{\mathbb{E}}$

Hiroaki Kajikawa
National Metrology Inst. of Japan, AIST
Kazunori Ide
National Metrology Inst. of Japan, AIST
Tokihiko Kobata
National Metrology Inst. of Japan, AIST

WeC03	63-04
Signal Processing and Image Processing	

Chair: Eitaku Nobuyama Kyushu Inst. of Tech.

16:00-16:15 WeC03-01
An Effective Identification System of Myanmar National Registration Card (NRC) Holder $\hat{\mathbb{A}} \hat{\mathbb{I}} \hat{\mathbb{I}}$

Ei Phyto Wai University of Computer Studies
Myint Myint Sein University of Computer Studies

16:15-16:30 WeC03-02
A Local Voting Method by Scanning High Confidence Level Voters for Vanishing Point Detection $\hat{\mathbb{A}} \hat{\mathbb{J}} \hat{\mathbb{E}}$

Trung Hieu BUI Kyushu Inst. of Tech.
Eitaku NOBUYAMA Kyushu Inst. of Tech.

16:30-16:45 WeC03-03
Object Surface Reconstruction from Multi-View Images with Enhancement Driven by Image Forces $\hat{\mathbb{A}} \hat{\mathbb{J}} \hat{\mathbb{I}}$

Karolina Nurzynska Kanazawa University
Mamoru Kubo Kanazawa University
Ken-ichiro Muramoto Kanazawa University

16:45-17:00 WeC03-04
Quasi-Dense Optical Flow Estimation Based on Dynamical System Models $\hat{\mathbb{A}} \hat{\mathbb{E}} \hat{\mathbb{G}}$

Tomoya Fukami Kyushu Inst. of Tech.
Shuichi Enokida Kyushu Inst. of Tech.
Noboru Sebe Kyushu Inst. of Tech.
Eitaku Nobuyama Kyushu Inst. of Tech.

17:00-17:15 WeC03-05
An Efficient Coulomb Descriptor for Convex Shapes $\hat{\mathbb{A}} \hat{\mathbb{F}} \hat{\mathbb{G}}$

Seon-Jong Kim Pusan National University
Jae-Man Lee Pusan National University
Saeid Belkasim Georgia State University

17:15-17:30 WeC03-06
Common-path Laser Encoder for Nanopositioning in Long Travel Range $\hat{\mathbb{A}} \hat{\mathbb{F}} \hat{\mathbb{I}}$

Chyan-Chyi Wu Tamkang University
Cheng-Chih Hsu Yuan Ze University
Ju-Yi Lee National Central University
Chun-Yao Cheng Tamkang University

WeC04	63-05
Networked Sensing and Applications (Organized Session)	

Organizer: Kurata Narito	Kajima Corporation
Chair: Satoshi Honda	Keio University
Chair: Narito Kurata	Kajima Corporation

16:00-16:15	WeC04-01
<i>Improvement of an Intelligent Room that Detects Hand Waving Motion for Operation of Home Appliances</i> A G	

Takeshi Nagayasu	Chuo University
Hidetsugu Asano	Pioneer
Kenji Terabayashi	Chuo University
Kazunori Umeda	Chuo University

16:15-16:30	WeC04-02
<i>Passive RFID Tag Positioning Using 1D Stripline-shaped Antenna</i> A G	

Kei Nakatsuma	The University of Tokyo
Akihito Noda	The University of Tokyo
Hiroyuki Shinoda	The University of Tokyo

16:30-16:45	WeC04-03
<i>Recognizing Bicycling States with HMM based on Accelerometer and Magnetometer Data</i> A H F	

Niwat Thepvilojanapong	Mie University
Keiji Sugo	Tokyo Denki University
Yutaka Namiki	Tokyo Denki University
Yoshito Tobe	Tokyo Denki University

16:45-17:00	WeC04-04
<i>A Research on Automatic Power Control of Intelligent Appliances for Dementia Patients</i> A H	

Kenta Yamamoto	Toyama Prefectural University
Takeshi Iwamoto	Toyama Prefectural University
Michito Matsumoto	Toyama Prefectural University

17:00-17:15	WeC04-05
<i>Selective Proximity Power Transmission Using Low Leakage Ribbon Waveguide and High-Q Resonant Coupler</i> A H	

Akihito Noda	The University of Tokyo
Hiroyuki Shinoda	The University of Tokyo

WeC05	52-101
Process Control and Process Automation II	

Chair: Masayasu Suzuki	Japan Science and Tech. Agency
Chair: Toshihiro Shinohara	Kinki University

16:00-16:15	WeC05-01
<i>Modeling and real-time heating control of a reheating furnace using an advection equation</i> A I G	

Masayasu Suzuki	JST and Tokyo Tech
Kenji Katsuki	Tokyo Tech
Jun-ichi Imura	Tokyo Tech
Jun-ichi Nakagawa	Nippon Steel
Tetsuaki Kurokawa	Nippon Steel
Kazuyuki Aihara	The University of Tokyo

16:15-16:30	WeC05-02
<i>DSP-Based Motion Controller Development for Milling Machine</i> A I J	

Udom Komin	National Electronics and Computer Tech. Center
Kamonwan Tanta-ngai	National Electronics and Computer Tech. Center

16:30-16:45	WeC05-03
<i>Parallel 5x Step-Up SC DC-DC Converter for Power Efficiency Improvement</i> A I	

Sawai Pongswatd	King Mongkut's Inst. of Tech. Ladkrabang
Krit Smerpituk	King Mongkut's Inst. of Tech. Ladkrabang
Kei Eguchi	Shizuoka University
Hirofumi Sasaki	Tokai University

16:45-17:00	WeC05-04
<i>Expression of Individual Woven Yarn of Textile Fabric Based on Segmentation of Three Dimensional CT Image by Using Yarn Position and Orientation</i> A I I	

Toshihiro Shinohara	Kinki University
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17:00-17:15 WeC05-05
Automatic Multi Channel Serial I/O Interface using
FPGA

WeC06	52-102
[TraFST-SICE Joint OS] Social Model and Networks / Panel Discussion on Social simulation as Trans- disciplinary Research (Organized Session)	

16:00-16:15 WeC06-01
Virtual Grounding for Developing Facsimile Models
 Shingo Takahashi Waseda University

16:30-16:45 WeC06-03
Multi-Agent Learning Approach to Dynamic Security Patrol Routing
 Mhd Irvan Tokyo Inst. of Tech.
 Takashi Yamada Tokyo Inst. of Tech.
 Takao Terano Tokyo Inst. of Tech.

17:00-17:15 WeC06-05
*Interaction Model for Chasm Creation on Multiagent
 Networks*
 Shuichiro Kanno Chiba University
 Sachiyo Arai Chiba University

17:30-19:00 WeC06-07
Panel Discussion on Social simulation as Transdisciplinary Research
 - Panelists
 Takao Terano Tokyo Inst. of Tech.
 Kaoru Endo Gakushuin Univ.
 Kazuo Furuta The Univ. of Tokyo
 Toshizumi Ohta
 The Univ. of Electro-Communications
 Ituki Noda AIST
 Gaku Yamamoto IBM Software Group, Japan
 - Moderator
 Motohisa Funabashi TraFST

WeC07 52-103
Computational Intelligence and Its Applications II
 (Organized Session)

Organizer: Mamoru Minami Okayama University
 Organizer: Junichi Murata Kyushu University
 Organizer: Akira Yanou Okayama University
 Chair: Mamoru Minami Okayama University
 Chair: Akira Yanou Okayama University

16:00-16:15 WeC07-01
Multiple Chaos Generation by Neural-Network-Differential-Equation For Intelligent Fish-Catching 眞 眞

Yuya Ito Okayama University
 Takashi Tomono Okayama University
 Mamoru Minami Okayama University
 Akira Yanou Okayama University

16:15-16:30 WeC07-02
Generation of a Forward Motion for a 13-Link Semi-Looper Robot 眞 眞

Kiyotaka Izumi Saga University
 Rongkai Shen Saga University
 Takeshi Tsujimura Saga University
 Keigo Watanabe Okayama University

16:30-16:45 WeC07-03
Swarm Reinforcement Learning Method for Multi-Agent Tasks -Solution of Dilemma Problems- 眞 眞

Shota Yamawake Kyoto Inst. of Tech.
 Yasuaki Kuroe Kyoto Inst. of Tech.
 Hitoshi Iima Kyoto Inst. of Tech.

16:45-17:00 WeC07-04
Standing/Walking Stabilization of Humanoid Robot by Visual Servoing Concept through Online-Visual-Pose-Estimation 眞 眞

Wei Song Shanghai University
 Tomohide Maeba Okayama University
 Geng Wang Okayama University
 Mamoru Minami Okayama University
 Akira Yanou Okayama University
 Yanan Zhang Shanghai University

WeC08	52-201
Manipulator	

Chair: Akira Shimada Shibaura Inst. of Tech.
Chair: Yoshitaka Matsuda Saga University

16:00-16:15 WeC08-01

An Approach to Sensor-less Grasping and Movement Control on Two-Fingered Robot Hands ~~WFI~~

Akira Shimada Shibaura Inst. of Tech.
Kenichi Sonoda Shibaura Inst. of Tech.
Shinsaku Unuma Shibaura Inst. of Tech.

16:15-16:30 WeC08-02

A Computational Model of 3D Object Grasping with Smooth Geometry under Rolling Contact ~~WFI~~

Morio Yoshida RIKEN
Suguru Arimoto RIKEN

16:30-16:45 WeC08-03

A novel redundancy resolution method to avoid joint limits and obstacles on anthropomorphic manipulators ~~WFG~~

Daesung Jung POSTECH
Youngjun Yoo POSTECH
Jahoo Koo POSTECH
Minchul Song POSTECH
Sangchul Won POSTECH

16:45-17:00 WeC08-04

On the Development of a 7-DoF SPP Robotic Arm ~~WHE~~

Haider Abbas F. Almurib
The University of Nottingham Malaysia Campus
Haidar Fadhil Al-Qrimli
The University of Nottingham Malaysia Campus
Nandha T. Kumar
The University of Nottingham Malaysia Campus

17:00-17:15 WeC08-05

Experimental Investigation on Decomposed Dynamic Control Considering the Nonlinearity of Flexible Robotic Arm ~~WHI~~

Haibin Yin Hokkaido University
Yukinori Kobayashi Hokkaido University
Yohei Hoshino Hokkaido University
Takanori Emaru Hokkaido University

17:15-17:30 WeC08-06

Remote Control of Robot Arms via Network by Force-Free Control Followed Template Matching ~~WIE~~

Achala Pallegedara Saga University
Yoshitaka Matsuda Saga University
Takeo Matsumoto Saga University
Kenta Tsukamoto Saga University
Naruto Egashira Kurume National College of Tech.
Satoru Goto Saga University

WeC09	52-202
Optimization	

Chair: Takashi Okamoto Chiba University

16:00-16:15 WeC09-01

Pruning Generalized Rules for Stock Markets Based on Genetic Algorithms 阿部 功

Yafei Xing	Waseda University
Shingo Mabu	Waseda University
Kotaro Hirasawa	Waseda University

16:15-16:30 WeC09-02

Mixed Integer Optimization using the Quasi-chaotic Optimization with the Discrete Simultaneous Perturbation Stochastic Approximation 阿部 功

Takashi Okamoto	Chiba University
Hironori Hirata	Chiba University

16:30-16:45 WeC09-03

Probabilistic Failure Analysis of Interconnected Dynamical Systems Based on the Concept of Robust Reliability 阿部 功

Satoshi Matsumoto	Kyoto University
Takehisa Kohda	Kyoto University

16:45-17:00 WeC09-04

An Implementation of Dynamic Programming for Many-Core Computers 阿部 功

Tsutomu Inamoto	Kobe University
Takuya Matsumoto	Kobe University
Chikara Ohta	Kobe University
Hisashi Tamaki	Kobe University
Hajime Murao	Kobe University

17:00-17:15 WeC09-05

Facility Location and Distribution Planning with Multiple Transport Alternatives 阿部 功

Yosuke Takano	Osaka University
Tatsushi Nishi	Osaka University
Masahiro Inuiguchi	Osaka University

WeC11	52-301
Control Theory	

Chair: Kazuyoshi Mori The University of AIZU

16:00-16:15 WeC11-01

A Design of the Scale Parameter of Wavelet Transform for the Estimation of Transition Time in PWL Systems 阿部 功

Tomoaki Kashiwao	Niihama National College of Tech.
Kenji Ikeda	The University of Tokushima
Takao Shimomura	The University of Tokushima

16:15-16:30 WeC11-02

An Approach to Noncausal Hybrid Estimation for Linear Continuous-Time Systems with Non-Gaussian Noises 阿部 功

Gou Nakura	No affiliation
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16:30-16:45 WeC11-03

Asymptotic mean square stability analysis for a stochastic delay differential equation 阿部 功

Peng Xue	Kanazawa University
Shigeru Yamamoto	Kanazawa University

16:45-17:00 WeC11-04

Stability Analysis of Sturm-Liouville Dynamics with 2D Transfer Function 阿部 功

Boe-Shong Hong	National Chung Cheng University
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17:00-17:15 WeC11-05

Temperature Parameter Control using RasID Algorithm in Q Value-Based Dynamic Programming with Boltzmann Distribution 阿部 功

Peng Sun	Waseda University
Shangqing Yu	Waseda University
Wen Feng	Waseda University
Shingo Mabu	Waseda University
Kotaro Hirasawa	Waseda University

17:15-17:30 WeC11-06

The Correlation Based Method for Input-Output Pairing 阿部 功

Adel Ahmadi	K. N. Toosi University of Tech.
Alireza Fatehi	K. N. Toosi University of Tech.
Ali Sedigh	K. N. Toosi University of Tech.

WeC12	52-302
Vehicle Control (Flight)	
Chair: Masatoshi Nishi	Kumamoto University
16:00-16:15	WeC12-01
<i>The Use of PD and I Control Relative to Wind in the Direction Control of Helicopter</i>	WFEJ
Surachai Hemhirun	
King Mongkut's University of Tech. Thonburi	
Annop Ruangwiset	
King Mongkut's University of Tech. Thonburi	
16:15-16:30	WeC12-02
<i>Redesign Implementation of a Nonlinear Sampled-Data Controller for a 3-DOF Model Helicopter</i>	WFEI
Keisuke Takamuku	Kumamoto University
Mitsuaki Ishitobi	Kumamoto University
Tsuyoshi Kumada	Kumamoto University
Masatoshi Nishi	Kumamoto University
Sadaaki Kunimatsu	Kumamoto University
16:30-16:45	WeC12-03
<i>Improvement of PD Pitching Angle Control of Helicopter in the Wind by variable P Control Gain</i>	WFEJ
Tewet Potirangsiyagon	KMUTT
Annop Ruangwiset	KMUTT
16:45-17:00	WeC12-04
<i>Sliding Mode Control for the Hovering of Helicopter by Using Quaternion Dynamics</i>	WFEI
Woonchul Ham	Chonbuk National University
Hyeokjae Kwon	Chonbuk National University
17:00-17:15	WeC12-05
<i>Nonlinear Control of an Aircraft in the Presence of Microburst Windshear</i>	WFEJ
Satoshi Yamagishi	Nagoya University
Naoki Hasegawa	Nagoya University
Noboru Sakamoto	Nagoya University
Masayuki Sato	JAXA
17:15-17:30	WeC12-06
<i>Sensor System for Fault Detection Identification and Accommodation of Elevator of UAV</i>	WFEI
Panuchporn Panitsrisit	KMUTT
Annop Ruangwiset	KMUTT

WeC13	52-303
Robot Control II	
Chair: Kazuma Sekiguchi	Tokyo Inst. of Tech.
Chair: Naoyuki Hara	Osaka Prefecture University
16:00-16:15	WeC13-01
<i>Bilateral Force Feedback Control using Multi-Degree-of-Freedom Mobile Robot</i>	WFEF
Naoya Murata	Keio University
Seiichiro Katsura	Keio University
16:15-16:30	WeC13-02
<i>A Design Scheme of Passivity-based Position and Force Control for Mobile Manipulator</i>	WFEI
Yasunori Kawai	Ishikawa National College of Tech.
Yuuta Ooura	Ishikawa National College of Tech.
16:30-16:45	WeC13-03
<i>Periodic Motion Control for Monorotor type Flying Robot at Non-equilibrium Point via Zero Dynamics Controller</i>	WFEH
Yasuyuki Kataoka	Tokyo Inst. of Tech.
Kazuma Sekiguchi	Tokyo Inst. of Tech.
Mitsuji Sampei	Tokyo Inst. of Tech.
16:45-17:00	WeC13-04
<i>Stabilizing of Bike Robot with Variable Configured Balancer</i>	WFEI
Masahiro Kawaguchi	Tokyo Inst. of Tech.
Masaki Yamakita	Tokyo Inst. of Tech.
17:00-17:15	WeC13-05
<i>Piecewise Affine Model Approximation for Unmanned Bicycle</i>	WFEH
Sompol Suntharasantic	Chulalongkorn University
Prachya Rungtweesuk	Chulalongkorn University
Manop Wongsaisuwan	Chulalongkorn University
17:15-17:30	WeC13-06
<i>Experimental Evaluation of Disturbance Observer-Based Heat Inflow Estimation Method</i>	WFEJ
Hidetaka Morimitsu	Keio University
Seiichiro Katsura	Keio University

WeC14 52-304

Mechanical Systems Control I

Chair: Fu-Cheng Wang National Taiwan University
Chair: Koichi Osuka Osaka University

16:00-16:15 WeC14-01

Semi-Optimal Motion Control for Nonholonomic Systems with a Passive Joint 関根 一

Chyon Hae Kim
Honda Research Inst. Japan, Co., Ltd.
Keisuke Nakamura
Honda Research Inst. Japan, Co., Ltd.
Hiroshi Tsujino
Honda Research Inst. Japan, Co., Ltd.
Shigeki Sugano Waseda University

16:15-16:30 WeC14-02

Synchronous Control of a Network-Based Triple Mechanically-Coupled Ball Screws System 関根 一

Min-Fu Hsieh National Cheng Kung University
Hsieh-Yu Li National Cheng Kung University
Kang-Yu Lai National Cheng Kung University

16:30-16:45 WeC14-03

Fictitious Reference Iterative Tuning for State Feedback Control of Inverted Pendulum with Inertia Rotor 関根 一

Yoshihiro Matsui Tokyo National College of Tech.
Shunichi Akamatsu Tokyo National College of Tech.
Tomohiko Kimura Tokyo National College of Tech.
Kazushi Nakano
The University of Electro-Communications
Kazunori Sakurama Kyoto University

16:45-17:00 WeC14-04

High-Speed Positioning Methods of an Ultrasonic Motor by Input Shaping Filter and Bang-Bang Control 関根 一

Takashi Kai
Tokyo University of Agriculture and Tech.
Keisuke Sakuma
Tokyo University of Agriculture and Tech.
Yukinori Nakamura
Tokyo University of Agriculture and Tech.
Shinji Wakui
Tokyo University of Agriculture and Tech.

17:00-17:15 WeC14-05

Design of Optimal Pathway for Throwing Motion Control via Bezier Curve 関根 一

Hikaru Suzuki Tokyo Inst. of Tech.
Kazuma Sekiguchi Tokyo Inst. of Tech.
Mitsuji Sampei Tokyo Inst. of Tech.

17:15-17:30 WeC14-06

Rising up Motion Control of Denguribot 関根 一

Yuki Iguchi Tokyo Inst. of Tech.
Kazuma Sekiguchi Tokyo Inst. of Tech.
Mitsuji Sampei Tokyo Inst. of Tech.

**Technical Program for
Thursday September 15, 2011**

ThPL 63-201/202

Plenary Talk II

Chair: Kenji Suzuki University of Tsukuba

9:00-10:00

Magflexonics for precision mechatronics and bio-inspired applications

Kok-Meng Lee Georgia Institute of Technology

ThA01 63-201/202

SICE Vision Produce Program
(Y50 Special Session)

Organizer: Shinji Hara The Univ. of Tokyo

Organizer: Hiroyuki Shinoda The Univ. of Tokyo

10:30-12:00

SICE Vision Produce Program --- SICE's Future Vision on a Revolutionary Infrastructure

Member of SICE Vision Produce Program

ThA02	63-03
Measurement of Sports Motion	

Chair: Senya Kiyasu Nagasaki University
Chair: Narito Kurata Kajima Corporation

10:30-10:45 ThA02-01
Measurement and Analysis of Golf Swing Using 3D Acceleration and Gyroscopic Sensors ~~MF~~FF
Hiroshi Negoro Hosei University
Masahiko Ueda Sumitomo Rubber Industries, LTD.
Kajiro Watanabe Hosei University
Kazuyuki Kobayashi Hosei University
Yosuke Kurihara Seikei University

10:45-11:00 ThA02-02
Measurement and Analysis of Bowling Swing Motion Using 3D Acceleration and Gyro Sensors ~~MF~~FI
Kazuhiro Kimura Hosei University
Kajiro Watanabe Hosei University
Kazuyuki Kobayashi Hosei University
Yosuke Kurihara Seikei University

11:00-11:15 ThA02-03
Measurement and Analysis of Batting Swing in Baseball Using Acceleration and Angular Velocity Sensors ~~MF~~FG
Hiromitsu Shimada Hosei University
Kajiro Watanabe Hosei University
Kazuyuki Kobayashi Hosei University
Yosuke Kurihara Seikei University

11:15-11:30 ThA02-04
Boxing Punch Analysis Using 3D Gyro Sensor ~~MF~~FG
Manabu Morita Hosei University
Kajiro Watanabe Hosei University
Kazuyuki Kobayashi Hosei University
Yosuke Kurihara Seikei University

11:30-11:45 ThA02-05
Monitoring System to Keep Suitable Physical Strength in Exercise by Body Area Network Sensing System ~~MF~~FG
Kosuke Sentoku Ritsumeikan University
Tomohiro Tanaka Ritsumeikan University
Yuki Matsuda Ritsumeikan University
Shigeru Takayama Ritsumeikan University

ThA03	63-04
Pattern Recognition	

Chair: Yoshihiro Mitani Ube National College of Tech.
Chair: Shingo Mabu Waseda University

10:30-10:45 ThA03-01
Fingerprint Recognition System for Low Quality Images ~~MF~~FH
Zin Mar Win University of Computer Studies, Yangon
Myint Myint Sein University of Computer Studies



10:45-11:00 ThA03-02
A study of fingerspelling recognition by hand shape using higher-order local auto-correlation features ~~MF~~FI
Takuya Kanemura Ube National College of Tech.
Yoshihiro Mitani Ube National College of Tech.
Yusuke Fujita Yamaguchi University
Yoshihiko Hamamoto Yamaguchi University

11:00-11:15 ThA03-03
Development of an Optical 3D Human Face Reconstruction System Using Moving-Window Method ~~MF~~FI
Yau-Zen Chang Chang Gung University
Zhi-Ren Tsai Asia University
Shih-Tseng Lee Chang Gung Memorial Hospital

11:15-11:30 ThA03-04
Manifold Learning Based on Multi-Feature for Road-Sign Recognition ~~MF~~FI H
Qieshi Zhang Waseda University
Sei-ichiro Kamata Waseda University

11:30-11:45 ThA03-05
Tree Recognition for Landscape Using by Combination of Features of its Leaf, Flower and Bark ~~MF~~FI I
Seon-Jong Kim Pusan National University
Byeong-Wan Kim Pusan National University
Dong-Pil Kim Pusan National University

11:45-12:00 ThA03-06
A Robust Intelligent Face Recognition Framework using GNP-based Multi-agent System ~~MF~~FI G
Deng Zhang Waseda University
Shingo Mabu Waseda University
Kotaro Hirasawa Waseda University

ThA04	63-05
Advances in Measurement	
Chair: Yoshio Aoki Nihon University	
10:30-10:45	ThA04-01
<i>On A Symmetric Discrete Dynamics for Hybrid Systems</i> 	
Katsunori Nakamura	Heian Jogakuin University
Akira Fusaoka	Ritsumeikan University
10:45-11:00	ThA04-02
<i>Analysis of Actual IT Security Incident in an Organization by Using IT Security Implementation Model</i> 	
Masashi Sugiura	University of Electro-Communications
Hirohiko Suwa	University of Electro-Communications
Toshizumi Ohta	University of Electro-Communications
11:00-11:15	ThA04-03
<i>Indentation Analysis of Tamoxifen-Resistant MCF-7 cells by Using Atomic Force Microscope</i> 	
Tatsunori Hanai	Kogakuin University
Takashi Nakakuki	Kogakuin University
11:15-11:30	ThA04-04
<i>Analysis of Mobile Robot Implemented Fish Behavior Rules Using Fractal and Information Content</i> 	
Koji Fukuda	Anan National College of Tech.
Ryuzaburo Sugino	Anan National College of Tech.
Mio Kobayashi	Anan National College of Tech.
Noboru Morizumi	Anan National College of Tech.
11:30-11:45	ThA04-05
<i>A Single-Phase PWM Inverter Controlling Base on PLL Technique</i> 	
Vittaya Tipsuwanporn	King Mongkut's Inst. of Tech. Ladkrabang
A. Charoen	Kasem Bundit University
Arjin Numsomran	King Mongkut's Inst. of Tech. Ladkrabang
Kowit Phipek	King Mongkut's Inst. of Tech. Ladkrabang
11:45-12:00	ThA04-06
<i>Dictionary-based Compressive SLAM</i> 	
Tomomi Nagasaka	University of Fukui
Kanji Tanaka	University of Fukui

ThA06	52-102
[TraFST-SICE Joint OS] Game Theory and Auction / Human-Agent Interaction and Agent Architecture (Organized Session)	

Organizer: Keiki TAKADAMA	
The University of Electro-Communication	
Chair: Hiroshi Sato	National Defense Academy
Chair: Hajime Kita	Kyoto University
Chair: Keiki TAKADAMA	The University of Electro-Communication
10:30-10:45	ThA06-01
<i>Evolution of Social Hierarchy in 2x2 Games</i> 	
Eizo Akiyama	University of Tsukuba
10:45-11:00	ThA06-02
<i>Game theory and pragmatics: An evolutionary approach</i> 	
Ryousuke Nori	Future University Hakodate
Toshiji Kawagoe	Future University Hakodate
11:00-11:15	ThA06-03
<i>An Experimental Study of Bidding Behavior in Procurement Auctions with Subcontract Bids: Profits, Efficiency, and Policy Implications</i> 	
Naoki Watanabe	University of Tsukuba
Jun Nakabayashi	University of Tsukuba
11:15-11:30	ThA06-04
<i>Bivalent Opinion Dynamics in New Product Diffusion</i> 	
Makoto Mizuno	Meiji University
11:30-11:45	ThA06-05
<i>Parameter Identification in Voting Simulation Using Multi-Agent Simulation Model and Its Application</i> 	
Tadahiko Murata	Kansai University
Kenta Konishi	Kansai University
11:45-12:00	ThA06-06
<i>Multi-Agent Simulation of Counterinsurgency</i> 	
Hiroshi Sato	National Defense Academy
Masao Kubo	National Defense Academy
Akira Namatame	National Defense Academy

12:00-12:15 ThA06-07
Agent-based Modeling/Simulation for Teaching Science and Computer in High School ~~WFGF~~
 Masako Okamoto Kyoto University
 Takeshi Fujioka
 Kyoto Municipal Tonan Senior High School
 Hajime Kita Kyoto University

12:15-12:30 ThA06-08
Classification of Collective Adaptive Situations in Cross Cultural Game by Fuzzy C-Means Clustering ~~WFG~~
 Yuya Ushida
 The University of Electro-Communications
 Keiki Takadama
 The University of Electro-Communications

12:30-12:45 ThA06-09
Multi Agent Simulation through Organizational Learning Classifier System ~~WFGHE~~
 Elias Mohammad Abu Hasnat Tokyo Inst. of Tech.
 Takashi Yamada Tokyo Inst. of Tech.
 Takao Terano Tokyo Inst. of Tech.

12:45-13:00 ThA06-10
Framework, Platform and Trends for Sociomimetic Computing ~~WFGI~~
 Hamed Khandan Tokyo Inst. of Tech.
 Takao Terano Tokyo Inst. of Tech.

ThA07 52-103
Neural Network and its Application
 Chair: Haruhiko Nishimura University of Hyogo

10:30-10:45 ThA07-01
Signal Response Efficiency in Izhikevich Neuron Model ~~WFGG~~
 Sou Nobukawa University of Hyogo
 Haruhiko Nishimura University of Hyogo
 Teruya Yamanishi Fukui University of Tech.
 Jian-Qin Liu
 National Inst. of Information and Communications Tech.

10:45-11:00 ThA07-02
Revised GMDH-type Neural Network Using Principal Component-Regression Analysis ~~WFGI~~
 Tadashi Kondo The University of Tokushima
 Junji Ueno The University of Tokushima

11:00-11:15 ThA07-03
Medical Image Diagnosis of Lung Cancer by Revised GMDH-type Neural Network Using Heuristic Self-Organization ~~WFGI~~
 Tadashi Kondo The University of Tokushima
 Junji Ueno The University of Tokushima

11:15-11:30 ThA07-04
Detection of a motor bearing shield fault using neural networks ~~WFG€~~
 Sunisa Sornmuang
 National Electronics and Computer Tech. Center
 Jittiwut Suwatthikul
 National Electronics and Computer Tech. Center

11:30-11:45 ThA07-05
Modeling of a Magneto-Rheological Damper Using Modified FNN without Force Sensor Input ~~WGI~~
 Kittipong Ekkachai
 Sirindhorn International Inst. of Tech.
 Kanokvate Tungpimolrut
 National Electronics and Computer Tech. Center
 Sirichai Nithi-Uthai
 National Electronics and Computer Tech. Center
 Apicit Tantaworrasilp
 National Electronics and Computer Tech. Center
 Itthisek Nilkhamhang
 Sirindhorn International Inst. of Tech.

ThA08 52-201
Kukanchi - interactive human-space design and intelligence
 (Organized Session)

Organizer: Kazuyoshi Wada
 Tokyo Metropolitan University
 Organizer: Mihoko Niitsuma Chuo University
 Chair: Kazuyoshi Wada Tokyo Metropolitan University
 Chair: Mihoko Niitsuma Chuo University

10:30-10:45 ThA08-01
Environmental perception for grasping an unknown object based on 3D range distance information ~~WFG~~ €
 Hiroyuki Masuta Tokyo Metropolitan University
 Eriko Hiwada Tokyo Metropolitan University
 Naoyuki Kubota Tokyo Metropolitan University

10:45-11:00 ThA08-02
Path Planning using Multi-resolution Map for a Mobile Robot ~~WFG~~ I
 Yuichiro Toda Tokyo Metropolitan University
 Naoyuki Kubota Tokyo Metropolitan University

11:00-11:15 ThA08-03
Preliminary Field Test of Communication Robot for Seniors Living Alone ~~WFG~~ G
 Kazuyoshi Wada Tokyo Metropolitan University
 Ryuutaro Ueno Tokyo Metropolitan University
 Toshiaki Ichino Tokyo Metropolitan University
 Toru Yamaguchi Tokyo Metropolitan University

11:15-11:30 ThA08-04
Motion Pattern Recognition using Case-Based Reasoning for Information Providing ~~WFG~~ I
 Yihsin Ho Tokyo Metropolitan University
 Nobuyuki Sekine Tokyo Metropolitan University
 Eri Sato Shimokawara Tokyo Metropolitan University
 Toru Yamaguchi Tokyo Metropolitan University

ThA09 52-202
Biomimetic Approach in Robotics and Machines
 (Organized Session)

Organizer: Keigo Watanabe Okayama University
 Organizer: Kiyotaka Izumi Saga University
 Organizer: Yutaka Maeda Kansai University
 Chair: Keigo Watanabe Okayama University
 Chair: Kiyotaka Izumi Saga University

10:30-10:45 ThA09-01
Motion Generation of a Multi-legged Robot with a Slider Mechanism for Each Foot ~~WFG~~ €
 Masaaki Ikeda Okayama University
 Keigo Watanabe Okayama University
 Kiyotaka Izumi Saga University

10:45-11:00 ThA09-02
Energy Efficiency Rate Optimization of Bracing Robot ~~WFG~~ I
 Michiyuki Itoshima Okayama University
 Yusuke Toda Okayama University
 Tomohide Maebe Okayama University
 Hidemi Kataoka Okayama University
 Mamoru Minami Okayama University
 Akira Yanou Okayama University

11:00-11:15 ThA09-03
Learning of Inverse-Dynamics for SCARA Robot ~~WFG~~ €
 Naoyuki Ishibashi Kansai University
 Yutaka Maeda Kansai University

11:15-11:30 ThA09-04
An Unscented Rauch-Tung-Striebel Smoother for SLAM Problem ~~WFG~~ I
 Saifudin Razali Okayama University
 Keigo Watanabe Okayama University
 Shoichi Maeyama Okayama University
 Kiyotaka Izumi Saga University

11:30-11:45 ThA09-05
Trajectory Tracking Control of Mobile Robots by an Image-based Fuzzy Controller ~~WFG~~ I
 Tatsuya Kato Okayama University
 Keigo Watanabe Okayama University
 Shoichi Maeyama Okayama University

11:45-12:00 ThA09-06
*Visual Servoing of Patient Robot's Face and Eye-Looking
 Direction to Moving Human* ~~MFH~~

Sho Nakamura	Okayama University
Kosuke Okumura	Okayama University
Akira Yanou	Okayama University
Mamoru Minami	Okayama University

ThA10 52-203
Advanced Robotic Systems
 (Organized Session)

Organizer: Ching-Chih Tsai
 National Chung Hsing University
 Chair: Ching-Chih Tsai
 National Chung Hsing University
 Chair: Tzuu-Hseng S. Li
 National Cheng Kung University

10:30-10:45 ThA10-01
*Robust fuzzy-based sliding mode tracking control for
 constrained robots with constraint uncertainties* ~~MFHGE~~

Hui-Min Yen	National Cheng Kung University
Tzuu-Hseng S. Li	National Cheng Kung University
Yeong-Chan Chang	Kun-Shan University

10:45-11:00 ThA10-02
*Detecting and Tracking of Host People on a Slave Mo-
 bile Robot for Service-Related Tasks* ~~MFHGE~~

Chin-Lung Chen	National Taiwan University
Chih-Chung Chou	National Taiwan University
Feng-Li Lian	National Taiwan University

11:00-11:15 ThA10-03
*Object Recognition in Household Environment Using
 Fusion of Shape and Haar-like Features* ~~MFHGE~~

Jong-Hann Jean	St. John's University
Ming-Jin Hsieh	St. John's University

11:15-11:30 ThA10-04
*Global Path Planning for Autonomous Robot Naviga-
 tion Using Hybrid Metaheuristic GA-PSO Algorithm* ~~MFH~~

Hsu-Chih Huang	Hungkuang University
Ching-Chih Tsai	National Chung Hsing University

11:30-11:45 ThA10-05
*Real-Time Visual Tracking with Adaptive Particle Filter
 for Human-Machine Interaction* ~~MFH~~

Bor-Jeng Chen	National Taiwan University
Cheng-Ming Huang	National Taipei University of Tech.
Li-Chen Fu	National Taiwan University

ThA11	52-301
Networked Systems Control	

Chair: Kenji Kashima Tokyo Inst. of Tech.

10:30-10:45 ThA11-01

Optimal Controlling Node Problem for Multi-agent Systems via alt-PageRank **MFH** €

Hiroki Yamamoto The University of Tokyo
Koji Tsumura The University of Tokyo

10:45-11:00 ThA11-02

Path Choice Problem on Multi-agent Systems: Heterogeneous Case **MFH** I

Takuya Okuyama The University of Tokyo
Koji Tsumura The University of Tokyo

11:00-11:15 ThA11-03

Haptic Communication Using Multiple-Routes in Data Transmission **MFH** F

Nozomi Suzuki Keio University
Seiichiro Katsura Keio University

11:15-11:30 ThA11-04

Evaluating Static Load Balancing Algorithm in Grid **MFH** I

Sherihan Abu Elenin Chiba University
Masato Kitakami Chiba University

11:30-11:45 ThA11-05

Robustness of Consensus Algorithm for Communication Delays and Switching Topology **MFH** H

Takanobu Shida Keio University
Hiromitsu Ohmori Keio University

11:45-12:00 ThA11-06

Application of DSRC/WAVE for More Efficient Street-lamp Control **MFH** F

Ching-Fu Lin National Cheng Kung University
Jyh-Ching Juang National Cheng Kung University
Eric Liang Automotive Research and Testing Center
Liang-Yu Ke Automotive Research and Testing Center

ThA12	52-302
Smart Infrastructure and Control (Organized Session)	

Organizer: Yutaka Iino Toshiba Corporation

Organizer: Toru Namerikawa Keio University

Chair: Yutaka Iino Toshiba Corporation

Chair: Toru Namerikawa Keio University

10:30-10:45 ThA12-01

Distributed Control for Load Frequency of Power Networks based on Iterative Gradient Methods **MFH** I

Taichiro Kato Keio University
Toru Namerikawa Keio University

10:45-11:00 ThA12-02

Consideration on Systematic Analysis and Evaluation of Energy System Efficiency **MFH** E

Yutaka Iino Toshiba Corporation

11:00-11:15 ThA12-03

Dynamic Target Navigation based on Multisensor Kalman Filtering and Neighbor Discovery Algorithm **MFH** G

Kazuya Kosugi Keio University
Toru Namerikawa Keio University

11:15-11:30 ThA12-04

Passivity-based Cooperative Estimation Algorithm for Networked Visual Motion Observers **MFH** I

Takeshi Hatanaka Tokyo Inst. of Tech.
Takayuki Nishi Tokyo Inst. of Tech.
Masayuki Fujita Tokyo Inst. of Tech.

Shu-Chen Wang Taipei College of Maritime Tech.
Shiao-Chen Lee Taipei College of Maritime Tech.
Chi-Jui Wu
National Taiwan University of Science and Tech.

Haider Abbas F. Almurib
The University of Nottingham Malaysia Campus
Lokman H Hassan
University of Malaya
Mahmoud Moghavvemi
University of Malaya

Chair: Takanori Miyoshi Toyohashi University of Tech.

Chair: Akira Kojima Tokyo Metropolitan University

10:30-10:45 ThA14-01

Estimation of Applied Force by Using Human Body Dynamics Model ~~WFI~~ H E

Kazuhiro Takamori Toyohashi University of Tech.

Takanori Miyoshi Toyohashi University of Tech.

Kazuhiko Terashima Toyohashi University of Tech.

10:45-11:00 ThA14-02

Control of an Abnormal Human Menstrual Cycle in PCOS by Speed Gradient Algorithm ~~WFI~~ H I

Hotaka Saito Keio University

Hiromitsu Ohmori Keio University

11:00-11:15 ThA14-03

A modeling of pedestrian behavior based on hybrid systems approach -an analysis on the direction of confluence- ~~WFI~~ I G

Tsuyoshi Shimizu Tokyo Metropolitan University

Takashi Igakura Tokyo Metropolitan University

Ryota Ishibashi Tokyo Metropolitan University

Akira Kojima Tokyo Metropolitan University

11:15-11:30 ThA14-04

Development of Collision Avoidance Supporting System for Power Assist System in Omni-directional Mobile Robot ~~WFI~~ I I

Yuki Ueno Toyohashi University of Tech.

Hideo Kitagawa Gifu National Collage of Tech.

Kiyoaki Kakihara KER CO., LTD.

Kazuhiko Terashima Toyohashi University of Tech.

11:30-11:45 ThA14-05

Vein Extraction for an Intravenous Injection Support System using Mahalanobis Distance ~~WFI~~ I H

Adiljan Yimit Iwate University

Yoshihiro Hagihara Iwate University

Tasuku Miyoshi Iwate University

Yukari Hagihara Iwate University

**Technical Program for
Friday September 16, 2011**

FrPL 63-201/202

Plenary Talk III

Chair: Kenichiro Nonaka Tokyo City University

9:00-10:00

*Dynamics, Control and Cooperation in Multi-agent
Systems: From Synchronization to Networked Control*

Frank Allgower University of Stuttgart

FrA02 63-03
FLUCOME-J SICE
(Organized Session)

Organizer: Oyama Osamu Meiji University
Organizer: Kenji Kawashima Tokyo Inst. of Tech.
Chair: Osamu Oyama Meiji University
Chair: Kenji Kawashima Tokyo Inst. of Tech.

10:30-10:45 FrA02-01
*A Kalman filter for estimating transient pressure and
flow rate in a pipe*

Akira Ozawa Yokohama National University
Kazushi Sanada Yokohama National University

10:45-11:00 FrA02-02
*Gas Governor Pilot valve with Integral and Feedfor-
ward structure*

Techakasem Chalermrat Tokyo Institution of Tech.
In Kim Tokyo Institution of Tech.
Choung Youn Tokyo Institution of Tech.
Toshiharu Kagawa Tokyo Institution of Tech.

11:00-11:15 FrA02-03
*Development of Walking assist system with Dry-Ice
Power Cell*

Hiroki Ishizuka Meiji University
Osamu Oyama Meiji University
Ato Kitagawa Tokyo Inst. of Tech.

11:15-11:30 FrA02-04
*Trajectory control of pneumatic servo table with air
bearing*

Jun Li Tokyo Inst. of Tech.
Kenji Kawashima Tokyo Inst. of Tech.
Toshinori Fujita Tokyo Denki University
Toshiharu Kagawa Tokyo Inst. of Tech.

11:30-11:45 FrA02-05
*MI simulation of an orifice flow in a circular pipe with
different beta ratios*

Mitsuhiro Nakao Kagoshima University
Kenji Kawashima Tokyo Inst. of Tech.
Toshiharu Kagawa Tokyo Inst. of Tech.

FrA03	63-04
Advanced Pattern Measurement I (Organized Session)	

Organizer: Toshiyuki Tanaka	Keio University
Organizer: Shinpei Okawa	The University of Electro-Communications
Chair: Toshiyuki Tanaka	Keio University
Chair: Yoshimitsu Aoki	Keio University

10:30-10:45	FrA03-01
<i>Cell Extraction Method from Phase Contrast Microscopy Image</i>	

Sho Sakuma	Keio University
Toshiyuki Tanaka	Keio University

10:45-11:00	FrA03-02
<i>Study on accurate estimation of musical information in musical performance</i>	

Noboru Funakoshi	Keio University
Toshiyuki Tanaka	Keio University

11:00-11:15	FrA03-03
<i>Vibro-visual correlation imager for extracting complex differentials and Laplacian</i>	

Shigeru Ando	The University of Tokyo
Toru Kurihara	The University of Tokyo

11:15-11:30	FrA03-04
<i>Accuracy Improvement for Analysis of Emphysema by Lung Lobe Segmentation</i>	

Kazuaki Neda	Keio University
Toshiyuki Tanaka	Keio University
Shotaro Chubachi	Keio University
Hiroaki Sugiura	Keio University

11:30-11:45	FrA03-05
<i>Classification Method for Degree of Lung Adenocarcinoma Differentiation</i>	

Naoki Murakami	Keio University
Toshiyuki Kanako	Keio University
Toshiyuki Tanaka	Keio University

11:45-12:00	FrA03-06
<i>Application of sparsity regularization to time-domain diffuse optical tomography</i>	

Shinpei Okawa	The University of Electro-Communications
Yukio Yamada	The University of Electro-Communications

12:00-12:15	FrA03-07
<i>The study of correlation between fNIRS and fMRI for the time lapse analysis of rehabilitation</i>	

Jo Orikawa	Keio University
Toshiyuki Tanaka	Keio University
Shigeo Takizawa	Biofilia Rehabilitation Laboratory
Yoshiyasu Takefuji	Biofilia Rehabilitation Laboratory

FrA04	63-05
Networked Sensor System I	
Chair: Satoshi Honda	Keio University
Chair: Narito Kurata	Kajima Corporation
10:30-10:45	FrA04-01
<i>An Efficient Multicasting Method Without a Base Station</i>	
Wataru Uemura	Ryukoku University
10:45-11:00	FrA04-02
<i>Distributed Synchronization Algorithm for Multi-agent System</i>	
Zhong Ren	Kanazawa University
Shigeru Yamamoto	Kanazawa University
11:00-11:15	FrA04-03
<i>HEHC: Heterogeneous-Aware Enhanced Hierarchical Clustered Scheme for Wireless Sensor Networks</i>	
Md. Abdullah-al Mamun	Iwate University
Yuji Koi	Iwate University
Naoshi Nakaya	Iwate University
Yukari Hagihara	Iwate University
Goutam Chakraborty	Iwate Prefectural University
11:15-11:30	FrA04-04
<i>Sensor drift detection by utilizing multi-sensor signals</i>	
Nathavuth Kitbutrawat	
National Electronics and Computer Tech. Center	
Pakorn Lopattanakij	
National Electronics and Computer Tech. Center	
Pasakorn Tiwatthanont	
National Electronics and Computer Tech. Center	
Songkord Thirachai	
National Electronics and Computer Tech. Center	
Jittiwut Suwatthikul	
National Electronics and Computer Tech. Center	
11:30-11:45	FrA04-05
<i>Automatic Calibration Method for Networked Thermal Sensors</i>	
Tomoyuki Fujino	Graduate School of Keio University
Satoshi Honda	Keio University

11:45-12:00	FrA04-06
<i>An Improved PSO Method for Energy Saving System of Office Lighting</i>	
Wa Si	Waseda University
Harutoshi Ogai	Waseda University
Katsumi Hirai	Hakutsu Tech. Corporation
Hidehiro Takahashi	Hakutsu Tech. Corporation
Masatoshi Ogawa	Waseda University

FrA05 52-101
Innovative Data Cooperation Architecture in Industrial Control Systems
 (Organized Session)

Organizer: Tsutomu Yamada Hitachi, Ltd.
 Organizer: Yoichi Takayanagi TOSHIBA Corporation
 Organizer: Akio Ito Yokogawa Electric Corporation
 Chair: Yoichi Takayanagi TOSHIBA Corporation
 Chair: Tsutomu Yamada Hitachi, Ltd.

10:30-10:45 FrA05-01

Myth and Reality on Control System Security Revealed by Stuxnet ~~IEEE~~ H

Toshio Miyachi JPCERT Coordination Center
 Hiroki Narita JPCERT Coordination Center
 Hidekazu Yamada JPCERT Coordination Center
 Hirohisa Furuta JPCERT Coordination Center

10:45-11:00 FrA05-02

Integrity Enhancement of Real-Time Systems by Information-Theoretic Cryptography ~~IEEE~~ F

Shigeki Katayama Toshiba Corporation
 Katsuhiko Sekiguchi Toshiba Corporation
 Kazuto Fukushima Toshiba Corporation
 Tsutomu Matsumoto

Yokohama National University

11:00-11:15 FrA05-03

Energy efficiency of manufacturing processes based on the connectivity and flexibility of control system networks ~~IEEE~~ I

Masatoshi Takano Toyota Motor Corporation

11:15-11:30 FrA05-04

The current status and challenges of standardization for electronic catalog for industrial automation ~~IEEE~~ F

Shinpei Kurokawa Yokogawa Electric Corporation
 Koji Demachi Yokogawa Electric Corporation

11:30-11:45 FrA05-05

OPC UA Information Model, Data Exchange, Safety and Security for IEC 61131-3 ~~IEEE~~ I

Iko MIYAZAWA Kanagawa Industrial Tech. Center
 Masashi MURAKAMI

Digital Electronics Corporation

Takashi MATSUKUMA

Digital Electronics Corporation

Koji FUKUSHIMA Fuji Electric Corporation

Yoshiharu MARUYAMA Fuji Electric Corporation

Masayoshi MATSUMOTO

Fuji Electric Corporation

Junichi KAWAMOTO Toshiba Corporation

Eiji YAMASHITA Yokogawa Electric Corporation

11:45-12:00 FrA05-06

FDT Technology for CC-Link Network ~~IEEE~~ I €

Satoshi Noguchi Mitsubishi Electric Corp.

Kenji Suzuki Mitsubishi Electric Corp.

Shinichiro Chino Mitsubishi Electric Corp.

Hiroshi Sakurada Mitsubishi Electric Corp.

Isao Tarui Mitsubishi Electric Corp.

Nobuyuki Ban Mitsubishi Electric Corp.

Pontes Charles

Mitsubishi Electric Europe B.V. Germany

12:00-12:15 FrA05-07

DART - DYNAMIC ARC RECOGNITION AND TERMINATION INTRINSIC SAFETY WITHOUT THE POWER LIMITS ~~IEEE~~ I

Udo Gerlach

Physikalisch-Technische Bundesanstalt

Thomas Uehlken

Physikalisch-Technische Bundesanstalt

Ulrich Johannsmeyer

Physikalisch-Technische Bundesanstalt

Martin Junker Pepperl und Fuchs GmbH

Andreas Hennecke Pepperl und Fuchs GmbH

Lutz Liebers Pepperl und Fuchs GmbH

Tetsu Suzuki Pepperl und Fuchs GmbH

12:15-12:30 FrA05-08

An Approach to Optimize Energy Use in Food Plants ~~IEEE~~ I

Tomoyuki Ikeyama Yokogawa Electric Corporation

Hiroshi Watanabe Yokogawa Electric Corporation

Satoru Isobe Yokogawa Electric Corporation

Hiroshi Takahashi Yokogawa Electric Corporation

FrA06 52-102
ICT Applications in Food Productions I
 (Organized Session)

Organizer: Takaharu Kameoka Mie University
 Organizer: Atsushi Hashimoto Mie University
 Organizer: Hiroaki Ishizawa Shinshu University
 Organizer: Masayuki Hirafuji NARO
 Chair: Masayuki Hirafuji NARO
 Chair: Takehiko Hoshi
 Shizuoka Prefectural Research Inst. of Agriculture and Forestry

10:30-10:45 FrA06-01
An Application of Knowledge Systems for Agricultural Sensing Data

Kazuho Maeda Fujitsu Laboratories Ltd.
 Koji Nakamichi Fujitsu Laboratories Ltd.
 Yoshinori Yaginuma Fujitsu Laboratories Ltd.

10:45-11:00 FrA06-02
Quasi Real-Time Field Network System for Monitoring Remote Agricultural Fields

Masaru Mizoguchi University of Tokyo
 Tetsu Ito X-Ability Ltd.
 Arif Chusnul University of Tokyo
 Shoichi Mitsuishi AINEX, Ltd.
 Masazumi Akazawa University of Tokyo

11:00-11:15 FrA06-03
Development of an Automatic Farm Works Recording System Using GPS

Takuro Oya Fujitsu Laboratories Ltd.
 Akira Fujii Fujitsu Laboratories Ltd.
 Hidenori Sekiguchi Fujitsu Laboratories Ltd.



11:15-11:30 FrA06-04
Trial Integration of Agricultural Field Sensing Data

Takuji Kiura
 National Agriculture and Food Research Organization
 Kei Tanaka
 National Agriculture and Food Research Organization
 Masaaki Omine
 National Agriculture and Food Research Organization
 Tomokazu Yoshida
 National Agriculture and Food Research Organization

11:30-11:45 FrA06-05
AGRISERVER for multipurpose use in agriculture and its related industries

Yasunori Saito Shinshu University
 Kazuki Kobayashi Shinshu University
 Takanobu Suzuki
 Nagano Prefecture Agricultural Experiment Station
 Masayuki Hirafuji
 National Agricultural Research Center for Hokkaido Region
 Takuzi Kiura National Agricultural Research Center
 Tokihiro Fukatsu
 National Agricultural Research Center

FrA07	52-103
Biological and Physiological Engineering	
Chair: Akira Toyomura	Tokyo Denki University
Chair: Seiji Nishifuji	Yamaguchi University
10:30-10:45	FrA07-01
<i>A VEP-based Spelling System with Sequential Stimulus using Binary BCH Codes</i> 	
Takashi Mizoguchi	Kyushu Inst. of Tech.
Jun Irie	Kyushu Inst. of Tech.
Tomonari Yamaguchi	Kyushu Inst. of Tech.
Katsuhiro Inoue	Kyushu Inst. of Tech.
10:45-11:00	FrA07-02
<i>Experimental design for face-to-face vocal communication in MRI/MEG environment</i> 	
Akira Toyomura	Tokyo Denki University
Masahide Yuasa	Tokyo Denki University
Shinya Kuriki	Tokyo Denki University
11:00-11:15	FrA07-03
<i>Effect of Acute Aerobic Exercise on EEG Rhythms Stressed from Sound and Mental Task</i> 	
Seiji Nishifuji	Yamaguchi University
Daisuke Maino	Yamaguchi University
Shogo Tanaka	Yamaguchi University
11:15-11:30	FrA07-04
<i>Personal Identification Method using Footsteps</i> 	
Masato Miyoshi	The University of Tokushima
Kentaro Mori	The University of Tokushima
Yasunori Kashiara	The University of Tokushima
Masafumi Nakao	The University of Tokushima
Satoru Tsuge	Daido University
Minoru Fukumi	The University of Tokushima
11:30-11:45	FrA07-05
<i>Magnetically-Guided Assembly of Magnetic Sugar Particles for biodegradable scaffolds</i> 	
Chengzhi Hu	Nagoya University
Carlos Tercero	Nagoya University
Seiichi Ikeda	Nagoya University
Toshio Fukuda	Nagoya University
Fumihito Arai	Nagoya University
Makoto Negoro	Fujita Health University

FrA08	52-201
Action Understanding and Behavior Analysis (Organized Session)	
Organizer: Atiqur Rahman Ahad	Kyushu Inst. of Tech.
Chair: Seiji Ishikawa	Kyushu Inst. of Tech.
Chair: Md. Atiqur Rahman Ahad	Kyushu Inst. of Tech.
10:30-10:45	FrA08-01
<i>Action Recognition Algorithm Based on Optical Flow and RANSAC in Frequency Domain</i> 	
Hafiz Imtiaz	Bangladesh University of Engineering and Tech.
Upal Mahbub	Bangladesh University of Engineering and Tech.
Md. Atiqur Rahman Ahad	Kyushu Inst. of Tech.
10:45-11:00	FrA08-02
<i>A Physics-based Stochastic Framework for Activity Recognition and Analysis</i> 	
Ricky J. Sethi	University of California, Los Angeles
Amit K. Roy-Chowdhury	University of California, Riverside
11:00-11:15	FrA08-03
<i>Multiple Persons' Action Recognition by Fast Human Detection</i> 	
S. M. Ashik Eftakhar	Kyushu Inst. of Tech.
Joo Kooi Tan	Kyushu Inst. of Tech.
Hyeongseop Kim	Kyushu Inst. of Tech.
Seiji Ishikawa	Kyushu Inst. of Tech.
11:15-11:30	FrA08-04
<i>Improved Approach for Action Recognition based on Local and Global Features</i> 	
Md. Atiqur Rahman Ahad	Kyushu Inst. of Tech.
J Tan	Kyushu Inst. of Tech.
H Kim	Kyushu Inst. of Tech.
S Ishikawa	Kyushu Inst. of Tech.
11:30-11:45	FrA08-05
<i>Action Dataset - A Survey</i> 	
Md. Atiqur Rahman Ahad	Kyushu Inst. of Tech.
J Tan	Kyushu Inst. of Tech.
H Kim	Kyushu Inst. of Tech.
S Ishikawa	Kyushu Inst. of Tech.

FrA09	52-202
Mobile Robot I	
Chair: Yoshiharu Amano	Waseda University
Chair: Masahiro Tanaka	Konan University
10:30-10:45	FrA09-01
<i>Development of a SIFT based Monocular EKF-SLAM Algorithm for a Small Unmanned Aerial Vehicle</i>	
Taro Suzuki	Waseda University
Yoshiharu Amano	Waseda University
Takumi Hashizume	Waseda University
10:45-11:00	FrA09-02
<i>An Improved Active SLAM Algorithm for Multi-robot Exploration</i>	
Viet-Cuong Pham	National Cheng Kung University
Jyh-Ching Juang	National Cheng Kung University
11:00-11:15	FrA09-03
<i>RBPF-Based Map Generation for an Indoor Mobile Robot</i>	
Sheng Jinbo	University of Electro-Communications
Jia Songmin	Beijing University of Tech.
Tano Shunichi	University of Electro-Communications
Li Xiuzhi	Beijing University of Tech.
11:15-11:30	FrA09-04
<i>Evaluation of A Positioning Correction Method in GPS Blockage Condition</i>	
Yu Sakuma	Waseda University
Kiichiro Ishikawa	Waseda University
Toshinori Yamazaki	Waseda University
Yoshiharu Amano	Waseda University
Takumi Hashizume	Waseda University
11:30-11:45	FrA09-05
<i>Localization of Segway RMP</i>	
Takashi Kuwata	Konan University
Masahiro Tanaka	Konan University
Masahiro Wada	Konan University
Tomohiro Umetani	Konan University
Minoru Ito	Maizuru National College of Tech.
11:45-12:00	FrA09-06
<i>Path Planning Method Design for Mobile Robots</i>	
Chia-Jun Yu	Tamkang University
Yi-Hong Chen	Tamkang University
Ching-Chang Wong	Tamkang University

FrA10	52-203
Artificial muscle actuators and sensors (Organized Session)	
Organizer: Masaki Yamakita	Tokyo Inst. of Tech.
Chair: Kinji Asaka	AIST
Chair: Masaki Yamakita	Tokyo Inst. of Tech.
10:30-10:45	FrA10-01
<i>Development of a Quadruped Soft Robot with Fully IPMC Body</i>	
Naoki Tomita	Nagoya University
Kentaro Takagi	Nagoya University
Kinji Asaka	AIST
10:45-11:00	FrA10-02
<i>Development of Curved Type Pneumatic Artificial Rubber Muscle Using Shape-memory Polymer</i>	
Kazuto Takashima	Kyushu Inst. of Tech.
Toshiro Noritsugu	Okayama University
Jonathan M Rossiter	University of Bristol
Shijie Guo	Tokai Rubber Industries, Ltd.
Toshiharu Mukai	RIKEN
11:00-11:15	FrA10-03
<i>Fully Plastic Actuators Based on Ionic-Liquid-Based Bucky-Gels and their Applications to Braille Display</i>	
Takushi Sugino	AIST
Kinji Asaka	AIST

FrA11	52-301
Adaptive & Learning Control I ---Adaptive Control Theory---	
(Organized Session)	

Organizer: Kenji Ikeda The University of Tokushima
Organizer: Yoshihiro Ohnishi Ehime University
Chair: Kenji Ikeda The University of Tokushima
Chair: Shiro Masuda Tokyo Metropolitan University

10:30-10:45 FrA11-01
A Simple Redesign of Model Reference Adaptive Control with Actuator Failures ~~MF~~ J

Yoshihiko Miyasato
The Inst. of Statistical Mathematics

10:45-11:00 FrA11-02
A Design Scheme of Model Reference Adaptive Control System with Using a Smooth Parameter Projection Adaptive Law ~~MF~~ E

Masataka Sawada National Defense Academy
Keietsu Itamiya National Defense Academy

11:00-11:15 FrA11-03
Design of Model Reference Adaptive Control Systems Based on Virtual Error Method ~~MF~~ F€

Yuta Kochiyama Keio University
Hiromitsu Ohmori Keio University

11:15-11:30 FrA11-04
Virtual Feedback Error Learning Control ~~MF~~ Fí

Yamato Matsubara Nara Inst. of Science and Tech.
Makoto Noguchi Nara Inst. of Science and Tech.
Atsushi Satoh Iwate University
Kenji Sugimoto Nara Inst. of Science and Tech.

11:30-11:45 FrA11-05
High Gain Adaptive Control of Nonholonomic Systems with Uncertain Control Coefficients ~~MF~~ F

Ryuji Michino Kumamoto Industrial Research Inst.
Yoshihiko Sakamoto Kumamoto University
Ikuro Mizumoto Kumamoto University

FrA12	52-302
Control Theory and Design I	

Chair: Koichi Kobayashi Japan Advanced Inst. of Sci. & Tech.

10:30-10:45 FrA12-01
Game-Theoretic Consideration on Efficient Approximation of Maximal Output Admissible Sets by Multiple Ellipsoids ~~MF~~ G

Koji Kita Nara Inst. of Science and Tech.
Kiminao Kogiso Nara Inst. of Science and Tech.

10:45-11:00 FrA12-02
Development of a Simulator for Control Design of a Wave Maker ~~MF~~ H

Min-Fu Hsieh National Cheng Kung University
Chia-Ching Lin National Cheng Kung University
Hsieh-Yu Li National Cheng Kung University

11:00-11:15 FrA12-03
Automatic Method of Finding tolerance for Verified LQ control Method based on Verified Numerical Computation ~~MF~~ I €

Kentaro Yano Fukuoka Inst. of Tech. JC
Masanobu Koga Kyushu Inst. of Tech.

11:15-11:30 FrA12-04
A Pruning Method for Accumulated Rules by Genetic Network Programming ~~MF~~ I I

Lutao Wang Waseda University
Shingo Mabu Waseda University
Kotaro Hirasawa Waseda University


11:30-11:45 FrA12-05
An educational implementation of a course "Practical Sequence Control" at CIT -features of its lectures and experimental training sessions- ~~MF~~ í €


Yoshiaki Uezumi UEZUMI T&A ORG


FrA13	52-303
Robust Control I	
Chair: Yasumasa Fujisaki	Osaka University
Chair: Boe-Shong Hong	National Chung Cheng University
10:30-10:45	FrA13-01
<i>Iterative Design of the Reduced-order Weight and Controller for the H_∞ Loop-shaping Method under Open-loop Magnitude Constraints</i>	
Masashi Yamamoto	Mie University
Kazuhiro Yubai	Mie University
Junji Hirai	Mie University
10:45-11:00	FrA13-02
<i>Speeding up of Calculation for μ-synthesis of Low Order H_∞ Controllers</i>	
Takuma Iwamoto	Hiroshima University
Masami Saeki	Hiroshima University
Satoshi Satoh	Hiroshima University
11:00-11:15	FrA13-03
<i>Virtual Reference Feedback Tuning for H-infinity Controllers</i>	
Yasumasa Fujisaki	Osaka University
Kensuke Saitou	Kobe University
11:15-11:30	FrA13-04
<i>Synthesis of Robust Output Feedback Guaranteed Cost Controllers for a Class of Uncertain Linear Systems</i>	
Masaya TAKAZATO	The University of Tokushima
Hidetoshi OYA	The University of Tokushima
Hiroaki MUKAIDANI	Hiroshima University
11:30-11:45	FrA13-05
<i>Energy Management upon DC Electric Scooters with LPV Parameterization and Pareto Game-theoretics</i>	
Boe-Shong Hong	National Chung Cheng University
H.-M. Ju	National Chung Cheng University
S.-B. Chen	National Chung Cheng University
T.-Y. Lin	National Chung Cheng University
W.-J. Su	National Chung Cheng University
Mei-Hung Wu	Nanhua University
11:45-12:00	FrA13-06
<i>Robust Stability Analysis with Cycling-Based LPTV Scaling and Its Relationship with Lifting-Based Approach</i>	
Yohei Hosoe	Kyoto University
Tomomichi Hagiwara	Kyoto University


FrA14	52-304
Navigation, Guidance, and Control in Aerospace Systems I	
(Organized Session)	
Organizer: Tsutomu Ichikawa	Japan Aerospace Exploration Agency
Organizer: Yoshimasa Ochi	National Defense Academy
Chair: Yoshimasa Ochi	National Defense Academy
Chair: Tsutomu Ichikawa	Japan Aerospace Exploration Agency
10:30-10:45	FrA14-01
<i>PID controller design using fractional balanced reduction</i>	
Hiroyuki Kondo	National Defense Academy
Yoshimasa Ochi	National Defense Academy
Sho Sasano	National Defense Academy
10:45-11:00	FrA14-02
<i>Experiment of Collision Avoidance Control Law with Information Amount Feedback using Vehicle Model</i>	
Takehiro Higuchi	Yokohama National University
Kensuke Kokubu	Yokohama National University
Seiya Ueno	Yokohama National University
11:00-11:15	FrA14-03
<i>Anti-windup Design for Flexible Spacecraft Attitude Control System</i>	
Takeya Asakawa	University of Electro-Communications
Isao Yamaguchi	National Defense Academy of Japan
Yoshiro Hamada	Japan Aerospace Exploration Agency
Tokio Kasai	Japan Aerospace Exploration Agency
Tomoyuki Nagashio	Osaka Prefecture University
Takashi Kida	The University of Electro-Communications
11:15-11:30	FrA14-04
<i>Improvement of Guidance Law for Simultaneous Attack</i>	
Shunsaku Arita	Yokohama National University
Seiya Ueno	Yokohama National University
11:30-11:45	FrA14-05
<i>Orbital Maintenance for Observation mission of Peanut-Shaped Asteroid</i>	
Mai Bando	Kyoto University
Koichi Osuka	Osaka University
Takao Fujii	Fukui University of Tech.
Hiroshi Yamakawa	Kyoto University


FrB-IN	63-Gallery
Measurement, Control and Systems (Interactive)	
Interactive Session	


13:00-14:30 FrB-IN-01
ISO-GUM and Supplements are utilized for data of an assurance of BCA  F
 Yasuo IWAKI Chaos applied research office


13:00-14:30 FrB-IN-02
The Backscattering Cross Sections of Snow Particles and the Radar Reflectivity Factor  G H
 Mamoru Ota Toyama National College of Tech.
 Toru Shiina Toyama National College of Tech.
 Mamoru Kubo Kanazawa University
 Ken-ichiro Muramoto Kanazawa University


13:00-14:30 FrB-IN-03
A proposal of optical and electrical measurement method for tactile sensor using phototransistor.  G J
 Satoshi Tsuji Saga University
 Akira Kimoto Saga University
 Eiji Takahashi Saga University


13:00-14:30 FrB-IN-04
Wafer Positioning by Laser Scanning Method  H H
 Ju-Yi Lee National Central University
 Yi-Cheng Chen National Central University
 Jian-You Chen National Central University
 Yun-Yan Lee National Central University
 Yu-Bin Chen National Central University


13:00-14:30 FrB-IN-05
A Novel Non-Contact Hand Motion Classification Technique for Application to Human Machine Interfaces  H
 Koichi Kurita Kochi National College of Tech.


13:00-14:30 FrB-IN-06
Wireless Portable Sensor for Real-Time Data Collection in Human Walking Motion  I I
 Koichi Kurita Kochi National College of Tech.

13:00-14:30 FrB-IN-07
Estimation of the density of the snowfall particle using electric balances and 2DVD  I J
 Sho Horiuchi Kanazawa University
 Nobuhiro Shimaya Kanazawa University
 Karolina Nurzynska Kanazawa University
 Mamoru Kubo Kanazawa University
 Ken-ichiro Muramoto
 Ishikawa National College of Tech.
 Yasushi Fujiyoshi Hokkaido University

13:00-14:30 FrB-IN-08
Backscatter distribution analysis of the lower atmosphere layer with two optical lidars in the winter season  I I
 Kaoru Matsuda Kanazawa University
 Mamoru Kubo Kanazawa University
 Karolina Nurzynska Kanazawa University
 Ken-ichiro Muramoto
 Ishikawa National College of Tech.

13:00-14:30 FrB-IN-09
Size distribution and snowfall rate dependence for snow particles  I F
 Hiroyuki Kitayama Kanazawa University
 Mamoru Kubo Kanazawa University
 Karolina Nurzynska Kanazawa University
 Ken-ichiro Muramoto
 Ishikawa National College of Tech.

13:00-14:30 FrB-IN-10
Basis Examination for Nondestructive Qualitative Analysis of Textile by Infrared Absorption Features  I I
 Tomomi Dozono Shinshu University
 Hiroaki Ishizawa Shinshu University
 Shota Tokutake Shinshu University
 Yuki Takei Shinshu University
 Takashi Miki
 Japan Textile Products Quality and Tech. Center

13:00-14:30 FrB-IN-11
Real-time Measurement of Static Strain using Fiber Bragg Gratings with Optical Frequency Domain Reflectometry  I €
 Yukitaka Shinoda Nihon University
 Takashi Arai Nihon University
 Daichi Miyata Nihon University
 Takashi Higo Nihon University

13:00-14:30 FrB-IN-12
Consideration of Feature Extraction Based on Center of Gravity for Nihon Buyo Dancer using Motion Capture System ~~AFI~~ I I
 Yukitaka Shinoda Nihon University
 Yuta Watanabe Nihon University
 Yuki Mito Hitotsubashi University
 Reishi Watanuma Waseda University
 Mieko Marumo Nihon University

13:00-14:30 FrB-IN-13
A new tactile sensing device based on an absolute pressure sensor and force sensing register ~~AFI~~ I J
 Akihiko Kojima Hosei University
 Yuya Abe Hosei University
 Kazuyuki Kobayashi Hosei University
 Tomoyuki Ohkubo Hosei University
 Yosuke Kurihara Seikei University

13:00-14:30 FrB-IN-14
Robust Adaptive Control using Neural Network based on Lyapunov Techniques ~~AFI~~ I G
 Soo-Young Kim Dongseo University
 Tae-Seok Jin Dongseo University

13:00-14:30 FrB-IN-15
A modeling of pedestrian flow with psychologically-based personal spaces ~~AFI~~ I I
 Takashi Igakura Tokyo Metropolitan University
 Tsuyoshi Shimizu Tokyo Metropolitan University
 Ryota Ishibashi Tokyo Metropolitan University
 Akira Kojima Tokyo Metropolitan University

13:00-14:30 FrB-IN-16
A modeling of traffic flow with MLD system approach including the effect of human reaction delays ~~AFI~~ J G
 Hidenobu Yokoe Tokyo Metropolitan University
 Ryota Ishibashi Tokyo Metropolitan University
 Akira Kojima Tokyo Metropolitan University

13:00-14:30 FrB-IN-17
On-Line Physical Parameter Estimation by Using Model Reference Adaptive Control Method based on the Modified Delta Form ~~AFI~~ J I
 Tatsu Aoki
 Tokyo Metropolitan College of Industrial Tech.
 Seiichi Kawata Advanced Inst. of Industrial Tech.

13:00-14:30 FrB-IN-18
DGPS based autonomous excavator traction control mechanism ~~AFI~~ J E H
 Sun Lim Korea Electronic Tech. Inst.
 Bong-Seok Kim Korea Electronic Tech. Inst.

13:00-14:30 FrB-IN-19
A new decentralized sliding mode observer design for interconnected power systems with unknown and time-varying delay ~~AFI~~ J E I
 Ali Ashraf-Modarres Mapna Group
 Hamid-Reza Momeni Tarbiat Modares University

13:00-14:30 FrB-IN-20
Swing-up Control of the Cart-Pendulum System based on Discrete Mechanics ~~AFI~~ J F I
 Tatsuya Kai Kyushu University
 Kensuke Bito Fujitsu Limited

13:00-14:30 FrB-IN-21
Decoupling the Identification of Linear and Nonlinear Parts in Block-Oriented Nonlinear Models Using Subspace Identification Approach ~~AFI~~ J G E
 Jyh-Cheng Jeng National Taipei University of Tech.
 Chia-Hung Liu National Taipei University of Tech.

13:00-14:30 FrB-IN-22
Study of Visible Light Communication System Using RGB LED Lights ~~AFI~~ J G I
 Takuto Komiyama Hosei University
 Kazuyuki Kobayashi Hosei University
 Kajiro Watanabe Hosei University
 Tomoyuki Ohkubo Hosei University
 Yosuke Kurihara Seikei University

13:00-14:30 FrB-IN-23
Modeling for CBTC Car-borne ATP/ATO Functions and Its Applications ~~AFI~~ J G J
 Zhong-Hua Quan POSCO ICT
 Sun-Ah Choi POSCO ICT
 Dong-Hyuk Choi POSCO ICT
 Chan-Ho Cho POSCO ICT
 Gie-Soo Park POSCO ICT
 Myung-Seon Ryou POSCO ICT

13:00-14:30 FrB-IN-24
A Novel Method for Real-Time Wafer Positioning during Transfer Process ~~AFI~~ J H H
 Yi-Cheng Chen National Central University
 Yu-Pin Chen National Central University
 Ju-Yi Lee National Central University

13:00-14:30 FrB-IN-25
Implementation of a Wafer Positioning System ~~WJH~~
 Yi-Cheng Chen National Central University
 Yun-Yen Lee National Central University
 Ju-Yi Lee National Central University
 Jian-You Chen National Central University

13:00-14:30 FrB-IN-26
MODELING, SIMULATION AND DISTRIBUTED CONTROL OF ROBOTIC SYSTEMS USING PETRI NET BASED MULTITASK PROCESSING ~~WJH~~
 Gen'ichi Yasuda Nagasaki Inst. of Applied Science

13:00-14:30 FrB-IN-27
Evolving RoboCup Soccer Player Formations by Particle Swarm Optimization ~~WJH~~ €
 Hidehiko Okada Kyoto Sangyo University
 Tetsuya Wada Kyoto Sangyo University
 Akira Yamashita Kyoto Sangyo University

FrB-SP1 63-Gallery
Technical Divisions of SICE
 (Special Poster Session)

13:00-14:30
 Technical Division of Measurement
 Technical Division of Control
 Technical Division of Systems and Information
 Technical Division of System Integration
 Technical Division of Industrial Applications
 Technical Division of Life Engineering
 Committee for Technical Collaboration and Incubation
 Trans-division Technical Committee on Collaboration Development with JSAE

FrB-SP2 63-Gallery
Technical Division of Measurement
 (Special Poster Session)

13:00-14:30
 Steering Committee for Sensing Forum
 Technical Committee on Temperature Measurement
 Technical Committee on Mechanical Measurement
 Technical Committee on Remote Sensing
 Technical Committee on Pattern Measurement
 Technical Committee on Sensing Photonics
 Technical Committee on Advanced Electronic Metrology
 Technical Committee on Network Sensing Systems
 Technical Committee on Ambient Sensing
 Research Committee for Inverse Problems in Measurement

FrB-SP3 63-Gallery
Technical Division of Control
 (Special Poster Session)

13:00-14:30
 Technical Committee on Control Technology
 Technical Committee on Control Theory
 Technical Committee on Plant Modeling
 Research Committee for Adaptation and Learning Control in Industries
 Research Committee for Systems and Control Technology for Energy and Environment
 Research Committee for Autonomous Guidance and Control of Vehicles
 Research Committee for Advanced Process Opera-

tion Technology
Research Committee for Future Needs and Seeds for
Control Technology

FrB-SP4 63-Gallery

Technical Division of Systems and Information
(Special Poster Session)

13:00-14:30

Technical Committee on System Engineering
Technical Committee on Man-Machine Systems
Technical Committee on Intelligent Systems
Technical Committee on Biological and Physiological Engineering
Technical Committee on Autonomous Decentralized Systems
Technical Committee on Neural Networks
Technical Committee on Discrete Event Systems
Technical Committee on Social Systems
Research Committee for Advance Natural Computing and its Application
Research Committee for Molecular Robotics
Research Committee for Relationality-Oriented Systems Science

FrB-SP5 63-Gallery

Technical Division of System Integration
(Special Poster Session)

13:00-14:30

Technical Committee on Mechatronics System
Technical Committee on Automation
Technical Committee on Robotics
Technical Committee on Assistive Engineering
Technical Committee on Engineering in Virtual Reality
Technical Committee on Rescue Engineering
Technical Committee on Universal Design
Technical Committee on Interaction and Intelligence
Technical Committee on Co-creation System
Technical Committee on TC for Robot Therapy
Technical Committee on Safe, Secure, and Reliable Society
Technical Committee on Biosystem
Technical Committee on RT System Integration
Technical Committee on Soft Materials
Technical Committee on Integrated Medical Engineering
Technical Committee on Artificial Life Body System

Technical Committee on Haptics
Technical Committee on Biomimetic Machines
Technical Committee on Motion Media
Technical Committee on “Kuukanchi”
Research Committee for Intelligent Vehicle
Research Committee for Tele-Operation Technology for Robotic Explorations in Active Volcano Area
Research Committee for Swarm Robotics
Research Committee for Lifestyle Innovation Technology

FrB-SP6 63-Gallery

Technical Division of Industrial Applications
(Special Poster Session)

13:00-14:30

Technical Committee on Strategic Collaboration Activities
Technical Committee on Flow Measurement and Fluid Control
Technical Committee on Instrument and Control Networks
Measurement and Control Engineer

FrB-SP7 63-Gallery

Technical Division of Life Engineering
(Special Poster Session)

13:00-14:30

Technical Committee on Integrative Biophysical Engineering and Informatics
Technical Committee on Electrophysiology and Kinesiology
Technical Committee on Ubiquitous Healthcare

FrC02	63-03
Sensors and Transducers	

Chair: Toshiyuki Hayashi
National Metrology Inst. of Japan/AIST
Chair: Tokihiko Kobata
National Metrology Inst. of Japan/AIST

15:00-15:15 FrC02-01
Analysis, Simulation, and Experimental Investigations of a One Dimensional Touch Panel Based on Strain Sensing 堀江 功

Chia-Hsing Pi	National Cheng-Kung University
Kuang-Shun Ou	National Cheng-Kung University
Ming-Hsin Chen	National Cheng-Kung University
Kuo-Shen Chen	National Cheng-Kung University

15:15-15:30 FrC02-02
Remote Measurement of Surface Compliance Distribution for Haptic Broadcasting 藤井 大

Masahiro Fujiwara	The University of Tokyo
Kei Nakatsuma	The University of Tokyo
Hiroyuki Shinoda	The University of Tokyo

15:30-15:45 FrC02-03
The Detection of Second Harmonic Components of Lamb Waves Generated from Fatigue Plate Using a Double-Layered Piezoelectric Transducer 堀江 功

Makoto Fukuda	Akita University
Kazuhiko Imano	Akita University
Hideki Yamagishi	Toyama Industrial Tech. Center
Katsuhiro Sasaki	Toyama Industrial Tech. Center

15:45-16:00 FrC02-04
Localization of Mobile Robots Based on Omni-Directional Ultrasonic Sensing 堀江 功

Chen-Chien Hsu	National Taiwan Normal University
Chien-Yu Lai	Tamkang University
Chisato Kanamori	The University of Electro-Communications
Hisayuki Aoyama	The University of Electro-Communications
Ching-Chang Wong	Tamkang University

16:00-16:15 FrC02-05
Portable and Low-Cost Measurement Systems for Innovative Engineering Design Courses 堀江 功

Yucel Ugurlu	National Instruments Japan
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16:15-16:30 FrC02-06
Impedance force control of robot hand using pressure sensor 堀江 功

Daisuke Kobayashi	Hosei University
Kajiro Watanabe	Hosei University
Kazuyuki Kobayashi	Hosei University
Yosuke Kurihara	Seikei University

FrC03	63-04
Advanced Pattern Measurement II	
(Organized Session)	

Organizer: Toshiyuki Tanaka	Keio University
Organizer: Shinpei Okawa	
The University of Electro-Communications	
Chair: Toshiyuki Tanaka	Keio University
Chair: Yoshimitsu Aoki	Keio University

15:00-15:15	FrC03-01
<i>Player Position Estimation by Monocular Camera for Soccer Video Analysis</i>	
MFJJÍ	

Hirokatsu Kataoka	Keio University
Kiyoshi Hashimoto	Keio University
Yoshimitsu Aoki	Keio University

15:15-15:30	FrC03-02
<i>A tracking method of multiple moving objects for animal watch sensor systems - Measures for random mobility and the problem with connection and separation -</i>	
MFJJF	
Dongji Nan	

The University of Electro-Communications	
Soichiro Morishita	The University of Tokyo
Hiroshi Yokoi	
The University of Electro-Communications	

15:30-15:45	FrC03-03
<i>Extraction Method of Glandular Areas in Prostate Biopsy Image</i>	
MFJJÍ	

Yoshiteru Toki	Keio University
Toshiyuki Tanaka	Keio University

15:45-16:00	FrC03-04
<i>Building Detection and City Analysis using Aerial Images</i>	
MFJJJ	

Satoshi Nakamura	Keio University
Yoshimitu Aoki	Keio University

16:00-16:15	FrC03-05
<i>3D Object Tracking by Pan-Tilt Moving Cameras and Robot Using Sparse Template Matching and Particle Filter</i>	
MFCEI	

Hiroyuki Ukida	The University of Tokushima
Masayuki Kawanami	The University of Tokushima
Yasuhiro Terama	The University of Tokushima

16:15-16:30	FrC03-06
<i>Rotation of multi-zeros optical beam during propagation and its application to distance measurement</i>	
MFCE	
Hideyuki Miyahara	The University of Tokyo
Yulan Qi	The University of Tokyo
Toru Kurihara	The University of Tokyo
Shigeru Ando	The University of Tokyo

FrC04	63-05
Networked Sensor System II	
Chair: Kazuma Sekiguchi	Tokyo Inst. of Tech.
15:00-15:15	FrC04-01
<i>GPS Implementation in Sensing Node Network System for Landslide Disaster</i> MOE FI	
binti Tuan Sariff Syarifah Sarina	Ritsumeikan University
Shintarou Taenaka	Ritsumeikan University
SHIGERU TAKAYAMA	Ritsumeikan University
15:15-15:30	FrC04-02
<i>Estimation Method of Dynamic Behaviors of Network Sensing Node at Landslide Disaster</i> MOE FI J	
Kousuke Taneda	Ritsumeikan University BKC
Shotaro Niimi	Ritsumeikan University BKC
binti Tuan Sariff Syarifah Sarina	Ritsumeikan University BKC
Shigeru TAKAYAMA	Ritsumeikan University BKC
15:30-15:45	FrC04-03
<i>A Data Collection System in Wireless Network Integrated WSN and ZIGBEE for Bridge Health Diagnosis</i> MOE FI G	
Haitao Xiao	Waseda University
Yixuan Gong	Waseda University
Harutoshi Ogai	Waseda University
Jie Zhang	Waseda University
Xiaohong Zou	Logical Product Corporation
Takenari Ottawa	Logical Product Corporation
Takunori Tsuji	Logical Product Corporation
15:45-16:00	FrC04-04
<i>Performance Evaluation of Route Cost for Wireless Sensor Networks with a Mobile Sink</i> MOE FI G J	
Yamaimaiti Nizhamudong	Iwate University
Naoshi Nakaya	Iwate University
Yukari Hagihara	Iwate University
Yuji Kouji	Iwate University
16:00-16:15	FrC04-05
<i>Position and Heading Tracking in Sensor Network via Instrumental Variable Estimation</i> MOE FI G H	
Ga Hyung Choi	Yonsei University
Hyo Seok Cheon	Changwon National University
Jin Bae Park	Yonsei University
Tae Sung Yoon	Changwon National University

16:15-16:30	FrC04-06
<i>A Network-Centric Approach to Sensor-data and Service Integration</i> MOE FI G H	
Takafumi Hayashi	The University of Aizu
Hideyuki Fukuhara	Net One Systems Co., Ltd.
Masayuki Hisada	NST, Inc.
Kazunori Suzuki	The University of Aizu
Takuto Yamada	The University of Aizu
Yodai Watanabe	The University of Aizu
Junya Terazono	The University of Aizu
Taro Suzuki	The University of Aizu
Toshiaki Miyazaki	The University of Aizu
Senro Saito	The University of Aizu
Isamu Kosedo	Net One Systems Co., Ltd.
Jiro Iwase	The University of Aizu

FrC05 52-101
International Standardization for Low-Carbon Society
 (Organized Session)

Organizer: Hisashi Sasajima Yamatake Corporation
 Chair: Hisashi Sasajima Yamatake Corporation
 Chair: Takeshi Ikeda Fuji Electric Corporation

15:00-15:15 FrC05-01
Strategic Approach for International Standardization in the Industrial Process Automation for realizing “Low-Carbon Society” ~~MOE~~ H

Akira Kobayashi Teikyo Heisei University
 Hisashi Sasajima Yamatake Corp.

15:15-15:30 FrC05-02
The Latest Updates on International Standardization Activities to Realize the Safe and Reliable Human Environment ~~MOE~~ I

Akio Fukada
 Toshiba IT & Control Systems Corporation

15:30-15:45 FrC05-03
Introduction of recent SC65E activity for digital factory concept ~~MOE~~ I

Takashi Ikeda Fuji Electric Co., Ltd.
 Hiroshi Yamazaki Yamatake Corporation

15:45-16:00 FrC05-04
International Standardization for Low-Carbon Society -Status of Energy Efficiency and Environmental Guidelines- ~~MOE~~ I

Toru Ishikuma Yamatake Corporation

16:00-16:15 FrC05-05
Industrial Wireless Standardization- Scope and Implementation of ISA SP100 Standard ~~MOE~~ J

Toshi Hasegawa Yokogawa Electric Corporation
 Hisanori Hayashi Yokogawa Electric Corporation
 Tsuyoshi Kitai Yamatake Corporation
 Hisashi Sasajima Yamatake Corporation

FrC06 52-102
ICT Applications in Food Productions II
 (Organized Session)

Organizer: Takaharu Kameoka Mie University
 Organizer: Atsushi Hashimoto Mie University
 Organizer: Hiroaki Ishizawa Shinshu University
 Organizer: Masayuki Hirafuji NARO
 Chair: Masaru Mizoguchi University of Tokyo
 Chair: Takuji Kiura NARC, NARO

15:00-15:15 FrC06-01
Development of Agricultural Monitoring Application as Media for Social Interaction ~~MOE~~ I

Kazuki Kobayashi Shinshu University
 Fumitoshi Kobayashi Shinshu University
 Yasunori Saito Shinshu University

15:15-15:30 FrC06-02
Field Monitoring System Using Agri-Server ~~MOE~~ J

Kazuya KANDA Tsuruoka National College of Tech.
 Tadashi ISHII Jisedaitech L.P
 Takaharu KAMEOKA Mie University
 Kouhei SAITOH

Tsuruoka National College of Tech.
 Ryousuke SUGANO
 Tsuruoka National College of Tech.

15:30-15:45 FrC06-03
Construction of a Stereo Camera Sensor Network Device for the Breeding Database ~~MOE~~ H

Isamu Sugita
 Toba National College of Maritime Tech.
 Katsura Iwamoto
 Toba National College of Maritime Tech.
 Kazuaki Shiraishi
 Toba National College of Maritime Tech.
 Takaharu Kameoka Mie University

15:45-16:00 FrC06-04
Comparison of low-cost field monitoring system based on Linux ~~MOE~~ J

Ryoei Ito Mie University

16:00-16:15 FrC06-05
Approaching the measurement about human behavior and environmental behavior by “Guideware”. ~Application possibility of “Guideware”~ (Report 1) ~~MOE~~ I

Reiji Takashide Kozo Keikaku Engineering Inc.
 Yoshiyuki Chigusa Kozo Keikaku Engineering Inc.
 Shunichi Takahira Kozo Keikaku Engineering Inc.

16:15-16:30 FrC06-06
Creating High-performance/Low-cost Ambient Sensor Cloud System Using OpenFS (Open Field Server) for High-throughput Phenotyping ~~ACEJ~~
 Masayuki Hirafuji NARO and University of Tsukuba
 Hideo Yoichi NARO
 Takuji Kiura NARO
 Keiko Matsumoto NARO
 Tokihiro Fukatsu NARO
 Kei Tanaka NARO
 Yukinori Shibuya NARO
 Atsushi Itoh NARO
 Hirohisa Nesumi NARO
 Norihiro Hoshi NARO
 Seishi Ninomiya University of Tokyo
 J. Adinarayana Indian Inst. of Tech. Bombay
 D. Sudharsan Indian Inst. of Tech. Bombay
 Yasunori Saito Shinshu University
 Kazuki Kobayashi Shinshu University
 Takanobu Suzuki
 Nagano Prefecture Agricultural Experiment Station

FrC07 52-103
Biological Systems

Chair: Toshiyuki Kondo
 Tokyo University of Agric and Tech.
 Chair: Kenji Kashima Tokyo Inst. of Tech.

15:00-15:15 FrC07-01
Connection Profile Robustness in a Heterogeneous Network of Piecewise Affine FitzHugh-Nagumo Models ~~ACEJH~~
 Kenji Kashima Tokyo Inst. Tech.
 Antonis Papachristodoulou University of Oxford
 Frank Allgower Stuttgart University

15:15-15:30 FrC07-02
Dynamics-Switching Optimal Control Model for Human Sitting Movements on Chair ~~ACEJJ~~
 Kazunori Wada Gunma University
 Toshikazu Matsui Gunma University
 Nobuaki Nakazawa Gunma University

15:30-15:45 FrC07-03
Analysis of Motor Skills for Throwing Darts: Measurement of Release Timing ~~ACEI~~
 Hiroshi Yamaguchi
 Tokyo University of Agriculture and Tech.
 Toshiyuki Kondo
 Tokyo University of Agriculture and Tech.

15:45-16:00 FrC07-04
Local Stability Analysis for a class of Quorum-Sensing Networks with Cyclic Gene Regulatory Networks ~~ACEFF~~
 Tomohiko Nakamura The University of Tokyo
 Shinji Hara The University of Tokyo
 Yutaka Hori The University of Tokyo

FrC08	52-201
Man-Machine Systems	
Chair: Toshihisa Sato	AIST
Chair: Kohei Okabe	JNIO SH
15:00-15:15	FrC08-01
<i>Automated Extraction of Non <h>-tagged Headers in Webpages by Decision Trees</i>	
Hidehiko Okada	Kyoto Sangyo University
Hiroki Arakawa	Kyoto Sangyo University
15:15-15:30	FrC08-02
<i>Keystroke Timing Analysis for Personal Authentication in Japanese Long Text Input</i>	
Toshiharu Samura	Akashi National College of Tech.
Haruhiko Nishimura	University of Hyogo
15:30-15:45	FrC08-03
<i>Application and Evaluation of Augmented Reality User Interface to a Card Game "Scopa"</i>	
Hidehiko Okada	Kyoto Sangyo University
Takashi Matsuse	Kyoto Sangyo University
15:45-16:00	FrC08-04
<i>A basis of safety design for cooperative human-machine system</i>	
Kohei Okabe	JNIO SH
Hiroyasu Ikeda	JNIO SH
16:00-16:15	FrC08-05
<i>Analysis of Drivers Control Methods of Task Demands Based on Behavioral Data in Actual Road Environments</i>	
Toshihisa Sato	AIST
Motoyuki Akamatsu	AIST
16:15-16:30	FrC08-06
<i>Wireless Group Manipulation of Autonomously Guided Mobile Robots for Smart Living Space Applications</i>	
Ming-Hsin Chen	National Cheng-Kung University
D. Gu	National Cheng-Kung University
Y.-D. Fu	National Cheng-Kung University
Chia-Hsing Pi	National Cheng-Kung University
K.-S. Ou	National Cheng-Kung University
Kuo-Shen Chen	National Cheng-Kung University

FrC09	52-202
Mobile Robot II	
Chair: Masahiko Mikawa	University of Tsukuba
Chair: Harutoshi Ogai	Waseda University
15:00-15:15	FrC09-01
<i>Development of Visual Odometry Component by Using Omni-directional Camera</i>	
Tadayuki Yokota	Hosei University
Kajiro Watanabe	Hosei University
Kazuyuki Kobayashi	Hosei University
Yousuke Kurihara	Seikei University
15:15-15:30	FrC09-02
<i>Virtual Camera View Composing Method Using Monocular Camera for Mobile Robot Teleoperation</i>	
Masahiko Mikawa	University of Tsukuba
Yoshihisa Ouchi	University of Tsukuba
Kazuyo Tanaka	University of Tsukuba
15:30-15:45	FrC09-03
<i>Sign-at-ease: Robot navigation system operated by connoted shapes drawn with laser beam</i>	
Yoshihiro Minato	Saga University
Takeshi Tsujimura	Saga University
Kiyotaka Izumi	Saga University
15:45-16:00	FrC09-04
<i>Wireless Indoor Surveillance Robot</i>	
Hou-Tsan Lee	Takming University of Sci. & Tech.
Wei-Chuan Lin	Takming University of Sci. & Tech.
Ching-Hsiang Huang	Takming University of Sci. & Tech.
Yu-Jhih Huang	Takming University of Sci. & Tech.
16:00-16:15	FrC09-05
<i>Development of Automatic Driving System by Robocar</i>	
Xin ZHAO	Waseda University
Nan WU	Waseda University
Yunfeng LOU	Waseda University
Harutoshi OGAI	Waseda University
16:15-16:30	FrC09-06
<i>Study on a Self-Sustain of a Robotic Bike and GPS Positioning Measurement for an Autonomic Run of it</i>	
Yoshinori Kudo	Keio University
Toshiyuki Tanaka	Keio University

FrC10	52-203
Robot Technology (RT) System	
Chair: Hajime Asama	The University of Tokyo
Chair: Akira Shimada	Shibaura Inst. of Tech.
15:00-15:15	FrC10-01
<i>Development of Open Humanoid Platform DARwIn-OP</i>	
Inyong Ha	The University of Tokyo
Yusuke Tamura	The University of Tokyo
Hajime Asama	The University of Tokyo
Jeakweon Han	Virginia Tech.
Dennis Hong	Virginia Tech.
15:15-15:30	FrC10-02
<i>Flexible, Adaptable and Cost-Effective Seismometer with Linux-Based Embedded System: R-NON</i>	
Pasakorn Tiwatthanont	NECTEC
Pakorn Lopattanakij	NECTEC
Nathavuth Kitbutrawat	NECTEC
Jittiwut Suwatthikul	NECTEC
Udom Lewlomphaisarl	NECTEC
15:30-15:45	FrC10-03
<i>Development of JAUS-Compliant Controller Using Python</i>	
Takumi Cho	Hosei University
Kazuyuki Kobayashi	Hosei University
Kajiro Watanabe	Hosei University
Tomoyuki Ohkubo	Hosei University
Yosuke Kurihara	Seikei University
15:45-16:00	FrC10-04
<i>An Approach to SysML and Simulink Based Motion Controller Design for Inverted Pendulum Robots</i>	
Danai Phaoharuhansa	Shibaura Inst. of Tech.
Akira Shimada	Shibaura Inst. of Tech.
16:00-16:15	FrC10-05
<i>Development of a Load Detecting System with Three-Valued Output for Construction Manipulator</i>	
Mitsuhiro Kamezaki	Waseda University
Kosuke Nakamura	Waseda University
Satoshi Hashimoto	Waseda University
Hiroyasu Iwata	Waseda University
Shigeki Sugano	Waseda University

FrC11	52-301
Adaptive and Learning Control	
Chair: Tatsu Aoki	Tokyo Met. College of Industrial Tech.
Chair: Takayuki Yamada	Ibaraki University
15:00-15:15	FrC11-01
<i>Input-Dependent Adaptive Immersion and Invariance Control</i>	
Nobuhiro Fujii	Osaka University
Toshiyuki Ohtsuka	Osaka University
15:15-15:30	FrC11-02
<i>The Simulation Analysis of the Hot Stove Effect in Repeated-play Decision Making under Ambiguity</i>	
Takemi Fujikawa	Universiti Sains Malaysia
Yohei Kobayashi	Universiti Sains Malaysia
15:30-15:45	FrC11-03
<i>Discussion of Neural Network Controllers from the point of view of Inverse Dynamics and Folding Behavior</i>	
Takayuki Yamada	Ibaraki University
15:45-16:00	FrC11-04
<i>Optimal Number of Neurons for a Two Layer Neural Network Model of a Process</i>	
Mahsa Sadegh asadi	K. N. Toosi University of Tech.
Alireza Fatehi	K. N. Toosi University of Tech.
Mehrdad Hosseini	K. N. Toosi University of Tech.
Ali Khaki sedigh	K. N. Toosi University of Tech.
16:00-16:15	FrC11-05
<i>Adaptive Clustering of Multi-Agent Systems</i>	
Hirofumi Ueno	The University of Tokyo
Takashi Okajima	The University of Tokyo
Koji Tsumura	The University of Tokyo

FrC12	52-302
Control Theory and Design II	
Chair: Kentaro Yano	Fukuoka Inst. of Tech.
Chair: Noriyuki Hori	Tsukuba University
15:00-15:15	FrC12-01
<i>Parallel Genetic Network Programming for Self-Sufficient Trash Collecting Problem</i>	
Xu Xian	Waseda University
Shingo Mabu	Waseda University
Yang Yang	Waseda University
Kotaro Hirasawa	Waseda University
15:15-15:30	FrC12-02
<i>Linear Descriptor Systems and Their Exact Discrete-Time Model</i>	
Shin Kawai	University of Tsukuba
Noriyuki Hori	University of Tsukuba
15:30-15:45	FrC12-03
<i>Adaptive Consensus of Discrete-Time Heterogeneous Multi-agent Systems</i>	
Takashi Okajima	The University of Tokyo
Koji Tsumura	The University of Tokyo
Tomohisa Hayakawa	Tokyo Inst. of Tech.
Hideaki Ishii	Tokyo Inst. of Tech.
15:45-16:00	FrC12-04
<i>A lightweight model predictive controller for repetitive discrete event systems</i>	
Hiroyuki Goto	Nagaoka University of Tech.
Tatsuki Yoshizumi	Nagaoka University of Tech.
16:00-16:15	FrC12-05
<i>On Optimality and Integrity of Plug-In Optimal Control</i>	
Koichi Osuka	Osaka University
Takao Fujii	Fukui Inst. of Tech.
Mai Bando	Kyoto University

FrC13	52-303
Robust Control II	
Chair: Takeshi Hatanaka	Tokyo Inst. of Tech.
15:00-15:15	FrC13-01
<i>Nonsingular Terminal Sliding Surface with Rational Exponent</i>	
Yong-Hwa Lee	Korea University
Seong Kyun Jeong	Korea University
Kang-Bak Park	Korea University
15:15-15:30	FrC13-02
<i>A minimal order observer-based guaranteed cost controller for uncertain time-delay systems</i>	
Erwin Susanto	Kumamoto University
Mitsuaki Ishitobi	Kumamoto University
Sadaaki Kunimatsu	Kumamoto University
Daisuke Matsunaga	Kumamoto University
15:30-15:45	FrC13-03
<i>A Design Method of Compensator to Minimize Model Error</i>	
Hironori Umei	Kumamoto University
Hiroshi Okajima	Kumamoto University
Nobutomo Matsunaga	Kumamoto University
Toru Asai	Osaka University
15:45-16:00	FrC13-04
<i>Non-Fragile Controller Design for Descriptor Delay Systems</i>	
Yusuke Suzuki	Aoyama Gakuin University
Yuzu Uchida	Aoyama Gakuin University
Jun Yoneyama	Aoyama Gakuin University
16:00-16:15	FrC13-05
<i>Some Remarks on Noncausal Systems Design for Linear Continuous-Time Markovian Jump Systems from the Point of View of Computational Algorithms</i>	
Gou Nakura	No affiliation
16:15-16:30	FrC13-06
<i>Design of Fixed Structural Controller Satisfying Robust Performance Condition on Nyquist Diagram</i>	
Taro Nagasaka	Mie University
Kazuhiro Yubai	Mie University
Junji Hirai	Mie University

FrC14	52-304
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Navigation, Guidance, and Control in Aerospace Systems II
(Organized Session)

Organizer: Tsutomu Ichikawa Japan Aerospace
Exploration Agency
Organizer: Yoshimasa Ochi National Defense Academy
Chair: Yoshimasa Ochi National Defense Academy
Chair: Tsutomu Ichikawa
Japan Aerospace Exploration Agency

15:00-15:15	FrC14-01
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Dynamical Simulations for Space Debris Capture ~~WGC~~ H
Shin-Ichiro Nishida JAXA
Satomi Kawamoto JAXA

15:15-15:30	FrC14-02
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Simultaneous control for position and vibration of planetary rover with flexible wheels ~~WGC~~ I
Masatsugu Otsuki JAXA
Shinichiro Narita JAXA
Sachiko Wakabayashi JAXA
Shinichiro Nishida JAXA

15:30-15:45	FrC14-03
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The angular position estimation for the moving space-craft using two rotating tracking stations ~~WGC~~ H
Tsutomu Ichikawa
Japan Aerospace Exploration Agency (JAXA)

15:45-16:00	FrC14-04
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Parameter Estimation of Aircraft Dynamics via Un-scented Smoother Using Multiple Data Sets ~~WGC~~ J
Nobuhiro Yokoyama National Defense Academy

**Technical Program for
Saturday September 17, 2011**

SaPL	63-201/202
Plenary Talk IV	

Chair: Hiromi Mochiyama University of Tsukuba

9:00-10:00

Smart robot and sensor design: From small intestine to the moon

Max Q.-H. Meng

The Chinese University of Hong Kon

SaA01	63-201/202
Biomedical engineering I	

Chair: Toshiyuki Tanaka Keio University
Chair: Seichiro Katsura Keio University

10:30-10:45 SaA01-01

The reusable glucose fiber sensor for the glucose absolute concentration measurement with heterodyne interferometry

~~WGH~~

Cheng-Chih Hsu Yuan Ze University

Shou-Heng Liang Yuan Ze University

Ju-Yi Lee National Central University

Chyan-Chyi Wu Tamkang University

Mao-Chen Liu National Nano Device Laboratories

10:45-11:00 SaA01-02

Detection of Surface Myoelectric Signals Using a Small Number of Electrodes

~~WGH~~

Kazuma Tomizawa Hosei University

Kajiro Watanabe Hosei University

Kazuyuki Kobayashi Hosei University

Yosuke Kurihara Seikei University

11:00-11:15 SaA01-03

Development of Unconstrained Biosignal Bed Sensing Method Using Piezoceramics to Detect Body Movement and Scratching Motion

~~WGH~~

Toshihiro Shino Hosei University

Shoko Nukaya

Tokyo Medical and Dental University

Yosuke Kurihara Seikei University

Kajiro Watanabe Hosei University

Hiroshi Tanaka

Tokyo Medical and Dental University

11:15-11:30 SaA01-04

Development of System for Unrestrained Measurement of Vital Signs in the Bathroom

~~WGH~~

Yushi Fujita Hosei University

Kajiro Watanabe Hosei University

Kazuyuki Kobayashi Hosei University

Yosuke Kurihara Seikei University

11:30-11:45 SaA01-05

Development of Sensing Device to Detect Human Hiding in a Car

~~WGH~~

Daisuke Mamiya Hosei University

Kajiro Watanabe Hosei University

Kazuyuki Kobayashi Hosei University

Yosuke Kurihara Seikei University

11:45-12:00 SaA01-06
BCI Based on Single EEG Used Simple Electroencephalography ~~WCH~~
 Tadahiro Oyama Kobe City College of Tech.
 Keita Higashi Kobe City College of Tech.
 Hillary Kipsang Choge The University of Tokushima
 Stephen Githinji Karungaru The University of Tokushima
 Satoru Tsuge Daido University
 Minoru Fukumi The University of Tokushima

SaA02 63-03
Inverse Problems I
 (Organized Session)

Organizer: Tadashi Ito Gunma University
 Chair: Kenbu Teramoto Saga University
 Chair: Tadashi Ito Gunma University

10:30-10:45 SaA02-01
Estimation by Regularized Process Tomography of Partially Filled Flow with Electro-Magnetic Induction ~~WCH~~
 Miki Sakuratani Keio University
 Satoshi Honda Keio University

10:45-11:00 SaA02-02
Analysis of the MEG Source Localization Method Combining Signal Space Separation and Magnetic Field Tomography ~~WCH F~~
 Tadashi Kitahara Keio University
 Satoshi Honda Keio University

11:00-11:15 SaA02-03
Discrete Fourier Coil for Localization of a Magnetic Dipole ~~WCH I~~
 Motoyuki Fujieda The University of Electro-Communications
 Hiroaki Tateno The University of Electro-Communications
 Takaaki Nara The University of Electro-Communications
 Mitsuo Hashimoto Polytechnic College Aomori

11:15-11:30 SaA02-04
Two-dimensional Localization of an RFID Tag by Using a Weighted Integral Sensor on a Square Boundary ~~WCH E~~
 Akihiro Chiba The University of Electro-Communications
 Takaaki Nara The University of Electro-Communications

11:30-11:45 SaA02-05
Divergence form of Euler's equation for magnetic dipole localization ~~WCH I~~
 Takaaki Nara The University of Electro-Communications
 Hirotooshi Watanabe The University of Electro-Communications
 Wataru Ito The University of Electro-Communications

SaA03	63-04
Signal Processing	

Chair: Koji Ogushi
National Metrology Inst. of Japan/AIST
Chair: Takanori Yamazaki
Oyama National College of Tech.

10:30-10:45 SaA03-01
Supervised Iterative Learning Algorithm for Eigenspace Models

Yohei Takeuchi	The University of Tokushima
Momoyo Ito	The University of Tokushima
Koji Kashihara	The University of Tokushima
Minoru Fukumi	The University of Tokushima

10:45-11:00 SaA03-02
Operational Conveyor-based Interface Circuit for Differential Resistive Sensors

Prasit Julsereewong
King Mongkut's Inst. of Tech. Ladkrabang
Amphawan Julsereewong
King Mongkut's Inst. of Tech. Ladkrabang
Thongchai Najaroen
King Mongkut's Inst. of Tech. Ladkrabang

11:00-11:15 SaA03-03
A High-Speed CMOS OP Amplifier with a Dynamic Switching Bias Circuit

Hiroo Wakaumi
Tokyo Metropolitan College of Industrial Tech.

11:15-11:30 SaA03-04
Simple Vector Summation Circuit Using Opamps

Thawatchai Kamsri
King Mongkut's Inst. of Tech. Ladkrabang
Amphawan Julsereewong
King Mongkut's Inst. of Tech. Ladkrabang
Anucha Keawpoonsuk Naresuan University
Wandee Petchmaneelumka
King Mongkut's Inst. of Tech. Ladkrabang
Vanchai Riewruja
King Mongkut's Inst. of Tech. Ladkrabang

11:30-11:45 SaA03-05
FPGA Implementation of Digital Differentiator Using Richardson Extrapolation and High Sampling Rate Acting Like Fractional Delay

Yasuaki Kaneda
Tokyo Metropolitan Industrial Tech. Research Inst.
Teruyoshi Sadahiro
Sasebo National College of Tech.
Masaki Yamakita Tokyo Inst. of Tech.

11:45-12:00 SaA03-06
Synthesis of Simple Interface Circuit Based on Time-Period Detection Technique for Capacitance Measurement

ANUCHA KAEWPOONSUK Naresuan University
APINAI RERKRATN
King Mongkut's Inst. of Tech. Ladkrabang

SaA04	63-05
Remote Sensing	
Chair: Senya Kiyasu	Nagasaki University
Chair: Hiroyuki Shinoda	The University of Tokyo
10:30-10:45	SaA04-01
<i>Magnitude estimation algorithm in seismic data acquisition application</i>	
Kittipong Sangkarak	National Electronics and Computer Tech. Center
Jasada Kudtongngam	National Electronics and Computer Tech. Center
U. Lewlomphaisarl	National Electronics and Computer Tech. Center
10:45-11:00	SaA04-02
<i>Practical Improvements of an Intelligent Medicine Case Based on User's Comments</i>	
Takuo Suzuki	University of Tsukuba
Yuta Jose	University of Tsukuba
Yasushi Nakauchi	University of Tsukuba
11:00-11:15	SaA04-03
<i>Remote Compliance Measurement Method Using Ultrasound Phased Array</i>	
Keiko Yokoyama	The University of Tokyo
Kei Nakatsuma	The University of Tokyo
Masahiro Fujiwara	The University of Tokyo
Masafumi Takahashi	The University of Tokyo
Hiroyuki Shinoda	The University of Tokyo
11:15-11:30	SaA04-04
<i>Semi-Supervised Method for Land Cover Classification of Remotely Sensed Image Considering Spatial Arrangement of the Pixels</i>	
Senya Kiyasu	Nagasaki University
Yuta Uraguchi	Nagasaki University
Kotaro Sonoda	Nagasaki University
Tomoya Sakai	Nagasaki University
11:30-11:45	SaA04-05
<i>Zero-Correlation Zone Sequence Sets having Subsets and Its Application to Instrumentation</i>	
Takafumi Hayashi	The University of Aizu
Takao Maeda	The University of Aizu
Shigeru Kanemoto	The University of Aizu
Satoshi Okawa	The University of Aizu

11:45-12:00	SaA04-06
<i>Initial Value Analysis of a Nonlinear Least-Square Method for Indoor Doppler Positioning with a Single Pseudolite</i>	
Yoshihiro Sakamoto	Waseda University
Hiroaki Arie	Riken
Takuji Ebinuma	The University of Tokyo
Kenjiro Fujii	
Hitachi Industrial Equipment Systems Co., Ltd.	
Shigeki Sugano	Waseda University

SaA05 52-101
Control and Measurement for industrial applications

Chair: Shigeru Oho Hitachi, Ltd.
 Chair: Cheng-Kai Lin National Taiwan University

10:30-10:45 SaA05-01
Development of High Accuracy Position Making System Applying Mark Robot in Construction Site ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Fumihiko Inoue Obayashi Corp.
 Satoru Doi Obayashi Corp.
 Eri Omoto Obayashi Corp.

10:45-11:00 SaA05-02
A Method of Input-Output Conditions for Automatic Program Generation using Petri Nets ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Masahiro Osogami Fukui University of Tech.
 Teruya Yamanishi Fukui University of Tech.
 Katsuji Uosaki Fukui University of Tech.

11:00-11:15 SaA05-03
Microchip Analysis Device for Fixed Caenorhabditis elegans by Tapered Micro channel ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Jaehoon Jung Nagoya University
 Masahiro Nakajima Nagoya University
 Masaru Kojima Nagoya University
 Toshio Fukuda Nagoya University

11:15-11:30 SaA05-04
A Novel Current-Slope Estimation Strategy for Sensorless Position Control of IPMSM without High-Frequency Signal Injection ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Cheng-Kai Lin National Taiwan University
 Li-Chen Fu National Taiwan University
 Tian-Hua Liu
 National Taiwan University of Science and Tech.


11:30-11:45 SaA05-05
The Study of Electric Field Distribution of Cylindrical Cavity Resonator with Two Waveguide Transmitters for Granular Material Dielectric Measurement ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Navapadol Kittiamornkul
 King Mongkut's University of Tech. Thonburi
 Orrathai Watcharakitchakorn
 King Mongkut's University of Tech. Thonburi
 Kamon Jirasereeamornkul
 King Mongkut's University of Tech. Thonburi
 Kosin Chamnongthai
 King Mongkut's University of Tech. Thonburi
 Kohchi Higuchi
 The University of Electro-Communications

11:45-12:00 SaA05-06
Implementation Analysis of Control Schemes for Choosing a Microcontroller ~~W~~ ~~G~~ ~~F~~ ~~H~~
 Kenta Morishima
 Central Research Laboratory, Hitachi, Ltd.
 Shigeru Oho
 Central Research Laboratory, Hitachi, Ltd.

SaA06 52-102
ICT Applications in Food Productions III
 (Organized Session)


Organizer: Takaharu Kameoka Mie University
 Organizer: Atsushi Hashimoto Mie University
 Organizer: Hiroaki Ishizawa Shinshu University
 Organizer: Masayuki Hirafuji NARO
 Chair: Seishi Ninomiya University of Tokyo
 Chair: Yasunori Saito Shinshu University

10:30-10:45 SaA06-01

A mobile-phone based field logging system for high quality Satsuma Mandarin production  I G


Toshiyuki Kamiya NEC System Technologies, Ltd.
 Nagisa Numano NEC System Technologies, Ltd.
 Hiroyuki Yagyu NEC System Technologies, Ltd.
 Hideo Shimazu NEC System Technologies, Ltd.

10:45-11:00 SaA06-02

Drifting Pesticide Detection Based on Attenuated Total Reflection of Infrared Spectroscopy  I Î


Takuro Horiguchi Shinshu University
 Hiroaki Ishizawa Shinshu University
 Shouhei Koyama Shinshu University
 Hiroki Yoshinari Shinshu University
 Shota Tokutake Shinshu University
 Hisashi Yamada Yanmer Co., Ltd.

11:00-11:15 SaA06-03

A wireless sensor network in a vineyard for smart viticultural management  I €


Takashi Togami Mie University
 Kyosuke Yamamoto Mie University
 Atsushi Hashimoto Mie University
 Naoki Watanabe Suntory Wine International Ltd.
 Kiyofumi Takata Suntory Wine International Ltd.
 Hajime Nagai Suntory Holdings Ltd.
 Takaharu Kameoka Mie University

11:15-11:30 SaA06-04

Measurement of MIR Characteristics of Rice in Storage using by FT-IR/ATR Spectroscopy  I Î

Takashi Onodera Niigata University
 Yoshitaka Motonaga Niigata University
 Norikuni Ohtake Niigata University
 Rie Ohsaki Denso Corp.
 Tetsuya Enomoto Denso Corp.

11:30-11:45 SaA06-05

Development of decision support system for optimal agricultural production under global environment changes  Î F

Seishi Ninomiya The University of Tokyo
 Masaru Mizoguchi The University of Tokyo
 Tsuneo Kuwagata

National Inst. of Agro-Environmental Sciences
 Hiroshi Nakagawa

National Agriculture and Food Research Organization

Taku Nishimura The University of Tokyo

Takuji Kiura

National Agriculture and Food Research Organization

Chihiro Kato The University of Tokyo

Ryoichi Doi The University of Tokyo

Wei Guo The University of Tokyo

Masayuki Hirafuji

National Agriculture and Food Research Organization

Toshiaki Iida The University of Tokyo

Kenichi Inoue Fukui Agricultural Experimental Station

Yasushi Ishigooka National Inst. of Agro-

Environmental Sciences

Masaomi Kimura The University of Tokyo

Yasuhiro Kominami

National Agriculture and Food Research Organization

Narutaka Kubo The University of Tokyo

Megumi Minamiyama

Agricultural Research Inst., Toyama Prefectural

Agricultural, Forestry & Fisheries Research Center

Hiroaki Miura The University of Tokyo

Kou Nakazono

National Agriculture and Food Research Organization

Mikio Nomura

Agricultural Research Inst., Toyama Prefectural

Agricultural, Forestry & Fisheries Research Center

Kazuhiro Nishida The University of Tokyo

Ryuta Ohishi The University of Tokyo

Hiroyuki Ohno

National Agriculture and Food Research Organization

Toyohiko Oida Fukui Agricultural Experimental Station

Hiroataka Saito Tokyo University of Agriculture and Tech.

Sho Shiozawa The University of Tokyo

Wataru Takahashi

Agricultural Research Inst., Toyama Prefectural

Agricultural, Forestry & Fisheries Research Center

Kei Tanaka

National Agriculture and Food Research Organization

Tadashi Tsukaguchi Ishikawa Prefectural University

Satoshi Yonekawa The University of Tokyo

Hiroe Yoshida

National Agriculture and Food Research Organization

Shuichiro Yoshida The University of Tokyo

11:45-12:00
Evaluation of influence of trellis system on eco-physiological property using sap flow sensor.
 Kazuhiro Nishioka
 Hiromi Mizunaga

SaA06-06
 Shizuoka University
 Shizuoka University

SaA07
Intelligent Control

52-103

Chair: Takeshi Shibuya
 University of Tsukuba

10:30-10:45
A Neural-Network-Based Approach to Robust H^∞ Fuzzy Control for Nonlinear Multiple Time-Delay Systems: Using Dither as Auxiliary
 Feng-Hsiag Hsiao

SaA07-01

National University of Tainan

10:45-11:00
A learning-based non-linear control system with constraint consideration
 Syafiq Fauzi Kamarulzaman
 Takeshi Shibuya
 Seiji Yasunobu

SaA07-02

University of Tsukuba
 University of Tsukuba
 University of Tsukuba

11:00-11:15
Adaptive Functional Module Selection using Machine Learning: Framework for Intelligent Robotics
 Martin Lukac
 Michitaka Kameyama

SaA07-03

Tohoku University
 Tohoku University

11:15-11:30
Analysis of a Method of Sharing for Common Coordinate System by Migration
 Koji MAKINO
 Jin-Hua SHE
 Yasuhiro OHYAMA

SaA07-04

Tokyo University of Tech.
 Tokyo University of Tech.
 Tokyo University of Tech.

11:30-11:45
Developing a Robot that Performs Tasks of Developmental Scales: On Gaze Control by Eye-Head Coordination
 Masanori Kido
 Hideaki Itoh
 Hisao Fukumoto
 Hiroshi Wakuya
 Tatsuya Furukawa

SaA07-05

Saga University
 Saga University
 Saga University
 Saga University
 Saga University

SaA08	52-201
Human Assistive Technologies I	
(Organized Session)	

Organizer: Hiroshi Hashimoto
Advanced Inst. of Industrial Tech.

Organizer: Daisuke Chugo
Kwansei Gakuin University

Organizer: Sho Yokota
Setsunan University

Chair: Hiroshi Hashimoto
Advanced Inst. of Industrial Tech.

Chair: Daisuke Chugo
Kwansei Gakuin University

Chair: Sho Yokota
Setsunan University

10:30-10:45 SaA08-01
A Study on Degree of Freedom in Hand Modeling ~~WG~~ JG
Hiroshi Hashimoto
Advanced Inst. of Industrial Tech.

Akinori Sasaki
Tokyo Metro. Indust. Tech. Research Inst.

Sho Yokota
Setsunan University

Yasuhiro Ohyama
Tokyo University of Tech.

Chiharu Ishii
Hosei University

10:45-11:00 SaA08-02
The Analysis of Lift Up Skill by Human ~~WG~~ JI
Yuki Sakaida
RIKEN

Daisuke Chugo
Kwansei Gakuin University

Ryojun Ikeura
Mie University/RIKEN

11:00-11:15 SaA08-03
Estimation of Operational Intention by Utilizing Self-Organizing Map, Ontology, and Petri-net ~~WG~~ EE
Takuya Kidokoro
Tokyo Denki University

Hiroshi Igarashi
Tokyo Denki University

Shuichi Nakata
Tokyo Denki University

Tetsuya Yasuda
Tokyo Denki University

Harumi Kobayashi
Tokyo Denki University

Satoshi Suzuki
Tokyo Denki University

11:15-11:30 SaA08-04
Pupil detecting algorithm with template matching for analysis of eye movements in training process of a vehicle operation ~~WG~~ EI
Kunihiko Kuronuma
Tokyo Denki University

Satoshi Suzuki
Tokyo Denki University

11:30-11:45 SaA08-05
Interaction robot considered difference of culture and physiological responses on greeting with the robot ~~WG~~ FE
Hirotaka Aoki
Tokyo Metropolitan University

Yasunari Fujimoto
Tokyo Metropolitan University

Satoshi Suzuki
Tokyo Denki University

Eri Sato-Shimokawara
Tokyo Metropolitan University

Toru Yamaguchi
Tokyo Metropolitan University

11:45-12:00 SaA08-06
WBL for Technical Skill of MONODZUKURI-With Target Selection at Any Time Method and Sequential Presentation of Achievement Method ~~WG~~ FI
Hideki Tabata
Advanced Inst. of Industrial Tech.

Hiroshi Hashimoto
Advanced Inst. of Industrial Tech.

SaA09	52-202
Systems Theory and Engineering I	
Chair: Jun-ichi Inoue	Hokkaido University
Chair: Masakazu Takahashi	University of Yamanashi
10:30-10:45	SaA09-01
<i>An Approach to Designing Control Systems for Sustainable Development</i>	
Kazutoshi Fujihira	Inst. of Environmentology
Koichi Osuka	Osaka University
10:45-11:00	SaA09-02
<i>Measurement of quality of experience in service engineering</i>	
Mitsunari Uozumi	Mitsubishi Electric Corp.
Hajime Asama	University of Tokyo
11:00-11:15	SaA09-03
<i>Statistical Mechanics of Labor Markets</i>	
He Chen	Hokkaido University
Takero Ibuki	Hokkaido University
Jun-ichi Inoue	Hokkaido University
11:15-11:30	SaA09-04
<i>An Extraction of failure modes for drug manufacturing computerized system</i>	
Masakazu Takahashi	University of Yamanashi
Reiji Nanba	Daiichi Inst. of Tech.
11:30-11:45	SaA09-05
<i>Using the Factor Model to Analyze Internet BBS Messages and Stock Returns</i>	
Hirohiko Suwa	University of Electro-Communications
Eiichi Umehara	Nomura Research Inst. Ltd.
Toshizumi Ohta	University of Electro-Communications
11:45-12:00	SaA09-06
<i>Effective Usage of Spring-Water and Psychology of Consumer</i>	
Reiji Nanba	Daiichi University, College of Tech.
Masakazu Takahashi	University of Yamanashi
Myokhin Tokuyama	Daiichi University, College of Tech.
Shigeru Isogai	Daiichi University, College of Tech.

SaA10	52-203
Co-creation System (Organized Session)	
Organizer: Yoshihiro Miyake	Tokyo Inst. of Tech.
Organizer: Yoshiyuki Miwa	Waseda University
Chair: Yoshihiro Miyake	Tokyo Inst. of Tech.
Chair: Shigeru Uesugi	Waseda University
10:30-10:45	SaA10-01
<i>Shadow awareness -Support for creation of body expression focused on fluctuation of shadow media-</i>	
Shiroh Itai	Waseda University
Yoshiyuki Miwa	Waseda University
10:45-11:00	SaA10-02
<i>Co-creative Expression -Duality of Embodied Interaction Focused on Generation of Sympathetic Awareness-</i>	
Takabumi Watanabe	Waseda University
Yoshiyuki Miwa	Waseda University
11:00-11:15	SaA10-03
<i>Development of a Real-Space Sharing Edutainment System based on Communication Support with Make-Believe Play</i>	
Masaru Yamane	Kwansei Gakuin University
Michiya Yamamoto	Kwansei Gakuin University
Tomio Watanabe	Okayama Prefectural University
11:15-11:30	SaA10-04
<i>Co-creative Rehabilitation: Effect of Rhythmic Auditory Stimulus on Gait Cycle Fluctuation in Parkinson's Disease Patients</i>	
Hiroataka Uchitomi	Tokyo Inst. of Tech.
Yoshihiro Miyake	Tokyo Inst. of Tech.
Satoshi Orimo	Kanto Central Hospital
Kazuki Suzuki	Tokyo Inst. of Tech.
Michael J. Hove	Max Planck Inst.
11:30-11:45	SaA10-05
<i>How Voluntary Movements Affect Cross-modal Temporal Perception</i>	
Taiki Ogata	The University of Tokyo, Tokyo Inst. of Tech.
Masayasu Furusato	Tokyo Inst. of Tech.
Masanori Yokoyama	Tokyo Inst. of Tech.
Takayuki Nozawa	Tohoku University, Tokyo Inst. of Tech.
Yoshihiro Miyake	Tokyo Inst. of Tech.

11:45-12:00 SaA10-06
An embodied swarm in co-creation ⅢC Ⅱ Ⅱ
 Yukio Pegio Gunji Kobe University
 Hisashi Murakami Kobe University
 Takayuki Niizato Kobe University
 Andrew Adamatzky University of the West England
 Yuta Nishiyama Kobe University
 Masashi Toda Future University Hakodate
 Toru Moriyama Shinshu University
 Tetsuya Matsui Kobe University
 Kojiro Iizuka Shinshu University
 Koichiro Enomoto Future University Hakodate

SaA11 52-301
Adaptive & Learning Control II --- New Approaches---
 (Organized Session)

Organizer: Kenji Ikeda The University of Tokushima
 Organizer: Yoshihiro Ohnishi Ehime University
 Chair: Ikuro Mizumoto Kumamoto University
 Chair: Yoshihiko Miyasato
 The Inst. of Statistical Mathematics

10:30-10:45 SaA11-01
Adaptive positioning control using adaptive velocity estimator ⅢC Ⅱ Ⅱ
 Kazuya Sato Saga University
 Shin-ichiro Obata Saga University
 Jun Nomura Saga University
 Kazuhiro Tsuruta Kyushu Sangyo University

10:45-11:00 SaA11-02
Optimal Portfolio Management by Using Extremum Seeking Control ⅢC Ⅱ Ⅱ
 Keisuke Funaki Keio University
 Hiromitsu Ohmori Keio University

11:00-11:15 SaA11-03
Application of Strongly Stable Generalized Predictive Control to Temperature Control of an Aluminum Plate ⅢC Ⅱ Ⅱ
 Junki Nishizaki Okayama University
 Satoshi Okazaki Okayama University
 Akira Yanou Okayama University
 Mamoru Minami Okayama University

11:15-11:30 SaA11-04
Fictitious reference iterative tuning of internal model controllers for non-minimum phase plants ⅢC Ⅱ Ⅱ
 Hien Thi Nguyen Kanazawa University
 Osamu Kaneko Kanazawa University
 Yusuke Wadagaki Kanazawa University
 Shigeru Yamamoto Kanazawa University

11:30-11:45 SaA11-05
Design of a PID Tuner Based on Generalized-Output Errors ⅢC Ⅱ Ⅱ
 Kayoko Hayashi Hiroshima University
 Toru Yamamoto Hiroshima University

11:45-12:00 SaA11-06
*Design of a Switching Nonlinear PID Control System
 based on Performance Assessment* MG FJ
 Yoshihiro Ohnishi Ehime University

SaA12 52-302
Control Applications
 Chair: Yasuchika Mori Tokyo Metropolitan University
 Chair: Atsuo Murata Okayama University

10:30-10:45 SaA12-01
Holding force control of robot hand MG G
 Wataru Watanabe Hosei University
 Kajiyo Watanabe Hosei University
 Kazuyuki Kobayashi Hosei University
 Yosuke Kurihara Seikei University

10:45-11:00 SaA12-02
*Model Predictive Control Applied to a Diesel Engine
 Air-Path System with Dead Time* MG G
 Tsugito Maruyama Fujitsu Laboratories Ltd.
 Tomohiro Shimura Tome R&D Inc.
 Arata Ejiri Transtron Inc.
 Yoshiaki Ikai Transtron Inc.
 Keiji Shimotani Transtron Inc.

11:00-11:15 SaA12-03
*Constant Current Pump Single-Cell Charge Pump Cir-
 cuit* MG H
 Jirawath Parnklang
 King Mongkut Inst. of Tech. Ladkrabang
 Sittisak Chaisotthee
 King Mongkut Inst. of Tech. Ladkrabang

11:15-11:30 SaA12-04
*Optimizing an Integrated Quality and Production-
 Inventory System with Perishable Seasonal Products* MG H
 Ibraheem A. Abdul Okayama University
 Atsuo Murata Okayama University

11:30-11:45 SaA12-05
*Searching Algorithm for Hypocenter Location in Convex
 Polygon Boundaries* MG I H
 Songkord Thirachai
 National Electronics and Computer Tech. Center
 Jittiwut Suwatthikul
 National Electronics and Computer Tech. Center
 Sunisa Sornmuang
 National Electronics and Computer Tech. Center

11:45-12:00 SaA12-06
Mathematical model of postprandial glucose-insulin metabolism in insulin dependent diabetics with subcutaneous and intravenous insulin administration routes ~~AG~~ | I
 Cecilia Yamamoto Noguchi Kyoto University
 Eiko Furutani Kyoto University
 Shoichiro Sumi Kyoto University

SaA14	52-304
Mechanical Systems Control II	
Chair: Yoshihiro Matsui Tokyo National College of Tech.	
Chair: Takashi Shimomura Osaka Prefecture University	
10:30-10:45	SaA14-01
<i>Path-Following Control of a Flexible-Base Manipulator Considering Dynamic Singularities and External Forces</i> AG I Naoyuki Hara Tokyo City University, Japan Daisuke Sato Tokyo City University, Japan Yoshikazu Kanamiya Tokyo City University, Japan	
10:45-11:00	SaA14-02
<i>Real-time Model Predictive Obstacle Avoidance Control with Dynamic Wheel Allocation using an Embedded CPU</i> AG I Naoki Takahashi Tokyo City University Kenichiro Nonaka Tokyo City University	
11:00-11:15	SaA14-03
<i>Vibration Control of an Optical Table by Piezoelectric Transducers</i> AG I Fu-Cheng Wang National Taiwan University San-Ho Yang National Taiwan University	
11:15-11:30	SaA14-04
<i>Vibration Control of a Two-mass Resonant System Using Wave Compensator</i> AG I Eiichi Saito Keio University Seiichiro Katsura Keio University	
11:30-11:45	SaA14-05
<i>Attitude Control of Spacecraft with VSCMGs using LPV Modeling Technique</i> AG I Yusuke Yamamoto Osaka Prefecture University Takashi Shimomura Osaka Prefecture University	
11:45-12:00	SaA14-06
<i>A Controller Design on Tendon-Driven Mechanisms</i> AG I Akira Shimada Shibaura Inst. of Tech. Atsushi Maruta Shibaura Inst. of Tech.	

SaB01	63-201/202
Biomedical engineering II	
Chair: Seiichiro Katsura	Keio University
Chair: Atsuo Murata	Okayama University
13:30-13:45	SaB01-01
<i>Blood Glucose Level Measurement by Confocal Reflection Photodetection System</i>	
Yuki Miyauchi	Shinshu University
Takuro Horiguchi	Shinshu University
Hiroaki Ishizawa	Shinshu University
Shin-ichirou Tezuka	Yokogawa Electric Corporation
Hitoshi Hara	Yokogawa Electric Corporation
13:45-14:00	SaB01-02
<i>Modeling of Three-dimensional Arm Movement Time-Effects of Movement Distance and Approach Angle to Target</i>	
Atsuo Murata	Okayama University
Takanori Akiyama	Okayama University
Makoto Moriwaka	Okayama University
14:00-14:15	SaB01-03
<i>Real-time Measurement System of Eye-hand Coordination in Calligraphy</i>	
Atsuo Murata	Okayama University
Kosuke Inoue	Okayama University
Makoto Moriwaka	Okayama University
14:15-14:30	SaB01-04
<i>Application to Vital Signs by Fiber Bragg Grating Sensing</i>	
Masaki Kawamura	Shinshu University
Hiroaki Ishizawa	Shinshu University
Shingo Sato	Shinshu University
Shouhei Koyama	Shinshu University
14:30-14:45	SaB01-05
<i>Analysis of Relationship between Head Motion Information and Driving Scene for Dangerous Driving Forecast</i>	
Koichiro Mori	Tokushima University
Momoyo Ito	Tokushima University
Kazuhiro Sato	Akita Prefectural University
Koji Kashihara	Tokushima University
Minoru Fukumi	Tokushima University

SaB02	63-03
Inverse Problems II (Organized Session)	
Organizer: Tadashi Ito	Gunma University
Chair: Kenbu Teramoto	Saga University
Chair: Tadashi Ito	Gunma University
13:30-13:45	SaB02-01
<i>Model-based diameter estimation of reinforcing bar considering in accurate propagation time measurement of microwave radar</i>	
Tsubasa Yoshinaga	Tokyo Inst. of Tech.
Yusuke Otake	Tokyo Inst. of Tech.
Jun-ya Takayama	Tokyo Inst. of Tech.
Shinji Ohyama	Tokyo Inst. of Tech.
13:45-14:00	SaB02-02
<i>Acoustic Near-field Imaging of Defects based on the Dynamic Shear Strain Analysis</i>	
Kenbu Teramoto	Saga University
Ryoji Inoue	Toshiba IT & Control Systems Corp.
MD.T.I Khan	Saga University
14:00-14:15	SaB02-03
<i>Design of a 2-D coded aperture imaging system using 32 gamma ray 1-D array detectors</i>	
Tadashi Ito	Gunma University
Kenta Nobusawa	Gunma University
14:15-14:30	SaB02-04
<i>Shape Reconstruction using Phase Only Correlation and Dynamic Programming</i>	
Toshiyuki Tanaka	Keio University
Taku Watanabe	Keio University
14:30-14:45	SaB02-05
<i>A regularization technique minimizing entropy for sparse reconstruction in diffuse optical tomography</i>	
Shinpei Okawa	The University of Electro-Communications
Yukio Yamada	The University of Electro-Communications
14:45-15:00	SaB02-06
<i>Weighted integral method for algebraic inversion: Theoretical consideration with a toy problem</i>	
Shigeru Ando	The University of Tokyo

SaB03	63-04
Sensing and Control	

Chair: Shinji Wakui
Tokyo University of Agri. and Tech.
Chair: Kenbu Teramoto
Saga University

13:30-13:45
SaB03-01
Markov-based Reordering Model for English-Myanmar Translation
Thinn Thinn Wai
University of Computer Studies, Yangon, Myanmar
Ni Lar Thein
University of Computer Studies, Yangon, Myanmar

13:45-14:00
SaB03-02
Numerical Electric Field Analysis of Power Status Sensor Observing Power Distribution System Taking into Account Measurement Circuit and Apparatus
Takuro Kubo
Saga University
Tatsuya Furukawa
Saga University
Hideaki Itoh
Saga University
Hisao Fukumoto
Saga University
Hiroshi Wakuya
Saga University

14:00-14:15
SaB03-03
A Combined Control Scheme Using the Flow Disturbance Observer and Base Plate Jerk Feedback in a Pneumatic Positioning Stage
Mohebullah Wali
Tokyo University of Agriculture and Tech.
Yukinori Nakamura
Tokyo University of Agriculture and Tech.
Shinji Wakui
Tokyo University of Agriculture and Tech.

14:15-14:30
SaB03-04
Prediction of Loss-of-Synchronism for a Five-Phase Stepping Motor
Keisuke Yagi
University of Tsukuba
Noriyuki Hori
University of Tsukuba

14:30-14:45
SaB03-05
Simple Resistance-to-Time Converter with Lead-Wire-Resistance Compensation
Prasit Julsereewong
King Mongkut's Inst. of Tech. Ladkrabang
Amphawan Julsereewong
King Mongkut's Inst. of Tech. Ladkrabang
Apinai Rerkratn
King Mongkut's Inst. of Tech. Ladkrabang
Nakorn Pootharaporn
King Mongkut's Inst. of Tech. Ladkrabang

14:45-15:00
SaB03-06
Electronically adjustable PD controller using OTAs
Wandee Petchmaneelumka
King Mongkut's Inst. of Tech. Ladkrabang
Thepjit Cheypoca
King Mongkut's Inst. of Tech. Ladkrabang
Vanchai Riewruja
King Mongkut's Inst. of Tech. Ladkrabang

SaB04	63-05
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Sensing System

Chair: Takanori Yamazaki

Oyama National College of Tech.

Chair: Koji Ogushi

National Metrology Inst. of Japan/AIST

13:30-13:45

SaB04-01

Development of Intuitive Tempo Adjustment Device for Metronome Interface

Yukie Kawasaki	Toyama Prefectural University
Tatsuo Motoyoshi	Toyama Prefectural University
Ken'ichi Koyanagi	Toyama Prefectural University
Toru Oshima	Toyama Prefectural University
Hiroshi Kawakami	

Graduate School of Informatics, Kyoto University

13:45-14:00

SaB04-02

3D Particle Image Velocimetry Using Correlation Image Sensor

Kenji Komiya	The University of Tokyo
Toru Kurihara	The University of Tokyo
Shigeru Ando	The University of Tokyo

14:00-14:15

SaB04-03

Temperature Distribution Measurement Based on ML-EM Using Square Type Ultrasonic CT System

Masato Mukoyama	Tokyo Inst. of Tech.
Keiji Ohga	Tokyo Inst. of Tech.
Yosuke Yabe	Tokyo Inst. of Tech.
Jun-ya Takayama	Tokyo Inst. of Tech.
Shinji Ohyama	Tokyo Inst. of Tech.

14:15-14:30

SaB04-04

Development of magnetic sensor based local pose component for JAUS compliant system

Kazunari Takahashi	Hosei University
Kazuyuki Kobayashi	Hosei University
Kajiro Watanabe	Hosei University
Tomoyuki Ohkubo	Hosei University
Yosuke Kurihara	Seikei University

14:30-14:45

SaB04-05

Measurement and Evaluation of Violin Tone Quality

Rie Hirai	Hosei University
Kajiro Watanabe	Hosei University
Kazuyuki Kobayashi	Hosei University
Yosuke Kurihara	Seikei University

14:45-15:00

SaB04-06

Remote Terminal Unit for Automatic Dam Monitoring System Using a Microcontroller

Prakob Komeswarakul

National Electronics and Computer Tech. Center

Prawit Saengsatcha

National Electronics and Computer Tech. Center

Arnan Jomtarax

National Electronics and Computer Tech. Center

Kumpee Suksomboon

National Electronics and Computer Tech. Center

Udom Lewlomphaisarl

National Electronics and Computer Tech. Center

SaB06 52-102
ICT Applications in Food Productions IV
 (Organized Session)

Organizer: Takaharu Kameoka Mie University
 Organizer: Atsushi Hashimoto Mie University
 Organizer: Hiroaki Ishizawa Shinshu University
 Organizer: Masayuki Hirafuji NARO
 Chair: Takaharu Kameoka Mie University
 Chair: Hiroaki Ishizawa Shinshu University

13:30-13:45 SaB06-01
Water-volume measurement of plants by using itplanter 堀江 真

Yoshiyuki SAKAGUCHI Ristumeikan University
 Torahiro NAKAMURA Ristumeikan University
 Yuki SUGISAKA Ristumeikan University
 Hiromi T. TANAKA Ristumeikan University

13:45-14:00 SaB06-02
A Gadget-Based Information Management System for Environmental Measurement and Control in Green-houses 堀江 真

Takehiko Hoshi Tokai University
 Ryosuke Ohata Tokai University
 Katsuyoshi Watanabe Fujitsu Kyushu Systems Ltd.
 Ryuji Osuka
 Shizuoka Prefectural Research Inst. of Agriculture and Forestry

14:00-14:15 SaB06-03
Development of an automatic data collection and communication system for greenhouse in Japan. 堀江 真

Ken-ichiro Yasuba
 National Inst. of Vegetable and Tea
 Hidehito Kurosaki
 National Inst. of Vegetable and Tea
 Masuyuki Takaichi
 National Inst. of Vegetable and Tea
 Katsumi Suzuki National Inst. of Vegetable and Tea

14:15-14:30 SaB06-04
E-kakashi project, an agri sensor network using ad hoc network technology 堀江 真

Norio Yamaguchi Softbank Mobile Corp.
 Yohei Sakai Softbank Mobile Corp.
 Tatsuro Shiraishi Softbank Mobile Corp.
 Shuhei Onishi Sandglass Corp.
 Takashi Kowata Hokubu Tsushin Kogyo Corp.

14:30-14:45 SaB06-05
Environmental Measurement for indoor plant factory with micro-miniature size wireless sensor 堀江 真

Takaharu Kameoka Mie University
 Hiroya Kondo
 Mie Prefecture Agricultural Research Inst.
 Masahide Isozaki
 Mie Prefecture Agricultural Research Inst.
 Toshiaki Nakamura
 Panasonic Electronic Devices Co., Ltd.
 Hirokazu Kitamura
 Panasonic Electronic Devices Co., Ltd.
 Junichi Kimura
 Panasonic Electronic Devices Co., Ltd.

SaB07	52-103
Intelligent Systems	
Chair: Martin Lukac	Tohoku University
13:30-13:45	SaB07-01
<i>Vision-based Real-time Detection Of Objects With Non-homogeneous Color Distributions Using A Fuzzy Classifier</i>	
Guo-Cyuan Chen	University of National Chung-Hsing
Chia-Feng Juang	University of National Chung-Hsing
13:45-14:00	SaB07-02
<i>Efficient Hybrid Rule Pruning for Intrusion Detection using Multi-Dimensional Probability Distribution</i>	
Nannan Lu	Waseda University
Shingo Mabu	Waseda University
Tuo Wang	Waseda University
Kotaro Hirasawa	Waseda University
14:00-14:15	SaB07-03
<i>A Novel Intrusion Detection System Based on the 2-Dimensional Space Distribution of Average Matching Degree</i>	
Tuo Wang	Waseda University
Shingo Mabu	Waseda University
Nannan Lu	Waseda University
Kotaro Hirasawa	Waseda University
14:15-14:30	SaB07-04
<i>Word Sense Disambiguation System for Myanmar Word in support of Myanmar-English Machine Translation</i>	
Nyein Thwet Thwet Aung	University of Computer Studies, Yangon
Ni Lar Thein	University of Computer Studies, Yangon
14:30-14:45	SaB07-05
<i>Word Alignment System Based on Hybrid Approach for Myanmar-English Machine Translation</i>	
Khin Thandar Nwet	University of Computer Studies, Yangon
Ni Lar Thein	University of Computer Studies, Yangon

14:45-15:00	SaB07-06
<i>A natural-language-based 3D-CG system with shape estimation for unknown words</i>	
Atsuo Nakahata	Saga University
Hideaki Itoh	Saga University
Hisao Fukumoto	Saga University
Hiroshi Wakuya	Saga University
Tatsuya Furukawa	Saga University

SaB08 52-201
Human Assistive Technologies II
 (Organized Session)

Organizer: Hiroshi Hashimoto
 Advanced Inst. of Industrial Tech.
 Organizer: Daisuke Chugo Kwansei Gakuin University
 Organizer: Sho Yokota Setsunan University
 Chair: Hiroshi Hashimoto
 Advanced Inst. of Industrial Tech.
 Chair: Daisuke Chugo Kwansei Gakuin University
 Chair: Sho Yokota Setsunan University

13:30-13:45 SaB08-01
A study on man-machine interface using EMG signals over the whole body ⅣⅢⅡⅠ F
 Keisuke Ueda Graduate School, Osaka Inst. of Tech.
 Hiroyuki Kobayashi Osaka Inst. of Tech.

13:45-14:00 SaB08-02
Intelligent wireless EMG/ECG electrode employing Zig-Bee technology ⅣⅢⅡⅠ
 Hiroyuki Kobayashi Osaka Inst. of Tech.

14:00-14:15 SaB08-03
Evaluation of Memory Recall Support System Using RFID Technology ⅣⅢⅡⅠ G
 Syunji Yazaki
 The University of Electro-Communications
 Yuji Sato Tokyo University of Tech.
 Hiroshi Igaki Tokyo University of Tech.
 Nobuhiro Tsukie
 Nippon Engineering College of Hachioji
 Tohru Hoshi Tokyo University of Tech.

14:15-14:30 SaB08-04
Supportive Method for Recognition of Environment Using Vibration ⅣⅢⅡⅠ
 Junya Imani Tokyo University of Tech.
 Soichiro Aoki Tokyo University of Tech.
 Koji Makino Tokyo University of Tech.
 Jin-Hua She Tokyo University of Tech.
 Yasuhiro Ohyama Tokyo University of Tech.

14:30-14:45 SaB08-05
Support System for Handwriting Using Projector ⅣⅢⅡⅠ J
 Kouji Yamada Shibaura Inst. of Tech.
 Masanobu Takahashi Shibaura Inst. of Tech.

14:45-15:00 SaB08-06
Study on Design Methodology of Power-Assisted Luggage Cart with Rotational Arms for Stair Climbing ⅣⅢⅡⅠ H
 Atsushi Imadu Osaka City University
 Ryotaro Tanaka Osaka City University
 Tadao Kawai Osaka City University
 Masashi Shibata Recruit Staffing Co., Ltd.

15:00-15:15 SaB08-07
A Study on a Mechanism of a Wheelchair Caster Unit for Step Climbing - Verification of Required Caster Unit Functions - ⅣⅢⅡⅠ J
 Sho Yokota Setsunan University
 Takanori Ito Kagawa University
 Tatsuya Yamaguchi
 Itoh Kinzoku Seisakusho Co., Ltd.
 Daisuke Chugo Kwansei Gakuin University
 Hiroshi Hashimoto
 Advanced Inst. of Industrial Tech.

SaB09	52-202
Systems Theory and Engineering II	
Chair: Makoto Katoh	Osaka Inst. of Tech.
Chair: Jun-ichi Inoue	Hokkaido University
13:30-13:45	SaB09-01
<i>Plan for Passage Decision of Elevators using Fuzzy Measurement of Personal Area</i> MG IG	
Makoto Katoh	Osaka Inst. of Tech.
Natsuki Imura	Graduate School of Osaka Inst. of Tech.
13:45-14:00	SaB09-02
<i>Object Ordering for Delay Minimization Considering Fairness</i> MG II	
Megumi Sawada	Mitsubishi Electric Corp.
Masashi Shiraishi	Mitsubishi Electric Corp.
Atsuo Ozaki	Mitsubishi Electric Corp.
Nobuo Matsumura	Mitsubishi Electric Corp.
14:00-14:15	SaB09-03
<i>Estimation of external corrosion under insulation using Group numbering of continuous conditions</i> MG JH	
Kentaro Yahiro	Waseda University
Sunghye Moon	Waseda University
Shigeyuki Tateno	Waseda University
Hisayoshi Matsuyama	Waseda University
14:15-14:30	SaB09-04
<i>Development of Fish-like Boid Simulator Based on Biological Code of Behavior</i> MG JJ	
Ryuzaburo Sugino	Anan National College of Tech.
Mio Kobayashi	Anan National College of Tech.
Koji Fukuda	Anan National College of Tech.
Noboru Morizumi	Anan National College of Tech.
14:30-14:45	SaB09-05
<i>Pruning High-level Network Using Genetic Algorithm for Efficient Hierarchical Route Planning in Road Networks</i> MG EH	
Manoj Kanta Mainali	Waseda University
Shingo Mabu	Waseda University
Kotaro Hirasawa	Waseda University

SaB11	52-301
Adaptive & Learning Control III ---Applications--- (Organized Session)	
Organizer: Kenji Ikeda	The University of Tokushima
Organizer: Yoshihiro Ohnishi	Ehime University
Chair: Toru Yamamoto	Hiroshima University
Chair: Yoshihiro Ohnishi	Ehime University
13:30-13:45	SaB11-01
<i>Analysis of Discrete-Time Plug-In Adaptive Control Systems Using Frequency Estimation</i> MG FE	
Kentaro Yajima	Keio University
Hiromitsu Ohmori	Keio University
13:45-14:00	SaB11-02
<i>Linear Approximation Model for Snake Robots and its Application</i> MG FI	
Kenji Ikeda	The University of Tokushima
Yoko Hatanaka	The University of Tokushima
Takao Shimomura	The University of Tokushima
14:00-14:15	SaB11-03
<i>Controller design of a Manipulator with Human Multi-Joint Arm-Like Viscoelastic Properties</i> MG FJ	
Mingcong Deng	Tokyo University of Agriculture and Tech.
Aihui Wang	Tokyo University of Agriculture and Tech.
14:15-14:30	SaB11-04
<i>A PID control for the Helicopter Attitude Control Experimental Model Using FRIT Method</i> MG G	
Shiro Masuda	Tokyo Metropolitan University
14:30-14:45	SaB11-05
<i>Classification of Waist Motion by Neural Networks-Toward Power Assist Suit for Caregiver</i> MG GJ	
Akira Kurita	Kogakuin University
Takashi Nakakuki	Kogakuin University

SaB12	52-302
PID Control	

Chair: Masayasu Suzuki
Japan Science and Tech. Agency
Chair: Hiroto Hamane
Kogakuin University

13:30-13:45
SaB12-01
Direct PID Tuning for Systems with Hysteresis and Its Application to Shape Memory Alloy Actuators ~~MGH~~ ~~MGH~~
Yuji Wakasa Yamaguchi University
Shinji Kanagawa Yamaguchi University
Kanya Tanaka Yamaguchi University
Yuki Nishimura Yamaguchi University

13:45-14:00
SaB12-02
One Parameter Tuning Method for PID Controller ~~MGH~~ ~~MGH~~
Tomoya Takagi Kogakuin University
Yusuke Hirama Kogakuin University
Masakatsu Harita Kogakuin University
Hiroto Hamane Kogakuin University
Kazuyoshi Miyazaki TOHO electronics Inc.

14:00-14:15
SaB12-03
Design MRAC PID Control for Fan and Plate Process ~~MGH~~ ~~MGH~~
Pranai Kungwalrut
King Mongkut's Inst. of Tech. Ladkrabang
Maitree Thumma
King Mongkut's Inst. of Tech. Ladkrabang
Vittaya Tipsuwanporn
King Mongkut's Inst. of Tech. Ladkrabang
Arjin Numsomran
King Mongkut's Inst. of Tech. Ladkrabang
Pisit Boonsrimuang
King Mongkut's Inst. of Tech. Ladkrabang

14:15-14:30
SaB12-04
The Design of PID Controller for Track Following Control of Hard Disk Drive Using Coefficient Diagram Method ~~MGH~~ ~~MGH~~
Jutarut Chaoraingern
King Mongkut's Inst. of Tech. Ladkrabang
Worapon Vaidee
King Mongkut's Inst. of Tech. Ladkrabang
Thanit Trisuwannawat
King Mongkut's Inst. of Tech. Ladkrabang
Vittaya Tipsuwanporn
King Mongkut's Inst. of Tech. Ladkrabang
Arjin Numsomran
King Mongkut's Inst. of Tech. Ladkrabang

14:30-14:45
SaB12-05
Identification Method for Commercialized PI control Using Laguerre Function ~~MGH~~ ~~MGH~~
Yusuke Hirama Kogakuin University
Hiroto Hamane Kogakuin University
Kazuyoshi Miyazaki TOHO electronics Inc.

14:45-15:00
SaB12-06
PID Control Schemes on Integer Grid Coordinates ~~MGH~~ ~~MGH~~
Yoshifumi Okuyama Humanitech Lab. Co., Ltd.

SaB14	52-304
Mechanical Systems Control III	

Chair: Yoshikazu Kanamiya Tokyo City University

13:30-13:45 SaB14-01

State Observer with Parameter Estimation for Sensorless Induction Motor 眞谷 正

Kang Hyo Park	Pusan National University
Cheol Moon	Pusan National University
Kee Hyun Nam	Pusan National University
Mun Kyu Jung	Pusan National University
Young Ahn Kwon	Pusan National University

13:45-14:00 SaB14-02

Sensorless Position Control for Four-Switch Three-Phase Synchronous Reluctance Motor Drives 眞谷 正

Cheng-Kai Lin	National Taiwan University
Li-Chen Fu	National Taiwan University
Tian-Hua Liu	National Taiwan University of Science and Tech.

14:00-14:15 SaB14-03

Sliding Mode Observer with Parameter Estimation for Sensorless Permanent Magnet Synchronous Motor 眞谷 正

Sung Hun Lee	Pusan National University
Cheol Moon	Pusan National University
Kee Hyun Nam	Pusan National University
Mun Kyu Jung	Pusan National University
Young Ahn Kwon	Pusan National University

14:15-14:30 SaB14-04

Design of PD Controller with Electrorheological Fluid Damper 眞谷 正

Ken'ichi Koyanagi	Toyama Prefectural University
Tomohiro Terada	Toyama Prefectural University
Toru Oshima	Toyama Prefectural University

14:30-14:45 SaB14-05

Basic Performance Experiments on a Belt Transmission System using Electro-Rheological Gel 眞谷 正

Masayoshi Dohi	Toyama Prefectural University
Ken'ichi Koyanagi	Toyama Prefectural University
Yasuhiro Kakinuma	Keio University
Hideobu Anzai	Fujikura Kasei Co., Ltd.
Koji Sakurai	Fujikura Kasei Co., Ltd.
Toru Oshima	Toyama Prefectural University

14:45-15:00 SaB14-06

Modeling and Control of Single Phase Inverter Power Supply 眞谷 正

Mona Abo El Dahb	Gunma University
Yoichi Shiraishi	Gunma University