

### Time Schedule for IS2EMU2012

Time Schedule for IS2EMU2012									
Day & Time  Research Area	First Day (1st November)								
	08:30 - 09:00 (30 minutes)	09:00 - 09:30 (30 minutes)	09:30 - 09:45 (15 minutes)	Technical Session I 09:45-11:45 (2 hours)	11:45-12:45 (1 hour)	Technical Session II 12:45-14:45 (2 hours)	14:45-15:00 (15 minutes)	Technical Session III 15:00-17:00 (2 hours)	17:30 - 19:30 (2 hours)
A Oral : 39	Registration (Meeting Room L)	Opening Remarks (Meeting Room L)	Coffee Break	[9:45 - 11:45] Oral Session AO-I (Room 14)	Lunch	[13:30 - 14:30] Invited Session A-I (Room 10)	Coffee Break	[15:00 - 17:00] Oral Session AO-II (Room 10)	Welcome Dinner Hosted by Dean of Eng. (University Canteen)
B Oral : 19				[Reserve Slot]		[12:50 - 14:40] Oral Session BO-I (Room11)		[15:00 - 16:40] Oral Session BO-II (Room11)	
C Oral : 29 Poster : 23				[09:45 - 11:45] Oral Session CO-I (Room 12)		[12:45 - 14:45] Oral Session CO-II (Room 13)		[15:00 - 17:00] Oral Session CO-III (Room 13)	
D+F Oral : 6+5 Poster : 13+35				[09:45 - 11:00] Short Presentation for Poster Session (Meeting Room L)		[12:45 - 14:45] Invited Session DF (Room 24)		[15:00 - 17:00] Oral Session DFO-I (Room 24)	
E Poster : 30				[Reserve Slot]		[Reserve Slot]		[Reserve Slot]	
G Oral : 9 Poster : 30				[Reserve Slot]		[Reserve Slot]		[15:00 - 16:00] Invited Session G (Room 1)	
Internship Program Poster : 25				[Reserve Slot]		[Reserve Slot]		[Reserve Slot]	

## Time Schedule for IS2EMU2012

Time Schedule for IS2EMU2012								
Day & Time  Research Area	Second Day (2nd November)							
	Technical Session IV	12:00-13:00 (1 hour)	Technical Session V		16:00 - 16:30 (30 minutes)	16:30 - 17:30 (1 hour)	18:00 - 20:00 (2 hours)	
	09:00-12:00 (3 hours)		13:00-16:00 (3 hours)					
A Oral : 38	[09:00 - 11:36] Oral Session AO-III (Room 18)		Lunch	[13:00 - 14:24] Oral Session AO-IV (Room 15)	[15:00 - 16:00] Invited Session A-II (Room 15)	[16:00 - 18:00] Special Event (Room 15) Visual-Haptic Communication between Padova University and Mie University		
B Oral : 19	[9:00 - 10:00] Invited Session B (Room 11)			[Reserve Slot]		Coffee Break Nomination of Students for Best Presentation Award in Each Research Area	Summarization of Symposium/ Best Presentation Award/ Closing Remarks/ Memorial Collective Photo (Meeting Room L)	Farewell Dinner Hosted by Dean of Eng. (Off Campus)
C Oral : 29 Poster : 23	[9:00 - 10:30] Invited Session C (Room 12)	[10:40 - 12:00] Short Presentation for Poster Session (Room 12)		[13:00 - 14:30] Poster Session CP-I (Sansui Foyer)				
D+F Oral : 6+5 Poster : 13+35	[9:00 - 12:00] Poster Session DFP-I (Sansui Foyer)			[13:00 - 16:00] Poster Session DFP-II (Sansui Foyer)				
E Poster : 30	[9:30 - 10:00] Invited Session E (Room 24)	[10:20 - 11:40] Short Presentation for Poster Session (Room 24)		[13:00 - 15:00] Poster Session EP-I (Sansui Foyer)				
G Oral : 9 Poster : 30	[10:00 - 12:05] Oral Session GO-I (Room 1)			[13:30 - 15:00] Poster Session GP-I (Sansui Foyer)				
Internship Program Poster : 25	Poster Session IP-I (Sansui Foyer)			Poster Session IP-II (Sansui Foyer)				

## **Invited Session**

### **Speeches by Invited Speakers**

#### **Research Area A**

A- I

November 1 13:30 – 14:30 Room 10

Speaker: Professor Dr. Abderrahmane Kheddar

CNRS-AIST Joint Robotics Laboratory and CNRS-UM2 LIRMM,  
Interactive Digital Human group, Montpellier, France

Title: Contact Humanoid

A- II

November 2 15:00 – 16:00 Room 15

Speaker: Professor Dr. Kouhei Ohnishi

Keio University, Department of System Design Engineering

Title: Real-world Haptics for Future Society

#### **Research Area B**

November 2 9:00 – 10:00 Room 11

Speaker: Dr. Eric Hu

Associate Professor, School of Mechanical Engineering, The University of Adelaide, Australia

Title: R&D in Energy and Sustainability Related Area

#### **Research Area C**

November 2 9:00 – 10:30 Room 12

Speaker: Professor Umapada Pal

Indian Statistical Institute, India

Title: Recent Trends in Document Image Analysis

## **Invited Session**

### **Speeches by Invited Speakers**

#### **Research Area D & F**

November 1 12:45 – 14:45 Room 24

12:45 – 13:45

Speaker: Dr. David Geoffrey Vince

Chairman, Department of Biomedical Engineering,  
Lerner Research Institute, Cleveland Clinic, USA

Title: Breakthroughs in Biomedical Engineering

13:55 – 14:45

Speaker: Ms. Catherine Root

BME Education Coordinator, Lerner Research Institute, Cleveland Clinic, USA

Title: Welcome to Cleveland Clinic: How, Why, and What?

#### **Research Area E**

November 2 9:30 – 10:00 Room 24

Speaker: Dr. Tadao Hashimoto

CEO/CTO SixPoint Materials, Inc., USA

Title: Comparison of Start-up Environment between US and Japan

- From A Case Study of SixPoint Materials, Inc. –

#### **Research Area G**

November 1 15:00 – 16:00 Room 1

Speaker: Dr. Harris Mouzakis

Laboratory for Earthquake Engineering, National Technical University of Athens, Greece

Title: Seismic Response of Historical Masonry Buildings



# Robotics & Mechatronics

Oral Presentation

## Research Area A

### Oral Presentations

#### Technical Session AO-I

November 1, 9:45 - 11:45, Room 14

*Satoshi Komada, chair*

- AO-1 Position and Stiffness Control by 2Link 6Tendon Mechanisms with Nonlinear Spring SAT  
Ryutaro Douzaki, Satoshi Komada and Junji Hirai
- AO-2 Control of Musculoskeletal Arm using a Visual Space  
Kento Hashimoto, Satoshi Komada, Daisuke Yashiro and Junji Hirai
- AO-3 Study on Characteristic Improvement of Suppression Control System of PMSM Torque Ripple by Axial Torque Feed back  
Kenta Nagai and Muneaki Ishida
- AO-4 Motion Curve Optimization for Bottle Conveyance Using Computational Fluid Dynamics Simulation  
Ken'ichi Kanazawa and Ken'ichi Yano
- AO-5 Optimization of Plunger Tip shape Based on Damage Estimation Using Linear Cumulative Damage Law  
Yuto Takagi and Ken'ichi Yano
- AO-6 Construction of Fault-tolerant Control System for a Force Sensor Fault in a Reconfigurable Robot  
Taku Ogita, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai
- AO-7 Analysis of Power Smoothing System using Electric Double Layer Capacitor for Micro-grid system  
Hidetoshi Hayashi, Naoki Yamamura and Muneaki Ishida
- AO-8 Design of a PID Controller based on  $H^\infty$  Loop Shaping Method using Frequency Responses  
Akihiro Doi, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai
- AO-9 Development of the small scale wind power generating device connected directly to the solar power generation system  
Masashi Samizo, Naoki Yamamura and Muneaki Ishida
- AO-10 New Method for Liquid-Medication Filling Systems  
Koji Miyashita, Ken'ichi Kanazawa and Ken'ichi Yano

## Research Area A

### Oral Presentations

#### Technical Session AO-II

November 1, 15:00 - 17:00, Room 10

*Soichiro Hayakawa, chair*

- AO-11 Autonomous Vehicles Deceleration Control System using Multi-Mode Driver Behavior Model based on a Hybrid System  
Ryosuke Horiki, Soichiro Hayakawa, Ryojun Ikeura and Hideki Sawai
- AO-12 Evaluation of Probabilistic Driving Decision Model Based on Logistic Regression Model  
Hikaru Sahashi, Soichiro Hayakawa, Ryojun Ikeura and Hideki Sawai
- AO-13 Research for improvement of map accuracy for ICL-SLAM using the line quality  
Mitsuhiro Terada, Satoshi Komada, Daisuke Yashiro and Junji Hirai
- AO-14 A proposal of a rapid algorithm that finds segments of intersections  
Yusuke Ikemoto, Hirokazu Matsui and Ken'ichi Yano
- AO-15 Research on torque pulsation detection for PMSM by using acceleration sensor applied on motor frame  
Hieu Nghia Nguyen and Muneaki Ishida
- AO-16 A Decision Method of Grasp Position Regions for a Polygonal Shaped Objects using a Grasp Force Evaluation Index Resisting External Force  
Keigo Miyajima, Satoshi Komada, Daisuke Yashiro and Junji Hirai
- AO-17 An Estimation Method of Output Force Distribution Considering Variation of Joint Torque of Limbs according to Posture  
Kazuyuki Yamamoto, Satoshi Komada, Daisuke Yashiro, Junji Hirai and Akinobu Nishimura
- AO-18 Lower Limb Examinations for Muscular Tension Estimation Methods for Each Muscle Group Based on Functionally Different Effective Muscle Theory  
Taiki Nishii, Satoshi Komada, Daisuke Yashiro and Junji Hirai
- AO-19 A Restrained Torque-based Motion Instructor: Forearm Flexion/Extension-driving Exoskeleton  
Takuya Nishimura, Yoshihiko Nomura and Ryota Sakamoto
- AO-20 Study on Stiffness Control of Tendon Mechanisms with Nonlinear Springs  
Hiroyasu Kashiwagi, Satoshi Komada, Daisuke Yashiro and Junji Hirai

## Research Area A

### Oral Presentations

#### Technical Session AO-III

November 2, 9:00 - 11:36, Room 18

*Norihiko Kato, chair*

AO-21 A Study on Suppression of Acoustic Noise caused by Torque Pulsation of BLDCM

Satoshi Yada and Muneaki Ishida

AO-22 Study on frame vibration suppression using repetitive control for PMSM which includes mechanical resonance properties

Kosuke Kato and Muneaki Ishida

AO-23 Z-axis rotation control using magnetic levitation

Tatsuya Nobori, Norihiko Kato, Naoaki Tsuda and Ken'ichi Yano

AO-24 Electrical power tracking control method of small wind power generation system

Ryousuke Matsuyama, N.Yamamura and M.Ishida

AO-25 A reduction method of the lower order harmonics in the Line-to-line voltage for reduction of harmonic current slot harmonics in induction motor

Ryo Watanabe and Muneaki Ishida

AO-26 A Vibration A Vibration Suppression Control Method of PMSM with Feed-forward Compensation under Variable Speed Drive

Kazunari Kuroyabu and M. Ishida

*Break*

*Naoki Yamamura, chair*

AO-27 Study on the Cooperative Control of the Power Generation System and an Electric Power Compensatory System in Micro Grid

Naoki Doudou, Naoki Yamamura and Muneaki Ishida

AO-28 A Study of Control Method for Three-phase to Single-phase Matrix Converter System With Neutral Line

Taiki Hasama, Naoki Yamamura and Muneaki Ishida

AO-29 Study on Establishment of Electrical Equivalent Model for Development of Fuel Cell Emulator

Satoshi Imamura, Naoki Yamamura and Muneaki Ishida

AO-30 Steady State Characteristics of the Boost-Type Matrix Converter

Keiichiro Hirokado, Naoki Yamamura and Muneaki Ishida



AO-31 Proposal of Simplified Model for Switched Reluctance Generator

Daisuke Ikeda, Naoki Yamamura and Muneaki Ishida

AO-32 Study on practical application of Combined-type Active Filter utilizing Power Amplifier

Atsuhiro Matsuoka, Naoki Yamamura and Muneaki Ishida

### **Technical Session AO-IV**

November 2, 13:00 - 14:24, Room 15

*Kazuhiro Yubai, chair*

AO-33 A Direct Tuning from Input/Output Data of the Youla Parameter in Consideration of Some Deviated Plants

Ken Sakakibara, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai

AO-34 Study on Design of Multivariable Fixed-order Controller Satisfying Robust Performance Condition Using Frequency Responses

Kazuki Senga, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai

AO-35 A Study on Design of the Gain-Scheduling Controller Guarantees the Performance Condition on the Nyquist Diagram

Yoshitaka Nishiguchi, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai

AO-36 A Shaping of Sensitivity function by  $H^\infty$  Model-matching using Medel-free Controller Tuning

Masataka Ishizaki, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai

AO-37 Tuning of Controller Parameters by FCbT with Stability Constraints for Non-minimum Phase Plants

Matsuo Ryota, Kazuhiro Yubai, Daisuke Yashiro and Junji Hirai

AO-38 Operation Force Reflecting Method in Machining Geometry via Bilateral Machining Support System with Variable Connecting Force

Tsuginobu Osada, Norihiko Kato and Ken'ichi Yano

AO-39 Centralized Controller with Adaptive Controller Based Bilateral Control under Communication Delay

Tadashi Hieno, Daisuke Yashiro, Satoshi Komada and Junji Hirai

### **Special Event**

November 2, 16:00 - 18:00, Room 15

*Daisuke Yashiro, chair*

"Visual-Haptic Communication between Padova University and Mie University"

Tadashi Hieno, Daisuke Yashiro, Satoshi Komada and Junji Hirai



# Environment & Energy

Oral Presentation

## Research Area B

### Oral Presentations

#### Technical Session BO-I

November 1, 12:50 - 14:40, Room 11

*Junsuke Murata, chair*

- BO-1 Modeling Analysis of Local Heat Transfer in Single Cell of Polymer Electrolyte Fuel Cell  
Kazuhiro Iio, Akira Nishimura, Masafumi Hirota and Naoki Maruyama
- BO-2 Investigation on Model of Wind Power Plant Utilizing Wind Blowing through Buildings for Construction of Smart City  
Takuya Ito, Akira Nishimura, Junsuke Murata, Toshitake Ando, Yasunari Kamada, Masafumi Hirota and Naoki Maruyama
- BO-3 Evaluation of Local Temperature Distribution of Single Cell of Polymer Electrolyte Fuel Cell and Clarification of Correlation between Heat and Mass Transfer and Power Generation Characteristics  
Hiroto Kondo, Akira Nishimura, Masafumi Hirota and Naoki Maruyama
- BO-4 Experimental Study on Gas-Liquid Two Phase Flow Distributions in Multi-pass Channels  
Nakagawa Yamato, Masafumi Hirota, Toshiaki Tsuchiya, Naoki Maruyama and Akira Nishimura
- BO-5 Structure Characteristics and CO<sub>2</sub> Reforming Performance of Visible-light-driven TiO<sub>2</sub> Photocatalyst  
Katsuya Nakamura, Akira Nishimura, Masafumi Hirota and Naoki Maruyama

*Break (13:40 - 13:50)*

*Toshitake Ando, chair*

- BO-6 Temperature Stabilization of Pulsating Flow in High Temperature Fluctuation Field using Small Coaxial Tube Heat Exchanger  
Yuji Masuda, Naoki Maruyama, Kazushige Nagata, Keishiro Hatta, Yukio Ito and Masahumi Hirota
- BO-7 Numerical Analysis on the Wake Velocity Field of Horizontal Axis Wind Turbine by Panel Method  
Honami Ota, Takao Maeda, Yasunari Kamada, Junsuke Murata and Shun Nishimura
- BO-8 Study on Flow around Complex Terrain in Turbulent Flow  
Kazutoshi Kurogi, Takao Maeda, Yasunari Kamada, Junsuke Murata, Keisuke Yamada and Yusuke Yamagishi
- BO-9 Experimental Study on Flow over Surface of Horizontal Axis Wind Turbine Blades  
Daiki Suzuki, Yasunari Kamada, Takao Maeda, Junsuke Murata, Yousuke Kagisaki and Shogo Nishimura
- BO-10 Research on Gasification System using Various Woody Biomass  
Kazumasa Seko, Yasunari Kamada, Takao Maeda, Fumitoshi Ikeda, Junsuke Murata and Toma Onodera

## Technical Session BO-II

November 1, 15:00 - 16:40, Room 11

*Akira Nishimura, chair*

BO-11 Effect of Turbulence Intensity on the Wind Turbine Performance at Low Reynolds Number  
Yusuke Nishida, Yasunari Kamada, Takao Maeda, Junsuke Murata and Kohei Iida

BO-12 Field Experiment on Relations between Inflow and Wake

Haruki Hirata, Takao Maeda, Yasunari Kamada, Junsuke Murata, Naoya Mori and Junya Hongo

BO-13 Research on the Straight-Bladed Vertical Axis Wind Turbine in the 2D Unsteady Flow Field

Qing'an Li, Toshiaki Kawabata, Takao Maeda, Yasunari Kamada and Junsuke Murata

BO-14 Numerical Simulation of Nucleate Boiling with Microlayer using Diffuse Interface Model

Yosuke Akatsuka, Koichi Tshujimoto, Toshihiko Shakouchi and Toshitake Ando

BO-15 A Study on the Reduction of the Flow Resistanse of the Turndown Channel due to Small Obstacle

Kenta Ito, Toshitake Ando, Toshihiko Shakochi and Koichi Tsujimoto

*Break (15:50 - 16:00)*

*Yasunari Kamada, chair*

BO-16 Flow Characteristics of Petal-Shaped Free Jet

Shota Iriyama, Toshihiko Shakouchi, Koichi Tsujimoto and Toshitake Ando

BO-17 Structural Analysis of Vector-controlled Jet under a Rotational Mode

Noritaka Shibata, Koichi Tsujimoto, Toshihiko Shakouchi and Toshitake Ando

BO-18 Flow Characteristics of Turbulent Channel Flow with a Flexible Finite-length Square Cylinder

Yusuke Hada, Koichi Tsujimoto, Toshihiko Shakouchi and Toshitake Ando

BO-19 Numerical Simulation of Low Mach Number Acoustics using Modified AVS Scheme with BPM

Tomoaki Miyoshi, Koichi Tsujimoto, Toshihiko Shakouchi and Toshitake Ando



# Information Processing & Communications

Oral Presentation

## Research Area C

### Oral Presentations

#### Technical Session CO-I

November 1, 9:45 - 11:45, Room 12

*Katsuhiro Naito, chair*

- CO-1 Proposal of Channel Estimation Method for SC-OFDM Systems in Time-Varying Fading Channel  
Tomokazu Yamamoto, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-2 Proposal of Doppler Frequency Spread Estimation Method for OFDM Systems  
Tatsuji Miyamoto, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-3 Proposal of PAPR Reduction Method for OFDM Signal in Time-Varying Fading  
Tomohito Koike, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-4 Proposal of Nonlinear Distortion Compensation Method for OFDM Systems  
Hiroyasu Ando, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-5 Proposal of Doppler Frequency Spread Compensation Method for OFDM Systems  
Shunsuke Takeuchi, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi

*Break*

*Yoshikatu Ohta, chair*

- CO-6 Implementation of Node Management Scheme in IPv4/IPv6 Networks for NTMobile  
Takuya Nishio, Katsuhiro Naito, Hidekazu Suzuki, Akira Watanabe, Kazuo Mori and Hideo Kobayashi
- CO-7 Automatic device grouping scheme based on illuminance for home sensor networks  
Fumiaki Mabe, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-8 Implementation of Sensor Network with Sub-Slots Allocation for Collision Avoidance  
Yosuke Iwasaki, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-9 Development of the kernel module for Bump in the Stack  
Yuta Inoue, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-10 Development of IPv4/IPv6 conversion router  
Keisuke Sugita, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi

#### Technical Session CO-II

November 1, 12:45 - 14:45, Room 13

*Wataru Ohyama, chair*

- CO-11 From Job Offer Form Automatic Assignment of Character Strings to “Vocational Guidance System”  
Masaya Shigenaga, Shinji Tsuruoka, Hiroharu Kawanaka and Haruhiko Takase
- CO-12 Schema Recognition Method Considering Annotation Parts for Medical Document Retrieval Systems  
Hiroshi Kajiwara, Hiroharu Kawanaka, Koji Yamamoto, Haruhiko Takase and Shinji Tsuruoka
- CO-13 Document Tagging Method for Low-resolution Medical Documents in Hospitals  
Shunta Nakamura, Hiroharu Kawanaka, Shunsuke Doi, Takahiro Suzuki, Katsuhiko Takabayashi, Koji Yamamoto, Haruhiko Takase and Shinji Tsuruoka
- CO-14 Extraction of Disease Area and Measurement of Disease Volume Using Three Dimensional Regional Statistics for OCT Image  
Ikunari Nakahara, Shinji Tsuruoka, Haruhiko Takase, Hiroharu Kawanaka, Fumio Okuyama
- CO-15 Automatic Boundary Extracting Method of Retinal Optical Coherence Tomography Image Using Three Dimensional Active Grid  
Naoki Takeno, Shinji Tsuruoka, Hiroharu Kawanaka, Haruhiko Takase, Hisashi Matsubara and Fumio Okuyama

*Break*

*Hiroharu Kawanaka, chair*

- CO-16 Enhancing the Noise Tolerance of SpikeProp network with Weight Decay  
Li Yan, Haruhiko Takase, Hiroharu Kawanaka and Shinji Tsuruoka
- CO-17 Handwritten Keywords Recognition on Blackboard for Tagging Lecture Scenes  
Shohei Okuyama, Shinji Tsuruoka, Haruhiko Takase and Hiroharu Kawanaka
- CO-18 Extension of Phrases for Article Determination using WordNet Thesaurus  
Hirofumi Hayashi, Hiromi Takeuchi, Hidenori Honma, Atsuo Kawai and Naoki Isu
- CO-19 Probabilistic Rotation Angle Estimation of 3D Rotated Characters  
Ryo Narita, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kimura
- CO-20 Automatic Chinese Text Classification Using Character-based and Word-based Approach  
Xi Luo, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kimura

### **Technical Session CO-III**

November 1, 15:00 - 17:00, Room 13

*Haruhiko Takase, chair*

- CO-21 Design and Implementation of Multi-dimensional TaskArray for MegaScript  
Takashi Masuda, Akihiro Mita, Masaki Matsumoto, Kazuhiko Ohno, Takahiro Sasaki and Toshio Kondo
- CO-22 A hierarchical scheduler library for workflow model  
Kohei Suzuki, Kazuhiko Ohno, Masaki Matsumoto, Takahiro Sasaki and Toshio
- CO-23 A Dynamic Rescheduling Scheme Reducing Scheduling Computation  
Masaki Matsumoto, Kazuhiko Ohno, Kohei Suzuki, Takashi Masuda, Takahiro Sasaki and Toshio Kondo
- CO-24 FabHetero: An Environment for Developing Diverse Heterogeneous Multi-core Processors  
Tomoyuki Nakabayashi, Takahiro Sasaki, Kazuhiko Ohno and Toshio Kondo
- CO-25 Improved Technique to Reduce Writeback of Variable Level Cache  
Ko Watanabe, Takahiro Sasaki, Kazuhiko Ohno and Toshio Kondo

*Break*

*Hideo Kobayashi, chair*

- CO-26 Inter-Cell CA Scheme Using Spread Spectrum Technique for Next Generation Mobile Communication Systems  
Genta Yoshizaki, Kazuo Mori, Katsuhiro Naito and Hideo Kobayashi
- CO-27 Proposal of ITS Communication Systems by using OFDM-SFN with MRC Technique  
Tomoyuki Hagino, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-28 Proposal of Demodulation Method for SC-OFDM Systems under High Speed Mobile Environments  
Takuma Kawamura, Katsuhiro Naito, Kazuo Mori and Hideo Kobayashi
- CO-29 Tracking of Local Myocardial Motion on M-mode Echocardiogram by DP-based Elastic Model  
Chao Chen, Naoki Maesako, Xi Lou, Wataru Ohyama, Tetsushi Wakabayashi, Fumitaka Kimura and Kiyotsugu Seikioka



# Information Processing & Communications

Poster Presentation



## Research Area C

### Poster Presentations

#### Technical Session CP-I

##### Short Presentation for Poster Session

November 2, 10:40 - 12:00, Room 12

*Kazuo Mori, chair*

##### Poster Presentation

November 2, 13:00 - 14:30, Sansui Foyer

- CP-1 Improve tolerance for fluctuation of input value in SpikeProp Network with Population Coding  
Yuuta Shin, Takase Haruhiko, Kawanaka Hiroharu, and Tsuruoka Shinji
- CP-2 DP-based Motion Tracking for Left Ventricular myocardium and its multi-thread implementation  
Kazuhisa Murakami, Wataru Ohyama, Tetsushi Wakabayashi, Fumitaka Kiumura and Kiyotsugu Sekioka
- CP-3 Shape of Brillouin gain spectrum under sinusoidal-like strain distribution  
Yoshiki Hayase and Hiroshi Naruse
- CP-4 Prototype of a Local Strain Detection Device using Planar Lightwave Circuit to Improve the Spatial Resolution of a Long-Range Distributed Fiber Optic Strain Measurement System  
Mitsuko Adachi and Hiroshi Naruse
- CP-5 Fabrication and Evaluation of Variable Stages Pipeline Processor Chip  
Hitoshi Nakamura, Tomoyuki Nakabayashi, Takahiro Sasaki, Kazuhiko Ohno and
- CP-6 Automatic Fruit Grading System Using Principal Component Analysis of Color Image  
K.Ito, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kiumura
- CP-7 Adaptive Optimization of Communication on Workflow Runtime System  
Takayuki Naka, Masaki Matsumoto, Kazuhiko Ohno, Takahiro Sasaki and Toshio
- CP-8 Simplification of Filter Circuit for Evaluation System of Scratching Behavior  
Yosuke Shiratsuka, Yuichi Noro and Takashi Takeo
- CP-9 On the Improvement of Distributed Hash Table Symphony  
Rei Tsuzuki, Yoshikatu Ohta and Hidetomo Suzuki
- CP-10 Load buffer with conversion capability from tiled data to raster data for motion search  
Takumi Inomata, Atsushi Tachino, Toshio Kondo, Takahiro Sasaki and Kazuhiko
- CP-11 Localization Using an Acceleration Sensor on a Smartphone  
Kentaro Kawamura, Niwat Thepvilojanapong, Yoshikatsu Ohta and Hidetomo
- CP-12 Accuracy improvement of signature verification by segmentation verification  
Yuta.Kamihira, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kiumura

- CP-13 Improvement of AMBA Bus Framework for Heterogeneous Multi-core processor  
Yusuke Seto, Takahiro Sasaki, Tomoyuki Nakabayashi, Kazuhiko Ohno, and Toshio
- CP-14 Positioning of RFIDs for Managing Medical Instruments in a Hospital by Means of Wireless LAN  
Kaori Takeda, Masaki Matsuzuki, Yuichi Noro and Takashi Takeo
- CP-15 Effect of an Off-Centered Arrangement in Permeability Measurement Using a Microstrip Line-Coaxial Conductor Method  
Masato Kawaguchi and Takashi Takeo
- CP-16 Measurement of the Magnetic Permeability in a Ferrite Core by Superimposing a Bias Current  
Kousuke Kikuchi and Takashi Takeo
- CP-17 Value-Range Analysis of Programs Incorporating Branch Conditions  
Yusuke Ito and Toshiyuki Yamada
- CP-18 Correctness of an Algorithm for Value-Range Analysis  
Yuuki Nakagawa and Toshiyuki Yamada
- CP-19 Improving the Precision of Semi Dynamic Program Slicing Method  
Takashi Ogami and Toshiyuki Yamada
- CP-20 A HOG based motion recognition method utilizing temporal average and change  
Naoto Funahashi, Takuma Sasaki, Hidetomo Suzuki and Yoshikatsu Ohta
- CP-21 Extraction of blood flow areas in MRI heart images with use of the level set method  
Kenta Nishikawa, Masanobu Masuda, Hidetomo Suzuki and Yoshikatsu Ohta
- CP-22 Determination Scheme for Histological Classification of Breast Masses by Objective Features Based on Clinical Features and Statistical Features  
Akiyoshi Hizukuri, Ryohei Nakayama, Yumi Kashikura, Hiroharu Kawanaka, Haruhiko Takase, Tomoko Ogawa, Shinji Tsuruoka
- CP-23 Program Visualization by Integration of Statements Using Comments  
Yuki Hashizume and Toshiyuki Yamada



Research Area D & F



# Life Science & Advanced Materials

Oral Presentation

## Research Area D & F (tentative schedule)

### Oral Presentations

#### Technical Session DFO-I

November 1, 15:00 - 17:00, Room 24

*Nobuyuki Imanishi, Toshikazu Kitagawa, chair*

- FO-1 Synthesis of Chiral  $\beta$ -Lactams Using Enantioselective Reduction of Iminocyclobutenones  
Akinori Ito, Iwao Hachiya and Makoto Shimizu
- FO-2 Synthesis of Quaternary  $\alpha$ -Amino Acid Derivatives Utilizing Tandem Reaction to Iminomalonates  
Miki Mushika, Makoto Shimizu
- FO-3 Determination of gold in environmental samples by graphite furnace atomic absorption spectrometry after preconcentration with protain biosorption  
Yasuki Tanaka, Hideyuki Katumata, Tohru Suzuki and Satoshi Kaneco
- FO-4 Purification of thiuram-contaminated water using carboxymethyl cellulose stabilized Fe/Ni bimetal nanoparticles  
Yuki Matsuura, Hideyuki Katumata, Tohru Suzuki and Satoshi Kaneco
- FO-5 Electrochemical Reduction of CO<sub>2</sub> at Diamond Electrode in Methanol under High Pressure  
Isamu Okazaki, Hideyuki Katsumata, Toru Suzuki and Satoshi Kaneco

*Break*

*Tadashi Inaba, Masahiro Tomita, chair*

- DO-1 Separation of Human Erythrocytes in a Quadrupole Magnet Flow Sorter  
Tomoya Tanaka, Lee R Moore, Jeffrey J. Chalmers, Masahiro Tomita, Takashi Horiuchi and Maciej Zborowski
- DO-2 A novel Magnetic Nanoparticle Separation Method Based on Quadrupole Magnetic Field-Flow Fractionation (QMgFFF)  
Toru Orita, Lee Moore, Powrnima Joshi, Masahiro Tomita, Takashi Horiuchi and Maciej Zborowski
- DO-3 Thickness of collagen gel promotes epithelial differentiation of human mesenchymal stem cells  
Hiromi Denno, Takafumi Takebayashi, Nobutoshi Nakamachi, Keiichi Miyamoto, Takashi Horiuchi and Yuji Ohta
- DO-4 Anti-Oxidative potential and Cell Senescence of Peritoneal Dialysis Effluent Derived cells  
Koji Abe, Tomoaki Kuzumoto, Takuya Hara, Cong Xiu Na, Keiichi Miyamoto, Takashi Horiuchi, Tomohiro Murata, Eiji Ishikawa, Shinsuke Nomura and Tadashi Tomo
- DO-5 Intercellular Junction of peritoneal dialysis effluent derived cells  
Takuya Hara, Koji Abe, Tomoaki Kuzumoto, Cong Xiu Na, Keiichi Miyamoto, Takashi Horiuchi, Tomohiro Murata, Eiji Ishikawa and Shinsuke Nomura
- DO-6 Biomechanical Study on the Center of Rotation in Functional Spinal Unit  
Takahiro Watanabe, Takamasa Yoshikawa and Tadashi Inaba



Research Area D & F



# Life Science & Advanced Materials

Poster Presentation

## Research Area D & F (tentative schedule)

### Poster Presentations

#### Technical Session DFP-I

#### Short Presentation for Poster Session

November 1, 9:45 - 11:00, Meeting Room L

#### Poster Presentation

November 2, 9:00 - 12:00, Sansui Foyer

*Takahito Itoh, chair*

- FP-1 Properties of Polymer Electrolyte Based on Poly(diallylmalononitrile)  
Daichi Uei, Takahiro Uno, Masataka Kubo and Takahito Itoh
- FP-2 Molecular Elongation by Repeated Cross-coupling Reactions on the Self-assembled Monolayer of a Tripod-shaped Trithiol and Electrochemical Determination of Product Yield  
Hisashi Umemura and Toshikazu Kitagawa
- FP-3 Reactions of Belt-like Cyclic Alkenes and Structures of Their Carbocationic Intermediates  
Hideaki Miyake, Takao Okazaki and Toshikazu Kitagawa
- FP-4 Regioselective Ring-Opening Halogenation Reaction of Azetidin-3-one *O*-Alkyl Oxime Promoted by Titanium Tetrahalide  
Shizuka Ariga, Iwao Hachiya and Makoto Shimizu
- FP-5 *N*-Alkylation of  $\alpha$ -Imino Ester Followed by Electrophilic Addition Reaction and Its Flow Synthesis  
Takanori Sano, Isao Mizota and Makoto Shimizu
- FP-6 Simulation of Diamond-like Carbon Growth on Iron Substrate Using Molecular Dynamics  
Ryosuke Iguchi, Takahiro Kawamura and Yasuyuki Suzuki
- FP-7 Photocatalytic degradation of 2-naphthol by  $\text{WO}_3$  hollow sphere  
Naoyuki Saka, Hideyuki Katsumata, Toru Suzuki and Satoshi Kaneco
- FP-8 Heterogeneous Fenton degradation of linuron with  $\text{BiFeO}_3$   
Koichi Inoue, Hideyuki Katsumata, Toru Suzuki and Satoshi Kaneko
- FP-9 Electrochemical reduction of  $\text{CO}_2$  at boron-doped electrode in methanol  
Kento Asama, Hideyuki Katsumata, Tohru Suzuki and Satoshi Kaneco
- FP-10 Photocatalytic hydrogen production from biomass solution with zinc oxide  
Sho Nishimoto, Hideyuki Katsumata, Tohru Suzuki, P. Gomathisankar and Satoshi Kaneco
- FP-11 Rheology of fumed silica suspension gels  
Yuichi Kataoka and Masami Kawaguchi
- FP-12 Effects of heating and pre-shearing on rheological behavior of silicone oil greases  
Toshiaki Yamaguchi, Masami Kawaguchi, Keisuke Kayano and Kazutaka Noro
- FP-13 Dispersion Behavior of Polymer-Adsorbed Fumed Silica in a Polymeric Matrix  
Yusuke Kondo, Naoya Torikai and Masami Kawaguchi
- FP-14 Hydrothermal gasification reaction of phenol water using oxide-carbon composite supported Ni catalysts  
Kenta Imanishi, Hitoshi Aoki, Tadanori Hashimoto, Hiroyuki Nasu, Atsushi Ishihara

- FP-15 Effect of Supports on Hydrocracking of Aromatic Hydrocarbon Using NiMo Supported Zeolite-Alumina and Silica Composite Catalysts  
Yuji Tsuda, Tadanori Hashimoto, Hiroyuki Nasu and Atsushi Ishihara
- FP-16 Characterization of perovskite-type anode materials,  $\text{Sr}_2\text{FeMoO}_{6-\delta}$  for SOFCs  
Hirokazu Takagi, Atushi Hirano, Yasuo Takeda and Nobuyuki Imanishi
- FP-17 Stable electrolyte for high voltage lithium metal secondary cells  
Ryo Yokozawa, Tatsuo Horiba and Nobuyuki Imanishi
- FP-18 Lithium nitride formation on lithium metal  
Naoki Futamura, Takayuki Ichikawa, Nobuyuki Imanishi, Yasuo Takeda and Osamu Yamamoto
- DP-1 Biomechanical Effect of Segmental Spinal Correction System on Adjacent Segments  
Yuki Nakagami, Takamasa Yoshikawa and Tadashi Inaba
- DP-2 Engineering of recombinant human Fc $\gamma$  receptor I by directed evolution  
Yoshiharu Asaoka, Kouta Hatayama, Teruhiko Ide and Masahiro Tomita
- DP-3 Cell Responses on Poly-L-lactic Acid Fibrous Scaffolds with Different Structure  
Mari Kamada, Masahiro Tomita, Masahiko Inagaki and Katsuya Kato
- DP-4 Confocal microscopic observation on baculovirus budded virus envelopes and liposome membranes using cell-sized artificial lipid vesicles prepared with a dropet-transfer method  
Misako Nishigami, Masahiro Tomita and Kanta Tsumoto
- DP-5 Development of Elastin-Fibrillin complex materials for elastic tissues reproduction  
Ayumu Kamiya, Marina Hasegawa, Atsushi Sakai, Masahiro Nakamura, Naoki Mizutani, Keiichi Miyamoto and Takashi Horiuchi
- DP-6 Investigation of elastin binding protein  
Masahiro Nakamura, Yoshihiko Hara, Atsushi Sakai, Ayumu Kamiya, Naoki Mizutani, Soushi Kageyama, Keiichi Miyamoto and Takashi Horiuchi

## Research Area D & F (tentative schedule)

### Poster Presentations

#### Technical Session DFP-II

November 2, 13:00 - 16:00, Sansui Foyer

*Takashi Horiuchi, chair*

- FP-19 Preparation of Self-Doped Conducting Polycyclopentadithiophene and Its Hybridization with silica  
Nobuaki Kumazawa, Takahiro Uno, Takahito Itoh and Masataka Kubo
- FP-20 Synthesis and Photolysis of Polydiazo Compounds Consisting of a Dimesityldiazomethane Derivative by Using Sonogashira Coupling Reaction  
Shinya Sato, Masaya Shintaku, Katsuyuki Hirai and Toshikazu Kitagawa
- FP-21 Preparation of Monolayer of a Dyad Having a Diaryldiazomethane and a Tripod-shaped Trithiol and Trapping of the Photogenerated Carbene  
Tsubasa Nagai, Katsuyuki Hirai and Toshikazu Kitagawa
- FP-22 Horner-Wadsworth-Emmons Reaction Using an Umpolung Reaction of  $\alpha$ -Imino Phosphonates  
Masasato Tateishi and Makoto Shimizu
- FP-23 Carbon-Carbon Bond Formation Reaction Using An Umpolung Reaction to  $\alpha$ -Imino Thioester  
Chihiro Ueda, Isao Mizota and Makoto Shimizu
- FP-24 Molecular Beam Epitaxy Growth of GaN under Ga-rich Conditions Simulated by Molecular Dynamics  
Hiroya Hayashi, Takafumi Miki, Takahiro Kawamura and Yasuyuki Suzuki
- FP-25 Hydrogen evolution from aqueous solution by  $\text{Cd}_{0.3}\text{Zn}_{0.7}\text{S}$  solid solution photocatalyst  
Hideki Ando, Hideyuki Katsumata, Toru Suzuki, Satoshi Kaneco
- FP-26 Degradation of organic pollutants with silver orthophosphate as a visible light responsive photocatalyst  
Masanao Taniguchi, Hideyuki Katsumata, Tohru Suzuki and Satoshi Kaneco
- FP-27 Photocatalytic degradation of Famotidine in aqueous solution with semiconductor photocatalysts  
Yusuke Shimizu, Hideyuki Katsumata, Tohru Suzuki and Satoshi Kaneco
- FP-28 Characterization of emulsions prepared by various surfactants  
Toru Imaeda and Masami Kawaguchi
- FP-29 Characterization of poly (N-isopropyl acrylamide) films spread at the air-water interface  
Yuki Okumura and Masami Kawaguchi
- FP-30 Preparation of a cobalt supported catalyst by the sol-gel method and Fischer-Tropsch reaction using a trickle bed reactor  
Youhei Sone, Tadanori Hashimoto, Hiroyuki Nasu and Atsushi Ishihara
- FP-31 Air electrode with oxide catalyst for aqueous lithium-air rechargeable batteries  
Shogo Sunahiro, Hirokazu Ohkuma, Ichiro Uechi, Nobuyuki Imanishi, Yasuo Takeda and Osamu Yamamoto
- FP-32 Synthesis and properties of Nb-Doped Cubic  $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$   
Kazuki Ishiguro, Yusuke Nakata, Nobuyuki Imanishi, Atsushi Hirano, Yasuo Takeda and Osamu Yamamoto
- FP-33 Ionic conductivity of cubic  $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12-0.5x}$   
Yusuke Nakata, Kazuki Ishiguro, Nobuyuki Imanishi, Atsushi Hirano, Yasuo Takeda and Osamu Yamamoto
- FP-34 Media Design Analysis for Thermally Assisted Magnetic Recording  
Takumi Horie, Daisaku Nunome, Tadashi Kobayashi and Yuji Fujiwara



- FP-35 Analysis of Tin Oxide Film by an Equivalent Circuit  
Yamato Ito, Kazuo Iida, Shigeru Sawada, Atsushi Shimizu and Yasuhiro Hattori
- DP-7 Biomechanical Study in Spine of Deformation Behavior Loaded Shear Force  
Masahiro Yamada, Takito Inukai, Takamasa Yoshikawa and Tadashi Inaba
- DP-8 Leptosiprosis in Mie Prefecture  
Shigehiro Akachi, Tomoya Tanaka, Marina Yamaguchi, Kanta Tsumoto and Masahiro Tomita
- DP-9 Reconstitution of an integrated membrane protein system on giant liposomes using the baculovirus-liposome fusion technique  
Takaaki Mori, Ayu Ohta, Masahiro Tomita and Kanta Tsumoto
- DP-10 Selective production of stereo-specific monoclonal antibodies by new hybridoma technology  
Yasuhiro Yamasaki, Yasuyuki Oda, Toshiyuki Ohshima, Katsuyuki Tamai, Takashi Murayama, Takashi Sakurai, Kanta Tsumoto and Masahiro Tomita
- DP-11 Specific binding of immunoglobulin G to protein A-mesoporous silica composites for affinity column chromatography  
Kazuma Nakanishi, Masahiro Tomita, Hitomi Nakamura and Katsuya Kato
- DP-12 The Technique to Control the Phenotype of the Ligament Cells by Three Dimensional Cell Scaffolds  
Naoki Mizutani, Satoshi Kageyama, Masahiro Hasegawa, Takafumi Takebayashi, Keiichi Miyamoto and Takashi Horiuchi
- DP-13 Studies on the control cell migration by elastin peptides  
Atsushi Sakai, Daisuke Shiosaki, Ryutaro Takarabe, Ayumu Kamiya, Masahiro Nakamura, Naoki Mizutani, Keiichi Miyamoto and Takashi Horiuti



# Nanoscience & Nanotechnology

Poster Presentation

## Research Area E

### Poster Presentations

#### Technical Session EP-I

#### Short Presentation for Poster Session

November 2, 10:20-11:40, Room 24

#### Poster Presentation

November 2, 13:00 - 14:00 (Odd number), 14:00 - 15:00 (Even number) , Sansui Foyer

- EP-1 Effect of Hydrogen Plasma Treatment on Field Emission Property of Carbon Nanotube Films  
Kazuma Oohara and Hideki Sato
- EP-2 Graphene Grown on Transition Metal by Low-Pressure Alcohol Catalytic Chemical Vapor Deposition Method  
Takaya Maesaka and Hideki Sato
- EP-3 Influence of Surface Morphology of Carbon Nanotube Film on Its Field Emission Characteristics  
Kota Shimanaka and Hideki Sato
- EP-4 Controllable Synthesis of Graphene Flakes in N-Methyl-Pyrrolidone (NMP) using Ultrasonic Treatment  
Nabihah Abdullah, Katano Takafumi and Fumio Kokai
- EP-5 Formation of One-dimensional Core-shell Structures Containing Silicon by Alcohol CVD Method  
Kenji Shirase, Bach Duc Cuong, Akira Koshio, and Fumio Kokai
- EP-6 One-step Growth of Carbon Nanotubes Filled with Copper Compounds by Alcohol CVD Using Cu/Ag Substrate  
Takuya Noguchi, Yusuke Furuyama, Akira Koshio, and Fumio Kokai
- EP-7 C<sub>60</sub> Solid Grown from o- and m-xylene Solution by Means of LLIP Method  
Naoki Sato and Yutaka Takahashi
- EP-8 Electronic Structures at Hydrogenated Diamond (110) Surface in External Electric Field  
Aiichiro Sugiyama, Kohji Nakamura, Kazuhiro Sano, Toru Akiyama, Tomonori Ito
- EP-9 First-Principles Calculations of Structural Stability of Fe Thin Films in External Electric Field  
Katsuya Masuda, Kohji Nakamura, Toru Akiyama and Tomonori Ito
- EP-10 First-Principles Calculations of Multiplet Structures of Transition-Metal Phthalocyanines  
Toshio Sakai, Yukie Kitaoka, Kohji Nakamura, Toru Akiyama, and Tomonori Ito
- EP-11 Growth Characteristics of Copper Oxide Nanowires by Thermal Oxidation in the Air  
Norihito Yokouchi, Kenta Maeda and Hideki Sato
- EP-12 Evaluation of Probe Diameter of Focused Ion Beam Systems with Noble Gas Field Ion Sources  
Masatoshi Ito, Shigekazu Nagai, Tatsuo Iwata, Kazuo Kajiwara and Koichi Hata
- EP-13 Fabrication of a Long-life Liquid Lithium Field Emission Electron Source  
Ryo Nagai, Koichi Hata and Shigekazu Nagai
- EP-14 Improvement of Field Induced Oxygen Etching Method Preparing a Gas Filled Ion Emitter with ideal shape at the atomic level  
Takayuki Asai, Shigekazu Nagai, Tatsuo Iwata, Kazuo Kajiwara, and Koichi Hata

- EP-15 Stability Measurement of Neon Ion Beam Current Emitted from Supertip Gas Field Ion Source  
Yuusuke Suzuki, Takayuki Asai, Shigekazu Nagai, Tatsuo Iwata, Kazuo Kajiwara and
- EP-16 MOVPE Growth of GaN on Off-Angle Trench-Patterned GaN/Sapphire Templates  
Zhi Cai, Hideto Miyake and Kazumasa Hiramatsu
- EP-17 Thick AlN Growth on 6H-SiC Substrate by Hydride Vapor Phase Epitaxy  
Shin Kitagawa, Naoki Gouriki, Hideto Miyake and Kazumasa Hiramatsu
- EP-18 Facet Structures of Selective-Area-Grown GaN on Semipolar (20-21) and (20-2-1) Substrates  
Shunsuke Okada, Daiki Jinno, Hideto Miyake and Kazumasa Hiramatsu
- EP-19 Theoretical Investigation for Miscibility in  $\text{GaN}_x\text{As}_{1-x-y}\text{Bi}_y$  Mixed Crystal  
Takahiro Makihara, Toru Akiyama, Kohji Nakamura and Tomonori Ito
- EP-20 Ab Initio-Based Approach to Novel Behavior of InAs/GaAs(001)-(n×3) Wetting Layer  
Kentaro Hirai, Toru Akiyama, Kohji Nakamura and Tomonori Ito
- EP-21 Experimental Studies on Electrically Tunable Terahertz Metamaterial Based on Organic Bistable Device  
Ryosuke Takagi and Tatsunosuke Matsui
- EP-22 Fabrication and Characterization of Low-Threshold Conducting Polymer Composite Laser  
Shinji Nozaki and Tatsunosuke Matsui
- EP-23 Electromagnetic Field Simulation Using Parallel Computation by GPU  
Tsuyoshi Iwata and Tatsunosuke Matsui
- EP-24 Time-of-Flight Measurement of Carrier Mobility of Conducting Polymer for the Development of Novel Organic Film Photovoltaic Cell  
Kei Kato and Tatsunosuke Matsui
- EP-25 Reflectance Characteristics at the Interface of GaP and Au Contact and the Exciting of the Surface Plasmon Polariton  
Shohei Nakamura, Atsushi Motogaito, Hideto Miyake and Kazumasa Hiramatsu
- EP-26 Study on the Relationship between the Structure and Polarization Property in the Double-Layer Wire Grid Polarizer  
Yuuta Morishita, Atsushi Motogaito, Hideto Miyake and Kazumasa Hiramatsu
- EP-27 Wave Algorithm of One-Dimensional Quasi-Passive Walk Like Proceed  
Keigo Yamada, Shigeo Kotake, Takahiro Kawamura and Yasuyuki Suzuki
- EP-28 A B3LYP Study on Hydration Structures of  $\text{K}^+$  and  $\text{Na}^+$  Ions in the KcsA Potassium Channel  
Mizuki Itoh, Masaki Mitani and Yasunori Yoshioka
- EP-29 Theoretical Study on Mechanism of Water Oxidation from  $\text{S}_0$  to  $\text{S}_3$  States Catalyzed by OEC  
Tomoya Ichino, Masaki Mitani and Yasunori Yoshioka
- EP-30 Theoretical Study on Electronic Structures of Complexes of Phosphatase with Phosphoric Acid Ester and Phosphoric Acid  
Tomoya Shimizu, Tomoya Ichino, Masaki Mitani and Yasunori Yoshioka



# Infrastructure & Production

Oral Presentation

## Research Area G

### Oral Presentations

#### Technical Session GO-I

November 2, 10:00- 12:05, Room 1

*Akikazu Kato, chair*

- |      |  |             |
|------|--|-------------|
| GO-1 | A Proposal on the Architectural Planning of PICU (Pediatric Intensive Care Unit) in Children's Hospital<br><u>Masayuki Kato</u> , Akikazu Kato and Shiho Mori  | 10:00-10:13 |
| GO-2 | Analysis on Inpatients' Postures and Behaviors and Usage of Desks in Multiple Bed Rooms- Study of Hospital Ward Environment for Early Recovery -<br><u>HARA Reiko</u> , KATO Akikazu, MORI Shiho, IMAI Shoji, MATSUMOTO Takatoshi, IMAI Koji and CHAN Seng Kee | 10:13-10:26 |
| GO-3 | Chronological Transition of Urban Form of Block 70 in New Belgrade, Serbia (former Yugoslavia), 1945-present<br><u>Vladimir POPOVIĆ</u> , Chikako TABATA and Yoshito TOMIOKA   | 10:26-10:39 |
| GO-4 | Development of Practical Tools for Vulnerability and Safety Evaluation of CHB house of the Philippines<br><u>Hiroshi IMAI</u> , Toshikazu HANAZATO, Akaki NAKATANI and ANGELITO G. LANUZA  | 10:39-10:52 |
|      | <i>Break</i>   | 10:52-11:00 |
|      | <i>Toshikazu Hanazato, chair</i>   |             |
| GO-5 | Shaking Table Experiments on Full-Scale Masonry Walls using Bricks made in Padang, Indonesia<br><u>Akaki Nakatani</u> , Toshikazu Hanazato, Yasushi Niitsu, Tadashi Mikoshiba and Hiroshi Imai   | 11:00-11:13 |
| GO-6 | Structural Characteristics of Traditional Wooden Houses in South Nias, Indonesia<br><u>S. Hanazato</u> , T. Hanazato, Y. Uekita, K. Sato, K. Nitto, K. Ono, A. Nakatani, S. Yoyok, P. Diananta and E. Pradipto   | 11:13-11:26 |
| GO-7 | Seismic Structural Monitoring of World Heritage Masonry Monuments in Earthquake-prone Countries<br><u>Natsumi Oyaizu</u> , Toshikazu Hanazato, Harris P. Mouzakis, Yasufumi Uekita, Kunihiko Ono, and Subagyo Pramumijyo                                       | 11:26-11:39 |
| GO-8 | Earthquake and Wind Monitoring of Five-Storied Pagoda Registered as Important Cultural Property<br><u>Tappei Yokoo</u> , Toshikazu Hanazato, Chikahiro Minowa and Yasushi Niitsu   | 11:39-11:52 |
| GO-9 | ASSESSMENT AFTER 10 YEARS FROM RESTORATION WORKS - Dynamic conservation and practical use of Jiyu Gakuen school Myonichikan, important cultural property -<br><u>Natsuko SUGIE</u> and Toshikazu HANAZATO  | 11:52-12:05 |



# Infrastructure & Production

Poster Presentation

## Research Area G

### Poster Presentations

#### Technical Session GP-I

November 2, 13:30 -15:00, Sansui Foyer

- GP-1 Control of porosities in stud welds of steel with gas shielding or flux for SAW  
Keisuke Fujiwara, Jippe Suzuki, Hiroshi Kawakami and Hitoshi Ozaki
- GP-2 Influence of material strength on spattering and diameter of nugget for resistance spot welding of steels  
Tsubasa Murakami, Jippe Suzuki, Hiroshi Kawakami and Hitoshi Ozaki
- GP-3 Application of indirect laser peening to thin plate of stainless steel  
Akiyoshi Kondo, Hiroshi Kawakami, Jippe Suzuki and Hitoshi Ozaki
- GP-4 Influence of Defocus Distance on Tolerance to Irradiated Position in Laser Butt Welding  
Ryusuke Akai, Jippe Suzuki, Hiroshi Kawakami and Hitoshi Ozaki
- GP-5 Influence of Pressure on Properties in Assist Gas Free Laser Cutting  
Yosuke Koike, Jippe Suzuki, Hiroshi Kawakami and Hitoshi Ozaki
- GP-6 Effect of Polarization on Penetration shape of Laser Butt Weld  
Tomoya Mori, Jippe Suzuki, Hiroshi Kawakami and Hitoshi Ozaki
- GP-7 Influence of Electrifying Condition on Hardening Performance in Die Steel, SKD11, Rapidly Resistance-Heated and Locally Hardened  
Kouhei OISHI
- GP-8 Tensile test in hot stage using resistance heating  
Yuuki Makida
- GP-9 Development of C-FRP Advanced Molding Method Using Thermoplastic Resin Sheet - Combination of Vacuuming and Induction Heating -  
Satonori MATSUMOTO
- GP-10 Simplified Measurement of Thermophysical Properties for Metallic Materials Using Rapid Resistance Heating  
Fumihiko Sano
- GP-11 Study on Reduction of Cutting Load of PVC Pipe by Using a Wedge Shaped Blade  
Makoto Aoki, Eitoku Nakanishi
- GP-12 The Effect of Tool Edge Geometry on Tool Wear in Milling of Al-Si Alloy  
Satoshi Otani
- GP-13 Influence of Processing Conditions on Bending Performance in Practical Die-Quenching Steel Sheet Rapidly Resistance-Heated and Hot Circular-Bent  
Yoshihiro Kusunoki
- GP-14 Simple Rheological Evaluations of Solidified Lubricant Greases and Their Thickeners under High Pressure  
Katsuhito Nishimura, Yuichi Nakamura and Masahito Matsui
- GP-15 Generation Behavior of Super Smooth Surface in Compression of Aluminum  
Yuma Yamamoto, Masahito Matsui, Kenichi Murai and Yuichi Nakamura
- GP-16 A Study on the Application of Thermal Well as a Heat Source/Sink of Heat Pump for Detached Houses Part2. The Relationship between the Ratio of Heating /Cooling Load and Insulation Performance of the House in Various Regions of Japan  
Junichi Nakagawa, Hisaya Nagai and Hiroaki Kitano



- GP-17 Basic Study on Subjective Impression for Sound Field with Superimposed Sound Effects  
Hisanori Hayakawa and Takane Terashima
- GP-18 Relationship between subjective impressions by visual information and sound field in architectural and urban space  
Wani Yuko and Terashima Takane
- GP-19 Basic Study on Discrimination of Sound Field by Difference in Attenuation Property of Room Acoustic Energy  
Maya Katoh and Takane Terashima
- GP-20 Experimental Study on Influence of Water Sprinkling as Early Age Curing on Compressive Strength of Porous Concrete  
Jun Kawai, Naoki Mishima and Shigemitsu Hatanaka
- GP-21 Experimental Study on Failing Behavior of Reinforced Concrete Columns with a Wall of Low Strength Concrete (Part 1 Experimental Outline)  
Furusawa Shoichi, Hatanaka Shigemitsu, Mishima Naoki, Ishida Tooru and Takahashi Tomoki
- GP-22 Experimental Study on Failing Behavior of Reinforced Concrete Columns with a Wall of Low Strength Concrete (Part 2 Experimental Result of Reinforced Concrete Columns with a Wing Wall)  
Takahashi Tomoki, Furusawa Shoichi, Ishida Tooru, Hatanaka Shigemitsu and Mishima Naoki
- GP-23 Experimental Study on Failing Behavior of Reinforced Concrete Columns with a Wall of Low Strength Concrete (Part3 Experimental Result of Reinforced Concrete Columns with a Spandrel Wall and Sagging Wall)  
Tooru Ishida, Shoichi Furusawa, Tomoki Takahashi, Shigemitsu Hatanaka and Naoki Mishima
- GP-24 Practical Study on the Development of the Supporting Scheme of Resident's Activity about the Disaster Mitigation  
Taishi Isowa, Kazuki Nishioka and Jun Kawaguchi
- GP-25 Analysis on Inpatients' Postures and Behaviors and Usage of Desks in Multiple Bed Rooms - Study of Hospital Ward Environment for Early Recovery -  
HARA Reiko, KATO Akikazu, MORI Shiho, IMAI Shoji, MATSUMOTO Takatoshi, IMAI Koji and CHAN Seng Kee
- GP-26 A Proposal on the Architectural Planning of PICU (Pediatric Intensive Care Unit) in Children's Hospital  
Masayuki Kato, Akikazu Kato and Shiho Mori
- GP-27 A research on actual use of a park to be arranged by local residents' request in an industrial complex - Some cases of industrial complexes in Yokkaichi city, Mie prefecture -  
Chiaki Inami, Kazuhiro Fuzimoto, Masuro Urayama and Kenjiro Matuura
- GP-28 A Vibration Experiment on the Scaled Models of Parasol Unit to Introduced with Pleated Membrane as Damping Element  
Hideki KAMIYA, Chikako TABATA and Yoshito TOMIOKA
- GP-29 The Chronological and Geographic Distributions on the Wall Construction of Timber Houses Built in Mie Pref.  
Yuko ASAI, Chikako TABATA and Yoshito TOMIOKA
- GP-30 A study about reexamination on the important area (Futamichochaya Area) in the Ise City Landscape Plan  
Susumu MORIKAWA, Naotaka HAYASHI and Satoshi ASANO