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5AM1-1: Bio-Signal Processing 1

Date: March 5, 9:00–10:30

Room: Kaiulani I

Chair: Prof. Yasunori Sugita (Nagaoka University of Technology)

5AM1-1-1 Nondestructive Evaluation of Fish Meat Using Ultrasound Signal by Machine Learning and Bag of Features

Chihiro Saeki (National Fisheries University), Kazuhiro Tokunaga (National Fisheries University), Shinichi Taniguchi (Nippon Kaiji Kentei Kyokai), Shinta Nakano (Nippon Kaiji Kentei Kyokai), Hiromitsu Ohta (National Fisheries University), Makoto Nakamura (National Fisheries University)

5AM1-1-2 Fundamental Tradeoff among Identification, Secrecy and Compression Rates in Biometric Identification System

Vamoua Yachongka (The University of Electro-Communications), Hideki Yagi (The University of Electro-Communications)

5AM1-1-3 A Proposal of Extraction Method of Pulse Wave during Driving of a Vehicle

Hotaka Takada (Maebashi Institute of Technology), Takashi Ishiguro (TAIYO YUDEN CO., LTD. R&D Center), Tomomi Ogawa (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)

5AM1-1-4 A consideration on a regeneration method of biological signal based on BSS

Kazuki Ota (Maebashi Institute of Technology), Hotaka Takada (Maebashi Institute of Technology), Takashi Ishiguro (TAIYO YUDEN CO., LTD. R&D Center), Tomomi Ogawa (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)

5AM1-1-5 Detection threshold of auditory apparent motion during linear self-motion

Miharu Noda (Tohoku University), Shuichi Sakamoto (Tohoku University), Zhenglie Cui (Tohoku University), Wataru Teramoto (Kumamoto University), Yôiti Suzuki (Tohoku University), Jiro Gyoba (Tohoku University)

5AM1-2: Wireless Communications

Date: March 5, 9:00–10:30

Room: Kaiulani II

Chair: Prof. Kohei Ohno (Meiji University)

5AM1-2-1 Automatic Modulation Classification Using Non-Parametric Distance and Phase Likelihood Functions

Kei Ichijo (Saitama University), Yosuke Sugiura (Saitama University), Tetsuya Shimamura (Saitama University)

5AM1-2-2 Proposal and Evaluation of CoMP System with Alamouti Transmission Diversity and MIMO Configuration

Naoki Ogi (Sophia University), Takeshi Hattori (Sophia University), Masakatsu Ogawa (Sophia University)

5AM1-2-3 Proposal of overlay network architecture supporting traffic offloading for IoT devices in LTE networks

Katsuhiro Naito (Aichi Institute of Technology), Shunsuke Shibata (Aichi Institute of Technology), Katsuhiko Kaji (Aichi Institute of Technology), Nobutaka Matsumoto (KDDI Research, Inc.), Takeshi Kitahara (KDDI Research, Inc.), Tadanori Mizuno (Aichi Institute of Technology)

5AM1-2-4 Design of performance evaluation scheme of LTE network for IoT traffic

Shunsuke Shibata (Aichi Institute of Technology), Katsuhiko Naito (Aichi Institute of Technology), Katsuhiko Kaji (Aichi Institute of Technology), Nobutaka Matsumoto (KDDI Research, Inc.), Takeshi Kitahara (KDDI Research, Inc.), Tadanori Mizuno (Aichi Institute of Technology)

5AM1-2-5 A Study on Uplink large-scale Chaos MIMO Transmission Scheme using Gaussian Belief Propagation

Naoto Horiike (Nagoya Institute of Technology), Eiji Okamoto (Nagoya Institute of Technology), Tetsuya Yamamoto (Panasonic Corporation)

5AM1-3: Power and Energy Systems

Date: March 5, 9:00–10:30

Room: Kaiulani III

Chair: Prof. Hiroo Sekiya (Chiba University)

5AM1-3-1 Improving thermometer's accuracy on low-price environment sensor for the mini-pipe greenhouse

Shinsuke Ueno (National Institute of Technology, Anan College), Susumu Yoshida (National Institute of Technology, Anan College), Fuminori Matsuura (National Institute of Technology, Anan College)

5AM1-3-2 Wind Speed Prediction Model Using LSTM and 1D-CNN

Rui Fukuoka (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Takashi Yasuno (Tokushima University)

5AM1-3-3 Analysis of Frequency Synchronization for Placements of Generators in Power Grid Using Oscillator Networks

Toshichika Aoki (Nippon Institute of Technology), Yuuki Morita (Nippon Institute of Technology), Hideyuki Kato (Oita University), Takayuki Kimura (Nippon Institute of Technology)

5AM1-3-4 Satellite Cloud Image Prediction Model Using Convolutional Neural Network

Kosuke Okumoto (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Takashi Yasuno (Tokushima University), Kiyoshi Takigawa (Shikoku Research Institute Inc.)

5AM1-3-5 Design of Phase-Controlled Class-D ZVS Inverter for Output Power Regulation

Yudai Nagata (Chiba University), Hiroo Sekiya (Chiba University)

5AM2-1: Watermarking

Date: March 5, 10:50–11:44

Room: Kaiulani I

Chair: Prof. Masaya Yoshikawa (Meijo University)

5AM2-1-1 Efficient Image Watermarking Using the Difference Value of Two Wavelet Filters

Yufeng Yan (Tokyo University of Science), Hyunho Kang (National Institute of Technology, Tokyo College), Keiichi Iwamura (Tokyo University of Science), Isao Echizen (National Institute of Informatics)

5AM2-1-2 Graph Watermarking Method Using Spread Spectrum Technique

Yu Matsuo (Ehime University), Toshiyuki Uto (Ehime University), Kenji Ohue (Ehime University)

5AM2-1-3 A 3-D Mesh Watermarking Technique via a Smoothed Watermark

Yu Matsuo (Ehime University), Rei Tanaka (Ehime University), Toshiyuki Uto (Ehime University), Kenji Ohue (Ehime University)

5AM2-2: Estimation 1

Date: March 5, 10:50–12:02

Room: Kaiulani II

Chair: Prof. Yusuke Kozawa (Ibaraki University)

5AM2-2-1 Fast Archery Arrow Localization by 2-Step TOA and TDOA of Impact Sound

Kosuke Tomita (Osaka City University), Ikuo Oka (Osaka City University), Tetsuo Tsujioka (Osaka City University), Hitoshi Watanabe (Osaka City University), Yu Morishima (National Institute of Technology, Suzuka College)

5AM2-2-2 Matrix Rank Minimization and Locally Linear Embedding Approach to Nonlinear Matrix Completion Problems

Tomoki Shise (Kogakuin University), Ryohei Sasaki (Tokyo University of Science), Katsumi Konishi (Kogakuin University), Toshihiro Furukawa (Tokyo University of Science)

5AM2-2-3 Estimation of Time-delay and Embedding Dimension of Rössler system using Persistent Homology with Witness Complex

Hiromi Sasaki (Meiji University), Shota Mochizuki (Meiji University), Keisuke Fukagai (Meiji University), Hiroyuki Kamata (Meiji University)

5AM2-2-4 Classification of Breath Smells by Neural Network

Sigeru Omatu (Osaka Institute of Technology)

5AM2-3: Detection

Date: March 5, 10:50–11:44

Room: Kaiulani III

Chair: Prof. Masahiro Wada (Konan University)

5AM2-3-1 Estimation of Gait Parameters Correlated with Cognitive Function Using Micro-Doppler Radar

Kenshi Saho (Toyama Prefectural University), Kouki Sugano (Toyama Prefectural University), Kazuki Uemura (Toyama Prefectural University), Michito Matsumoto (Toyama Prefectural University)

5AM2-3-2 Vehicle 3D-Shape Estimation Using MUSIC Algorithm for Millimeter wave 2D-MIMO radar

Yuta Akiyoshi (The University of Kitakyushu), Isamu Matsunami (The University of Kitakyushu)

5AM2-3-3 A Study on Detection and Evaluation for Human Motion using Mobile Sensors

Hisanori Takai (Konan University), Katsuya Hioki (Konan University), Masahiro Wada (Konan University)

5PM1-1: Image Processing and Recognition 1

Date: March 5, 13:20–15:08

Room: Kaiulani I

Chair: Prof. Takeshi Kumaki (Ritsumeikan University)

5PM1-1-1 A Visibility Diagnosis Method of Obstruction Warning Signal for Railway

Yusuke Kikuchi (Tokyo Denki University), Shigeo Wada (Tokyo Denki University)

5PM1-1-2 User-Oriented OBIR Using Visual Feedback of Feature-Weighting Function

Hiroto Nishiki (Tokyo Denki University), Shigeo Wada (Tokyo Denki University)

5PM1-1-3 Cellular Neural Networks with Partial Delay Output for Image Processing

Fumiki Sugano (Tokushima University), Takahisa Ando (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

5PM1-1-4 Bedside Event Real-time Recognition Using Low Resolution Infrared Array Sensor with Recurrent Convolutional Neural Network

Takumi Iida (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Takumi Hashimoto (Ritsumeikan University), Masayoshi Shirahata (Ritsumeikan University), Mitsuru Shiozaki (Ritsumeikan University), Takaya Kubota (Ritsumeikan University), Masafumi Kimata (Ritsumeikan University), Takeshi Fujino (Ritsumeikan University)

5PM1-1-5 Color Filter Array Interpolation Considering Self-Congruence Around Edges

Taishi Iriyama (Tamagawa University), Ryuta Suzuki (Tamagawa University), Masatoshi Sato (Tamagawa University), Tsuyoshi Otake (Tamagawa University)

5PM1-1-6 Clothing Classification by Image Graph-based Representation with LBP Mapping

Srisupang Thewsuwan (Kyushu Institute of Technology), Keiichi Horio (Kyushu Institute of Technology)

5PM1-2: Wireless Communications and Cognitive Radio

Date: March 5, 13:20–15:08

Room: Kaiulani II

Chair: Prof. Mikio Hasegawa (Tokyo University of Science)

5PM1-2-1 A study on improved scheduling algorithm for non-orthogonal multiple access-code division multiplexing scheme

Hiroki Kitagawa (Nagoya Institute of Technology), Eiji Okamoto (Nagoya Institute of Technology)

5PM1-2-2 A study of interference avoidance using windowed OFDM in UWB communication

Masakazu Kizawa (Meiji University), Tetsushi Ikegami (Meiji University)

5PM1-2-3 Performance Evaluation of Downlink Multi-User-Chaos-MIMO Transmission System in Correlated Channels

Rei Kitagawa (Nagoya Institute of Technology University), Naoto Horiike (Nagoya Institute of Technology University), Eiji Okamoto (Nagoya Institute of Technology University)

5PM1-2-4 A study on high-resolution Coded-Frequency Modulation radar in multi user environment

Keiji Jimi (The University of Kitakyushu), Isamu Matsunami (The University of Kitakyushu)

5PM1-2-5 High Spatial Resolution SFM-MIMO Radar Using Khatri-Rao Product Extension Processing

Shoya Ogaki (The University of Kitakyushu), Keiji Jimi (The University of Kitakyushu), Isamu Matsunami (The University of Kitakyushu)

5PM1-2-6 Throughput analysis of WLANs at any network topology taking into account capture effect

Yuto Yoshida (Chiba University), Hiroo Sekiya (Chiba University)

5PM1-3: Nonlinear Circuits and Systems

Date: March 5, 13:20–15:08

Room: Kaiulani III

Chair: Prof. Kenya Jin'no (Nippon Institute of Technology)

5PM1-3-1 Effect of Changing Coupling Strength to Synchronization Phenomena in Coupled van der Pol Oscillators

Vu Minh Hien (Tokushima University), Minh Hai Tran (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

5PM1-3-2 Synchronization of two coupled crystal oscillators

Ryota Inden (Ritsumeikan University), Kazuyoshi Ishimura (Ritsumeikan University), Isao T. Tokuda (Ritsumeikan University)

5PM1-3-3 Forced Synchronization of a Passive Walker Observed on Periodically Vibrating Base

Atsushi Hasegawa (Nagaoka University of Technology), Tadashi Tsubone (Nagaoka University of Technology)

5PM1-3-4 Stabilizing Method by Changing Switching Timing in Switched Dynamical Systems

Arata Ikemoto (Okayama University of Science), Yasuki Kanazawa (Naturanix Co., Ltd.), Takuji Kousaka (Oita University), Hideyuki Kato (Oita University), Daisuke Ito (Gifu University), Tetsushi Ueta (Tokushima University), Hirokazu Ohtagaki (Okayama University of Science), Hiroyuki Asahara (Okayama University of Science)

5PM1-3-5 Experimental Study of a stabilizing Method using Periodic Threshold to DC-DC Converter with Photovoltaic Module

Kenta Shinohara (Okayama University of Science), Takuji Kousaka (Oita University), Hideyuki Kato (Oita University), Hirokazu Ohtagaki (Okayama University of Science), Hiroyuki Asahara (Okayama University of Science)

5PM1-3-6 Synchronization Phenomena in a Ring of van der Pol Oscillators Coupled by Time-Varying Resistor

Toshiya Matsunashi (Tokushima University), Daiki Nariai (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

5PM2-1: Speech Processing, Synthesis and Recognition 1

Date: March 5, 15:30–17:18

Room: Kaiulani I

Chair: Prof. Shoji Makino (University of Tsukuba)

5PM2-1-1 Observing nonlinear phenomena induced by source-filter interaction using physical model of the vocal folds

Kishin Migimatsu (Ritsumeikan University), Syunsuke Dobe (Ritsumeikan University), Isao T. Tokuda (Ritsumeikan University)

5PM2-1-2 Minimum Statistical Spectrum for Microphone Array

Hibiki Kamimura (Saitama University), Yosuke Sugiura (Saitama University), Tetsuya Shimamura (Saitama University)

5PM2-1-3 Estimation of β -order MMSE-STSA Parameter-Set for Maximizing Speech Recognition Performance with Multiple Regression Analysis

Shintaro Kubo (National Institute of Technology, Tokuyama College), Ryoichi Miyazaki (National Institute of Technology, Tokuyama College)

5PM2-1-4 Perceptual grouping with prosodic features in Japanese dialects

Ling Zhang (Japan Advanced Institute of Science and Technology), Masato Akagi (Japan Advanced Institute of Science and Technology)

5PM2-1-5 Acoustic Scene Classification Based on Spatial Feature Extraction Using Convolutional Neural Networks

Gen Takahashi (University of Tsukuba), Takeshi Yamada (University of Tsukuba), Shoji Makino (University of Tsukuba)

5PM2-1-6 Novel Speech Recognition Interface Based on Notification of Utterance Volume Required in Changing Noisy Environment

Takahiro Goto (University of Tsukuba), Takeshi Yamada (University of Tsukuba), Shoji Makino (University of Tsukuba)

5PM2-2: Computer Vision

Date: March 5, 15:30–17:36

Room: Kaiulani II

Chair: Prof. Masahiro Tanaka (Konan University)

5PM2-2-1 Fine-tuning of Deep Learning Systems for Face Recognition of Library Visitors

Kodai Okada (Konan University), Masahiro Tanaka (Konan University)

5PM2-2-2 People Detection System in Learning Commons in the University by Deep Learning

Masahiro Tanaka (Konan University), Kodai Okada (Konan University)

5PM2-2-3 Household Items Recognition using Distance Sensor Equipped Video Sunglasses

Stephen Karungaru (Tokushima University), Kenji Terada (Tokushima University)

5PM2-2-4 Evaluation of Trunk Control Test Included in SIAS by Using Kinect

Tomoya Ohnishi (Konan University), Masahiro Tanaka (Konan University)

5PM2-2-5 Classification of Dance Motions based on Feature Points Extraction

Tomoya Kashifuku (National Institute of Technology, Anan College), Kengo Ohta (National Institute of Technology, Anan College), Susumu Yoshida (National Institute of Technology, Anan College), Fuminori Matsuura (National Institute of Technology, Anan College)

5PM2-2-6 High Quality Saliency Maps for Convolutional Neural Network Classifier

Yasunori Kudo (Keio University), Yoshimitsu Aoki (Keio University)

5PM2-2-7 Swimmer's stroke estimation using CNN and MultiLSTM

Kohei Hakozaiki (Keio University), Naoki Kato (Keio University), Masamoto Tanabiki (Keio University), Junko Furuyama (Keio University), Yuji Sato (Keio University), Yoshimitsu Aoki (Keio University)

5PM2-3: Learning Systems and Evolutionary Computations

Date: March 5, 15:30–17:18

Room: Kaiulani III

Chair: Prof. Hidehiro Nakano (Tokyo City University)

5PM2-3-1 Learning Algorithm with Nonlinear Map Optimization for Neural Network

Yuki Hoshino (Nippon Institute of Technology), Kenya Jin'no (Nippon Institute of Technology)

5PM2-3-2 Musical Instrument Identification Using Neural Networks for The Mixed Sounds of Multiple Instruments

Ryosuke Kojima (Nagaoka University of Technology), Yasunori Sugita (Nagaoka University of Technology)

5PM2-3-3 A Note on the Posterior Distribution of Bayesian Experimental Design Models Based on an Orthonormal System

Yoshifumi Ukita (Yokohama College of Commerce)

5PM2-3-4 Study on Non-uniform Convergence Speed of Quantum-Inspired Individuals on QEA in Maximum Cut Problem

Yoshifumi Moriyama (Prefectural University of Kumamoto), Ichiro Imura (Prefectural University of Kumamoto), Shigeru Nakayama (Kagoshima University)

5PM2-3-5 Self-organizing Maps for Extracting Common Latent Variables from Two Datasets

Hideaki Misawa (National Institute of Technology, Ube College)

5PM2-3-6 Optimization of Switching Phase of PWM Inverter by DE

Asuna Yamasaki (Nippon Institute of Technology), Kenya Jin'no (Nippon Institute of Technology)

6AM1-1: [Special Session] Industrial Applications

Date: March 6, 9:00–10:30

Room: Kaiulani I

Chair: Prof. Hiroyuki Asahara (Okayama University of Science)

6AM1-1-1 Thermoelectric Power Generation System for IoT Clean Devices

Tsutomu Iida (Tokyo University of Science), Nobuyuki Kasa (Okayama University of Science), Hiroyuki Asahara (Okayama University of Science)

6AM1-1-2 A High Efficiency DC/DC Converter for Low Voltage and High Current Input Systems

Koji Nakasuka (Okayama University of Science), Nobuyuki Kasa (Okayama University of Science)

6AM1-1-3 DC-DC Converter with Thermoelectric Modules

Hiroyuki Asahara (Okayama University of Science), Nobuyuki Kasa (Okayama University of Science), Tsutomu Iida (Tokyo University of Science)

6AM1-1-4 Battery Super Capacitor Combination Power Supply System for Automation Mobility

Yasuki Kanazawa (Nagoya University), Masayoshi Yamamoto (Nagoya University)

6AM1-1-5 A Flux Weakening Control Method for Interior Permanent Magnet Synchronous Motor in d-q Reference Frame Including Rotor Speed

Nobuyuki Kasa (Okayama University of Science)

6AM1-2: Estimation 2

Date: March 6, 9:00–10:30

Room: Kaiulani II

Chair: Prof. Eiji Okamoto (Nagoya Institute of Technology)

6AM1-2-1 Number of Users Estimated by Statistics of Random Backoff Time In WiFi Networks

Norihiro Matsumoto (Osaka City University), Ikuo Oka (Osaka City University), Shingo Ata (Osaka City University)

6AM1-2-2 An Error Probability Analysis for SNR Estimation in Nakagami-m Fading Channels

Tatsuhiko Murakami (Osaka City University), Ikuo Oka (Osaka City University), Shingo Ata (Osaka City University)

6AM1-2-3 Room Access Management Method Using RSSI from Smartphone by Machine Learning Estimation

Tomohiro Yoshida (Sophia University), Masakatsu Ogawa (Sophia University)

6AM1-2-4 Cooperative Waiting Line and Waiting Time Estimation Method Using Crowd Behavior Characteristics in Waiting Line

Tomoya Hayakawa (Sophia University), Masakatsu Ogawa (Sophia University)

6AM1-2-5 Sound distance perception based on weighted room impulse responses with head-enclosed back-surround loudspeaker-array

Misaki Otsuka (Ritsumeikan University), Yukoh Wakabayashi (Ritsumeikan University), Takahiro Fukumori (Ritsumeikan University), Masato Nakayama (Ritsumeikan University), Takanobu Nishiura (Ritsumeikan University)

6AM1-3: Control and Fuzzy Systems

Date: March 6, 9:00–10:12

Room: Kaiulani III

Chair: Prof. Shintaro Arai (Okayama University of Science)

6AM1-3-1 Safety-driving Support System for Electric Wheelchair Based on Time-to-collision and Danger-degree

Tomoki Matsuo (Tokushima University), Hiroshi Suzuki (Tokushima University), Akinobu Kuwahara (Tokushima University), Takahiro Kitajima (Tokushima University), Hisashi Takai (Tokushima University), Takashi Yasuno (Tokushima University)

6AM1-3-2 On-time Cruising Algorithm Using Vehicle Dynamics and Obstacle Avoidance for Self-driving

Kohei Komatsu (Tokushima University), Hiroshi Suzuki (Tokushima University), Akinobu Kuwahara (Tokushima University), Takahiro Kitajima (Tokushima University), Takashi Yasuno (Tokushima University)

6AM1-3-3 Autonomous Traveling Control of Crawler-type Mobile Robot for Supporting Agricultural Works

Yuya Iwawaki (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Hisashi Takai (Tokushima University), Takashi Yasuno (Tokushima University)

6AM1-3-4 Clustering based on Multi-layered Self-Organizing Map with Semantic Feature Propagation

Ryuki Mizutani (Kyushu Institute of Technology), Tetsuo Furukawa (Kyushu Institute of Technology), Keiichi Horio

(Kyushu Institute of Technology)

6AM2-1: [Special Session] Networking and Computing Technologies

Date: March 6, 10:50–12:02

Room: Kaiulani I

Chair: Prof. Hidehiro Kanemitsu (Waseda University)

6AM2-1-1 MPR Selection and Routing Algorithms Based on Link Disconnection Prediction in OLSR Protocol

Masaki Hanada (Tokyo University of Information Sciences), Wataru Nagata (Tokyo University of Information Sciences), Hidehiro Kanemitsu (Waseda University), Hideo Suzuki (Tokyo University of Information Sciences)

6AM2-1-2 In-Network Caching Strategy Considering Popularity and Playback Sequence for VoD Streaming over CCN

Akira Toyozaki (Tokyo University of Information Sciences), Masaki Hanada (Tokyo University of Information Sciences), Hidehiro Kanemitsu (Waseda University)

6AM2-1-3 On the Optimal Number of Computational Resources in MapReduce

Hidehiro Kanemitsu (Waseda University), Masaki Hanada (Tokyo University of Information Sciences)

6AM2-1-4 Effective Feature Selection for Damaged Buildings Using Post-Earthquake Satellite Image with Machine Learning

Jonggeol Park (Tokyo University of Information Sciences), Masaki Hanada (Tokyo University of Information Sciences), Hidehiro Kanemitsu (Waseda University)

6AM2-2: Optical Communications

Date: March 6, 10:50–12:02

Room: Kaiulani II

Chair: Prof. Masakatsu Ogawa (Sophia University)

6AM2-2-1 Performance Improvement of Spatial OFDM by Using Parallel Combinatory Signaling in LCD-Camera Communication System

Joji Takatsuka (Shizuoka University), Kouji Ohuchi (Shizuoka University)

6AM2-2-2 Experimental Evaluation of Hybrid PWM/DPAM Dimming Control Method for Digital Color Shift Keying using RGB-LED Array

Yusuke Matsuda (Tokyo University of Science), Yusuke Kozawa (Ibaraki University), Yohtaro Umeda (Tokyo University of Science)

6AM2-2-3 Performance Evaluation of Hybrid VN-CSK/PAM for Lighting Constrained Visible Light Communications

Keisuke Osawa (Ibaraki University), Hiromasa Habuchi (Ibaraki University), Yusuke Kozawa (Ibaraki University)

6AM2-2-4 Error Correcting Codes in Underwater RGB-LED Parallel Communication: Turbo or LDPC?

Ran Sun (Ibaraki University), Hiromasa Habuchi (Ibaraki University), Yusuke Kozawa (Ibaraki University)

6AM2-3: Circuit Design and Analysis 1

Date: March 6, 10:50–12:02

Room: Kaiulani III

Chair: Prof. Yoshihiko Horio (Tohoku University)

6AM2-3-1 New Power Saving Technique for Wireless Mobile Terminals Using CAZAC-OFDM and Polar Modulation Power Amplifiers

Ryota Ishioka (Tokyo University of Science), Tomotaka Kimura (Tokyo University of Science), Masahiro Muraguchi (Tokyo University of Science)

6AM2-3-2 24-GHz Amplifier Design using Particle Swarm Optimization

Kosuke Katayama (Waseda University), Kui-Ting Chen (Waseda University), Takaaki Baba (Waseda University)

6AM2-3-3 A New Adaptive Efficiency Control of the Transmitter with Remote Monitoring of the Receiver Load for 6.78 MHz Class Wireless Power Transfer

Yuto Honda (Ritsumeikan University), Masahiro Fukui (Ritsumeikan University)

6AM2-3-4 An Efficient Battery Charger for Utilizing Solar Panels with Bi-directional Power Accommodation

Naoki Yoshida (Ritsumeikan University), Yukinori Hayakawa (Ritsumeikan University), Masahiro Fukui (Ritsumeikan University), Ryota Kimikado (Kobe City College of Technology), Masakazu Michihira (Kobe City College of Technology)

6PM1-1: Speech Processing, Synthesis and Recognition 2

Date: March 6, 13:20–15:08

Room: Kaiulani I

Chair: Prof. Masato Akagi (Japan Advanced Institute of Science and Technology)

6PM1-1-1 Ego-Noise Reduction for Hose-Shaped Rescue Robot Using Basis-Shared Semi-Supervised Independent Low-Rank Matrix Analysis

Moe Takakusaki (University of Tsukuba), Daichi Kitamura (The University of Tokyo), Nobutaka Ono (Tokyo Metropolitan University), Shoji Makino (University of Tsukuba), Takeshi Yamada (University of Tsukuba), Hiroshi Saruwatari (The University of Tokyo)

6PM1-1-2 Time-series Evaluation of Men's Preferences Perceived from Female Speech

Takuro Shono (University of Yamanashi), Atsuki Otani (University of Yamanashi), Masanori Morise (University of Yamanashi), Kenji Ozawa (University of Yamanashi)

6PM1-1-3 Study on differences between perceptions of Japanese and Chinese emotional speech by Japanese and Chinese listeners

Chenyi Zhang (Japan Advanced Institute of Science and Technology), Masato Akagi (Japan Advanced Institute of Science and Technology)

6PM1-1-4 Conversational Speech Recognition Using Multiple Wearable Microphones

Shengke Lin (Shizuoka University), Takashi Tsunakawa (Shizuoka University), Masafumi Nishida (Shizuoka University), Masafumi Nishimura (Shizuoka University)

6PM1-1-5 Improvement of Speech Authentication Using Amplitude and Phase Information

Junichi Kimura (Tokyo Denki University), Surak Dernchabun (Tokyo Denki University), Shigeo Wada (Tokyo Denki University)

6PM1-1-6 Ego Noise Reduction and Sound Localization Adapted to Human Ears Using Hose-shaped Rescue Robot

Narumi Mae (University of Tsukuba), Koei Yamaoka (University of Tsukuba), Yoshiki Mitsui (The University of Tokyo), Mitsuo Matsumoto (University of Tsukuba), Shoji Makino (University of Tsukuba), Daichi Kitamura (The University of Tokyo), Nobutaka Ono (Tokyo Metropolitan University), Takeshi Yamada (University of Tsukuba), Hiroshi Saruwatari (The University of Tokyo)

6PM1-2: Optimization

Date: March 6, 13:20–15:08

Room: Kaiulani II

Chair: Prof. Yoshikazu Yamanaka (Utsunomiya University)

6PM1-2-1 Adapting Small World Network to FPGA Wiring Structure using Design Solution

Shuhei Kobayashi (University of Fukui), Seiichiro Moro (University of Fukui)

6PM1-2-2 On a Nonlinear Map Optimization

Seinosuke Ishikawa (Nippon Institute of Technology), Kenya Jin'no (Nippon Institute of Technology)

6PM1-2-3 Performance of Ant Colony Optimization Changing Characteristics of Pheromone Reaction

Ken Kamiyotsumoto (Tokushima University), Masaki Takeuchi (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

6PM1-2-4 Local Search Method for Multiple Vehicle Bike Sharing System Routing Problem

Honami Tsushima (Nippon Institute of Technology), Takafumi Matsuura (Nippon Institute of Technology), Kenya Jin'no (Nippon Institute of Technology)

6PM1-2-5 A Solving Method Using A Variable Penalty Coefficient for Vehicle Routing Problem with Time Windows

Daiki Watanabe (Nippon Institute of Technology), Yuuki Morita (Nippon Institute of Technology), Masaya Kaneko (Nippon Institute of Technology), Takayuki Kimura (Nippon Institute of Technology)

6PM1-2-6 Quality of Solutions Constructed by Internal State of Chaotic Neurons in Mutually-Connected Chaotic Neural Network

Takafumi Matsuura (Nippon Institute of Technology)

6PM1-3: Intelligent Transport Systems and Sensor Networks

Date: March 6, 13:20–14:50

Room: Kaiulani III

Chair: Prof. Shintaro Mori (Fukuoka University)

6PM1-3-1 A Study on Image Division Approach for Signal Demodulation Method Incorporating Reliability Determination in Image-Sensor-Based Visible Light Communication

Zhengqiang Tang (Okayama University of Science), Shintaro Arai (Okayama University of Science), Tomohiro Yendo (Nagaoka University of Technology)

6PM1-3-2 A Study on Improving Ranging Performance of UWB Radar System with Inter-Vehicle Communication

Keiichi Inada (Tokyo University of Science), Akira Nakamura (Tokyo University of Science), Makoto Itami (Tokyo University of Science)

6PM1-3-3 Proposal of a sound based drone detection system with a smartphone device

Kenichi Suzuki (Aichi Institute of Technology), Katsuhiro Naito (Aichi Institute of Technology)

6PM1-3-4 Performance evaluation of MEMS atmospheric pressure sensor as infrasound observation device

Yuji Saito (Tohoku University), Ryouichi Nishimura (National Institute of Information and Communications Technology), Shuichi Sakamoto (Tohoku University), Yôiti Suzuki (Tohoku University)

6PM1-3-5 Integration Enhancement system for building Interconnected IoT Network at Home

Shintaro Yamasaki (Osaka Institute of Technology), Kenji Matsui (Osaka Institute of Technology)

6PM2-1: Image Processing and Recognition 2

Date: March 6, 15:30–17:18

Room: Kaiulani I

Chair: Prof. Eiji Uchino (Yamaguchi University)

6PM2-1-1 RGB-FIR Camera Sensor Fusion for Robust Object Recognition with Deep Neural Network

Kota Yoshida (Ritsumeikan University), Takumi Iida (Ritsumeikan University), Masayoshi Shirahata (Ritsumeikan University), Mitsuru Shiozaki (Ritsumeikan University), Takaya Kubota (Ritsumeikan University), Takeshi Fujino (Ritsumeikan University)

6PM2-1-2 Iterative Image Retrieval Algorithm for Multi-Input Query

Shun Mitsui (Tokyo Denki University), Shigeo Wada (Tokyo Denki University)

6PM2-1-3 Deep Convolutional Neural Networks for Manga Show-Through Cancellation

Taku Nakahara (Tokyo University of Science), Kazunori Uruma (Tokyo University of Science), Tomohiro Takahashi (Tokyo University of Science), Toshihiro Furukawa (Tokyo University of Science)

6PM2-1-4 Image colorization based on Locally Linear Embedding

Takeshi Aiyoshizawa (Tokyo University of Science), Katsumi Konishi (Kogakuin University), Kazunori Uruma (Tokyo University of Science), Ryohei Sasaki (Tokyo University of Science), Tomohiro Takahashi (Tokyo University of Science),

Toshihiro Furukawa (Tokyo University of Science)

6PM2-1-5 CAM² on FPGA with Master-Slave Scheme

Ryota Katsuma (Ritsumeikan University), Takeshi Kumaki (Ritsumeikan University), Tomohiro Fujita (Ritsumeikan University), Takeshi Ogura (Ritsumeikan University)

6PM2-1-6 Evaluation of Vascular Contour Line at Arteriovenous Intersection Region in Eye Fundus Image by Non-Deterministic Snakes

Yuki Okami (Yamaguchi University), Hiroaki Koga (Yamaguchi University), Noriaki Suetake (Yamaguchi University), Eiji Uchino (Yamaguchi University)

6PM2-2: Information Security

Date: March 6, 15:30–17:36

Room: Kaiulani II

Chair: Prof. Hyunho Kang (National Institute of Technology, Tokyo College)

6PM2-2-1 Secure full-text search using addition homomorphic encryption

Keisuke Yamaguchi (Tokyo University of Science), Masaya Fujisawa (Tokyo University of Science)

6PM2-2-2 Genetic Programming Based Attack for RO PUF

Yusuke Nozaki (Meijo University), Masaya Yoshikawa (Meijo University)

6PM2-2-3 Physical Unclonable Function Using Neural Network

Hideki Nagata (Meijo University), Yoshiya Ikezaki (Meijo University), Yusuke Nozaki (Meijo University), Masaya Yoshikawa (Meijo University)

6PM2-2-4 Evaluation of Masked based Countermeasure using Random Number Tests

Kazuya Shibagaki (Meijo University), Yoshiya Ikezaki (Meijo University), Yusuke Nozaki (Meijo University), Masaya Yoshikawa (Meijo University)

6PM2-2-5 Fault injection technique of hardware security module

Taichi Umeda (Meijo University), Yoshiya Ikezaki (Meijo University), Yusuke Nozaki (Meijo University), Masaya Yoshikawa (Meijo University)

6PM2-2-6 Proposal of DPTM Algorithm for Continuous Authentication Using Probability Distribution

Takeshi Yamada (Daiichi Institute of Technology), Wataru Motoyama (Daiichi Institute of Technology), Shinya Fukumoto (Kagoshima University), Masayuki Kashima (Kagoshima University), Kiminori Sato (Kagoshima University), Mutsumi Watanabe (Kagoshima University)

6PM2-2-7 Evaluation of Continuous Authentication Using a Combination of Keystroke and Mouse Biometrics by Use of Deep Learning

Wataru Motoyama (Daiichi Institute of Technology), Takeshi Yamada (Daiichi Institute of Technology)

6PM2-3: Bifurcation and Chaos 1

Date: March 6, 15:30–17:36

Room: Kaiulani III

Chair: Prof. Tadashi Tsubone (Nagaoka University of Technology)

6PM2-3-1 Synchronization of Two Memristor-Based Chaotic Circuits Coupled by Resistor

Tsubasa Tezuka (Tokushima University), Kana Kobayashi (Tokushima University), Yoko Uwate (Tokushima University), Yasuteru Hosokawa (Shikoku University), Yoshifumi Nishio (Tokushima University)

6PM2-3-2 Relationship between a Synchronization Rate and a Dopant Mobility of a Memristor on Chaotic Circuits Coupled by Two Memristors

Kana Kobayashi (Tokushima University), Yasuteru Hosokawa (Shikoku University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

6PM2-3-3 Realization of an Interrupted Fast-Slow Characteristic Circuit with Spike Noise

Shoma Osada (Oita University), Hideyuki Kato (Oita University), Hiroyuki Asahara (Okayama University of Science), Takuji Kousaka (Oita University)

6PM2-3-4 Dynamical effect on a forced self-excited system with dry friction by weak harmonic perturbation

Takuto Yamaguchi (Oita University), Shoma Osada (Oita University), Hiroyuki Asahara (Okayama University of Science), Shu Karube (National Institute of Technology, Oita College), Takuji Kousaka (Oita University)

6PM2-3-5 Possibility of nonlinear prediction using branch of inverse mapping

Shota Mochizuki (Meiji University), Hiromi Sasaki (Meiji University), Kenji Nakamura (Meiji University), Keisuke Fukagai (Meiji University), Hiroyuki Kamata (Meiji University)

6PM2-3-6 Deriving Method of a Period Doubling Bifurcation Point by Piecewise-Linear Particle Swarm Optimizer

Kenji Yamazaki (Kagawa University), Hiroaki Kurokawa (Tokyo University of Technology), Takuji Kousaka (Oita University), Haruna Matsushita (Kagawa University)

6PM2-3-7 Time-delay Estimation using Persistent Homology with Vietoris-Rips Complex in Lorenz system of Different step sizes

Keisuke Fukagai (Meiji University), Hiromi Sasaki (Meiji University), Kenji Nakamura (Meiji University), Yuta Kase (Meiji University), Shota Mochizuki (Meiji University), Hiroyuki Kamata (Meiji University)

7AM1-1: Bio-Signal Processing 2

Date: March 7, 9:00–10:30

Room: Kaiulani I

Chair: Prof. Masashi Nakayama (Hiroshima City University)

7AM1-1-1 Human Respiration Detection and Posture Estimation during Office Work Using UWB-IR Radar

Ryo Kuboi (The University of Kitakyushu), Isamu Matsunami (The University of Kitakyushu)

7AM1-1-2 Ranking deep neural network for automatic music recommendation system using EEG

Hiroki Itoga (The University of Electro-Communications), Yoshikazu Washizawa (The University of Electro-

Communications), Yuko Urakami (National Rehabilitation Center for Persons with Disabilities)

7AM1-1-3 Study on Fractal Analysis of EEG in Motor Imagery

Kenji Nakamura (Meiji University), Yuta Kase (Meiji University), Keisuke Fukagai (Meiji University), Hiromi Sasaki (Meiji University), Shota Mochizuki (Meiji University), Hiroyuki Kamata (Meiji University)

7AM1-1-4 Fundamental research for an early detection system to find respiratory diseases in pigs

Cheng Yibing (Hiroshima City University), Kenta Narusawa (Hiroshima City University), Satoshi Iijima (Hiroshima City University), Masashi Nakayama (Hiroshima City University), Shunsuke Ishimitsu (Hiroshima City University), Aiko Ishida (National Agriculture and Food Research Organization), Osamu Mikami (National Agriculture and Food Research Organization)

7AM1-1-5 Non-linear Features Extraction of Biometric Authentication Using System Identification

Tomoaki Chou (Nagaoka University of Technology), Yasunori Sugita (Nagaoka University of Technology)

7AM1-2: Ad-hoc Network

Date: March 7, 9:00 –10:30

Room: Kaiulani II

Chair: Prof. Katsuhiko Naito (Aichi Institute of Technology)

7AM1-2-1 Fundamental Analysis for Blockchain-based Secured Caching Scheme for Information-Centric Network-based Wireless Sensor Network

Shintaro Mori (Fukuoka University)

7AM1-2-2 A route reconstruction method using sequence numbers in AODV for prolonging node lifetime

Yuta Suzuki (Shizuoka University), Kouji Ohuchi (Shizuoka University)

7AM1-2-3 3D Simulation for MANET in Mountainous Areas

Kosuke Watanabe (Gifu University), Michiko Harayama (Gifu University)

7AM1-2-4 Information-Centric Architecture Using Mobile Agent for MANET

Joji Fujikawa (Kanagawa Institute of Technology), Shigeki Shiokawa (Kanagawa Institute of Technology)

7AM1-2-5 Throughput and delay analyses for RTS/CTS-used IEEE 802.11 DCF on two-way flows string-topology multi-hop networks

Kouhei Hayashida (Chiba University), Hiroo Sekiya (Chiba University)

7AM1-3: Bifurcation and Chaos 2

Date: March 7, 9:00–10:30

Room: Kaiulani III

Chair: Prof. Hiroyuki Asahara (Okayama University of Science)

7AM1-3-1 A novel approach on chaos control based on stability transformation method

Vuong Danh Nguyen (Nagaoka University of Technology), Tadashi Tsubone (Nagaoka University of Technology)

7AM1-3-2 Circuit Design of Two Template Cellular Neural Networks for the Observation of Oscillation Phenomena

Yasuteru Hosokawa (Shikoku University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

7AM1-3-3 Ring Oscillator Based Random Binary Sequences with Prescribed Auto-Correlations by Post-Processing Using LFSR and Chaos Theory

Tin Ni Ni Kyaw (Kumamoto University), Akio Tsuneda (Kumamoto University)

7AM1-3-4 Propagation of Chaotic and Periodic Solutions in Ladder Coupled Chaotic Circuits with Different Parameters

Katsuya Nakabai (Tokushima University), Katsuki Nakashima (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

7AM1-3-5 Synchronization Phenomena in Coupled Chaotic Circuits with Asymmetric Weights Depending on Length

Kyohei Fujii (Tokushima University), Shuhei Hashimoto (Tokushima University), Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

7AM2-1: Filters and Oscillation

Date: March 7, 10:50–11:44

Room: Kaiulani I

Chair: Prof. Takafumi Matsuura (Nippon Institute of Technology)

7AM2-1-1 A proposal of the method to suppress a click noise using an iteration algorithm

Daisuke Kawano (Maebashi Institute of Technology), Tomomi Ogawa (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)

7AM2-1-2 A Fast Algorithm for Adaptive Notch Filter Based on NLMS algorithm and MIG algorithm

Yosuke Sugiura (Saitama University), Tetsuya Shimamura (Saitama University)

7AM2-1-3 Sound quality evaluation of clarity in automotive speaker layout

Arimasa Kanda (Hiroshima City University), Shunsuke Ishimitsu (Hiroshima City University), Koji Wakamatsu (Mazda Motor Corporation), Masanori Nakashima (Mazda Motor Corporation), Hiroshi Yamanaka (Mazda Motor Corporation)

7AM2-2: Estimation 3

Date: March 7, 10:50–12:02

Room: Kaiulani II

Chair: Prof. Tomomi Ogawa (Maebashi Institute of Technology)

7AM2-2-1 Locally Linear Embedding Approach to System Identification of Signal Transduction of Cellular Systems

Masaki Kamikubo (Kogakuin University), Atsushi Kanayama (Kogakuin University), Katsumi Konishi (Kogakuin University), Masashi Fujii (University of Tokyo), Katsuyuki Kunida (Nara Institute of Science and Technology), Shinsuke Uda (Kyushu University), Shinya Kuroda (University of Tokyo)

7AM2-2-2 An Output Prediction Method for Nonlinear ARX Model based on Locally Linear Embedding

Atsushi Kanayama (Kogakuin University), Masaki Kamikubo (Kogakuin University), Ryohei Sasaki (Tokyo University of Science), Katsumi Konishi (Kogakuin University), Toshihiro Furukawa (Tokyo University of Science)

7AM2-2-3 A consideration of a blind equalization method with noise suppression function

Makito Murata (Maebashi Institute of Technology), Tomomi Ogawa (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)

7AM2-2-4 Feedback Assistance with Concern For Others in Cooperative Work

Masaki Tanaka (Tokyo Denki University), Hiroshi Igarashi (Tokyo Denki University)

7AM2-3: Adaptive Systems and Modeling

Date: March 7, 10:50–12:02

Room: Kaiulani III

Chair: Prof. Kaori Kuroda (Tokyo University of Science)

7AM2-3-1 Measurement of Changes in Human's Attention to Realize Stress-free Assistance Operation in Humanoid Robot

Tatsuhiko Koshikawa (Tokyo Denki University), Hiroshi Igarashi (Tokyo Denki University)

7AM2-3-2 Operation Assist with Haptic Feedback in Nongrounded Input Device

Ryo Sato (Tokyo Denki University), Hiroshi Igarashi (Tokyo Denki University)

7AM2-3-3 Characteristic extraction method of human's strategy in the Rock-Paper-Scissors game

Takahiro Komai (Tokyo University of Technology), Song-Ju Kim (Keio University), Hiroaki Kurokawa (Tokyo University of Technology)

7AM2-3-4 Mechanistic Influence Analysis of Power Assist Orthosis for Human Body Using Simple Digital Human Model

Ayaka Sumoto (Tokushima University), Hiroshi Suzuki (Tokushima University), Akinobu Kuwahara (Tokushima University), Takahiro Kitajima (Tokushima University), Hisashi Takai (Tokushima University), Takashi Yasuno (Tokushima University)

7PM1-1: Image Processing and Recognition 3

Date: March 7, 13:20–15:08

Room: Kaiulani I

Chair: Prof. Masatoshi Sato (Tamagawa University)

7PM1-1-1 Tomographic Image Reconstruction via Chi-Square Minimization

Yusaku Yamaguchi (Shikoku Medical Center for Children and Adults), Takeshi Kojima (Tokushima University), Tetsuya Yoshinaga (Tokushima University)

7PM1-1-2 An attempt to enlarge basin in discrete tomographic dynamics with a competitive term

Takeshi Kojima (Tokushima University), Tetsushi Ueta (Tokushima University), Tetsuya Yoshinaga (Tokushima University)

7PM1-1-3 Automatic detection of spine in CT image by U-Net

Mikoto Kamata (Tokyo University of Technology), Kunihiro Fukushima (Fuzzy Logic Systems Institute), Hayaru Shouno (University of Electro-Communications), Isao Hayashi (Kansai University), Masayuki Kikuchi (Tokyo University of Technology)

7PM1-1-4 Blood Vessel Detection in Local Eye Fundus Image Considering Reflection from Artery

Shota Furukawa (National Institute of Technology, Kagoshima College), Noriaki Suetake (Yamaguchi University), Eiji Uchino (Yamaguchi University)

7PM1-1-5 Quantitative Evaluation of Vitreous Opacity Considering the Flow of Clouds in Vitreous

Wakana Matsui (Yamaguchi University), Shota Furukawa (National Institute of Technology, Kagoshima College), Noriaki Suetake (Yamaguchi University), Eiji Uchino (Yamaguchi University), Tomoko Orita (Yamaguchi University), Kazuhiro Kimura (Yamaguchi University)

7PM1-1-6 Identification and region extraction of symmetry by deep learning

Yoshiki Goto (Tokyo University of Technology), Masayuki Kikuchi (Tokyo University of Technology)

7PM1-2: Error Control Coding

Date: March 7, 13:20–15:08

Room: Kaiulani II

Chair: Prof. Shigeki Shiokawa (Kanagawa Institute of Technology)

7PM1-2-1 Joint Decoding of Low-density Parity-check Codes for Cyclic Gaussian Interference Channels

Tomoka Seki (Tokyo University of Science), Masaya Fujisawa (Tokyo University of Science)

7PM1-2-2 Construction of Locally Repairable Codes with Multiple Localities Based on Encoding Polynomial

Tomoya Hamada (The University of Electro-Communications), Hideki Yagi (The University of Electro-Communications)

7PM1-2-3 Polar Codes Achieving Strong Secrecy for Broadcast Channel with Confidential Messages

Takahiro Fujita (The University of Electro-Communications), Hideki Yagi (The University of Electro-Communications)

7PM1-2-4 A Simple Proof of Polarization for Memoryless Sources with and without Side Information

Yuming Yang (The University of Electro-Communications), Hideki Yagi (The University of Electro-Communications)

7PM1-2-5 A Study on Complexity Reduction for Frozen Bit Selection on Polar Code Using Monte-Carlo Method

Keita Ito (Nagoya Institute of Technology), Eiji Okamoto (Nagoya Institute of Technology), Hideki Takenaka (National Institute of Information and Communications), Hiroo Kunimori (National Institute of Information and Communications), Morio Toyoshima (National Institute of Information and Communications)

7PM1-2-6 Performance Analysis of Spatially-Coupled Low-Density Parity-Check Codes based on Reading Ratio in Racetrack Memory

Ryo Shibata (Tokyo University of Science), Gou Hosoya (Tokyo University of Science), Hiroyuki Yashima (Tokyo University of Science)

7PM1-3: Circuit Design and Analysis 2

Date: March 7, 13:20–15:08

Room: Kaiulani III

Chair: Prof. Yoko Uwate (Tokushima University)

7PM1-3-1 Modeling of Switching Regulator Controller with MATLAB

Junichi Masuda (Ritsumeikan University), Ami Tanaka (Ritsumeikan University), Tomohiro Fujita (Ritsumeikan University)

7PM1-3-2 All-optical AND gate with photonic crystal quantum-dot semiconductor optical amplifiers

Takuma Matsumoto (Tokyo University of Science), Gou Hosoya (Tokyo University of Science), Hiroyuki Yashima (Tokyo University of Science)

7PM1-3-3 Detectable Resistive Open Defects in 3D ICs with Electrical Interconnect Test Circuit Made of Diodes

Hanna Soneda (Tokushima University), Michiya Kanda (Tokushima University), Masaki Hashizume (Tokushima University), Hiroyuki Yotsuyanagi (Tokushima University), Shyue Kung LU (National Taiwan University of Science and Technology)

7PM1-3-4 Oscillation Frequency Estimation of Ring Oscillator for Interconnect Tests in 3D Stacked ICs

Noriko Miyatake (Tokushima University), Masaki Hashizume (Tokushima University), Hiroyuki Yotsuyanagi (Tokushima University), Hiroshi Yokoyama (Akita University), Tetsuo Tada (Tokushima Bunri University)

7PM1-3-5 A Study of Interconnect Analysis Based on DGTD Method

Takayuki Watanabe (University of Shizuoka)

7PM1-3-6 Analysis Procedure of Further Miniaturized Class-E² DC/DC Converter

Yusuke Ogi (Chiba Institute of Technology), Xiuqin Wei (Chiba Institute of Technology), Hiroo Sekiya (Chiba University), Tadashi Suetsugu (Fukuoka University)

7PM2-1: Speech Processing, Synthesis and Recognition 3

Date: March 7, 15:30–17:18

Room: Kaiulani I

Chair: Prof. Ryoichi Miyazaki (National Institute of Technology, Tokuyama College)

7PM2-1-1 Implementation of voice feedback model for speaker in speech rate converted conversation

Ju Hui Peng (Tokyo Denki University), Hiroto Saito (Tokyo Denki University)

7PM2-1-2 Dietary and Conversational Behavior Monitoring by Using Sound Information

Jumpei Ando (Shizuoka University), Takato Saito (NTT DOCOMO, INC.), Satoshi Kawasaki (NTT DOCOMO, INC.), Masaji Katagiri (NTT DOCOMO, INC.), Daizo Ikeda (NTT DOCOMO, INC.), Hiroshi Mineno (Shizuoka University), Takashi Tsunakawa (Shizuoka University), Masafumi Nishida (Shizuoka University), Masafumi Nishimura (Shizuoka University)

7PM2-1-3 Analysis and estimation of user's motivation of conversation by using acoustic features

Ryota Togai (Shizuoka University), Motoki Abe (Shizuoka University), Takashi Tsunakawa (Shizuoka University), Masafumi Nishida (Shizuoka University), Masafumi Nishimura (Shizuoka University)

7PM2-1-4 Fast and Robust Howling Suppression Method for Teleconference using Smartphone

Takuya Takahashi (Tokyo University of Science), Takahiro Natori (Tokyo University of Science), Nari Tanabe (Tokyo University of Science, Suwa), Toshihiro Furukawa (Tokyo University of Science)

7PM2-1-5 Synthesis of expressive singing voice by F0, amplitude envelope and spectral feature conversion.

Thi-Hao Nguyen (Japan Advanced Institute of Science and Technology), Masato Akagi (Japan Advanced Institute of Science and Technology)

7PM2-1-6 Estimation of glottal source waveform and vocal tract shape for singing-voice analysis

Kyoko Takahashi (Japan Advanced Institute of Science and Technology), Masato Akagi (Japan Advanced Institute of Science and Technology)

7PM2-2: Neural and Bio-Inspired Networks

Date: March 7, 15:30–17:00

Room: Kaiulani II

Chair: Prof. Hideyuki Kato (Oita University)

7PM2-2-1 Non-parallel training dictionary-based voice conversion with Variational Autoencoder

HO Tuan Vu (Japan Advanced Institute of Science and Technology), Akagi Masato (Japan Advanced Institute of Science and Technology)

7PM2-2-2 Improvement of Multi-Layer Neural Network Performance by An Activity Function

Betere Job Isaac (University of the Ryukyus), Hiroshi Kinjo (University of the Ryukyus), Kunihiko Nakazano (University of the Ryukyus), Naoki Oshiro (University of the Ryukyus)

7PM2-2-3 Towards a Brainmorphic Computing Paradigm and a Brain/Body Whole Organism Computation System

Yoshihiko Horio (Tohoku University)

7PM2-2-5 Convolutional Neural Networks with Inputs Based on Human Visual Perception

Hiromu Endo (Tokyo City University), Hidehiro Nakano (Tokyo City University), Arata Miyauchi (Tokyo City University)

7PM2-2-6 Autonomous travel control of vehicle using threshold-learning-type neuron model

Teruto Nimura (Ritsumeikan University), Tomohiro Fujita (Ritsumeikan University), Takeshi Kumaki (Ritsumeikan University), Takeshi Ogura (Ritsumeikan University)

7PM2-3: Complex Networks and Systems

Date: March 7, 15:30–17:18

Room: Kaiulani III

Chair: Prof. Song-Ju Kim (Keio University)

7PM2-3-1 Synchronization of Two Different Hierarchical Networks using Coupled Chaotic Circuits

Yoko Uwate (Tokushima University), Yoshifumi Nishio (Tokushima University)

7PM2-3-2 A Basic Study on Herding Algorithm in the Three-Dimensional Space

Hiroyuki Hoshi (Prefectural University of Kumamoto), Ichiro Iimura (Prefectural University of Kumamoto), Shigeru Nakayama (Kagoshima University)

7PM2-3-3 Analyzing the Robustness of Herding Algorithm Regarding Agents' Moving-Speeds

Hiroyuki Hoshi (Prefectural University of Kumamoto), Ichiro Iimura (Prefectural University of Kumamoto), Shigeru Nakayama (Kagoshima University)

7PM2-3-4 A construction of a disaster prevention radio broadcasting using the internet

Naoki Ezura (Maebashi Institute of Technology), Hiroyuki Okazaki (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)

7PM2-3-5 FPGA Spiking Neural Network coupled by Infrared Red communications

Shohei Sugino (Chiba University), Kazuki Matsumoto (Chiba University), Hiroyuki Torikai (Kyoto Sangyo University), Hiroo Sekiya (Chiba University)

7PM2-3-6 Consideration of Authentication Method in Emergency Transport System

Tsubasa Nagasawa (Maebashi Institute of Technology), Hiroyuki Okazaki (Maebashi Institute of Technology), Shinichi Motomura (Maebashi Institute of Technology), Hiroki Matsumoto (Maebashi Institute of Technology)