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February 27, 14:00–15:40 (February, 28, 9:00–10:40 (JST))	Optimization and Estimation 27PM1-1: Page 2	Image Processing and Recognition 27PM1-2: Page 2	
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February 27, 18:50–20:50 (February, 28, 13:50–15:50 (JST))	Circuits, Nonlinear Circuits, Bifurcation and Chaos 27PM3-1: Page 4	Optical and Wireless Communications (2) 27PM3-2: Page 5	
February 28, 8:40-10:20	Speech Processing and Recognition (1) 28AM1-1: Page 6	Wireless Communications (1) 28AM1-2: Page 6	Optimization 28AM1-3: Page 7
February 28, 10:40-12:40	Speech Processing and Recognition (2) 28AM2-1: Page 7	Wireless Communications (2) 28AM2-2: Page 8	Nonlinear Circuits and Systems 28AM2-3: Page 8
February 28, 13:40-15:40	Image Processing and Recognition (1) 28PM1-1: Page 9	Wireless Communications (3) 28PM1-2: Page 9	Complex Networks and Nonlinear Systems 28PM1-3: Page 10
February 28, 16:00-18:00	Image Processing and Recognition (2) 28PM2-1: Page 11	Sensor Network 28PM2-2: Page 11	
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March 1, 11:00-12:40	[Special Session] Advanced Image Processing and AI Applications in Data and Life Sciences 1AM1-1: Page 14	Circuit Design and Analysis 1AM1-2: Page 14	
March 1, 13:40-15:20	Computer Vision (1) 1PM1-1: Page 15	Estimation 1PM1-2: Page 15	
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27PM1-1: Optimization and Estimation

Date: February 27, 14:00-15:40 (February, 28, 9:00-10:40 (JST))

Room: Room 1 (Zoom)

Chair: Yuting Geng (Ritsumeikan University)

27PM1-1-1 Oscillation Parameters Search for CPG Model with Motor Dynamics Using Firefly Algorithm

Yuta Miyake (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Anuar Kassim (UTeM), Takashi Yasuno (Tokushima University)

27PM1-1-2 Basic research on applying swarm intelligence to an optimizer in variational quantum eigensolver

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

27PM1-1-3 Adaptive Subspace Reconstruction Algorithm for Subspace Clustering

Takuto Wada (Hosei University), Ryohei Sasaki (Tokyo University of Technology), Katsumi Konishi (Hosei University)

27PM1-1-4 Flow rate estimation of a blood pump for implantable ventricular assist device by using variations in the position of magnetically levitated impeller

Taiki Yoshino (Toyo University), Yutaka Suzuki (Toyo University), Syuya Shida (Toyo University), Toru Masuzawa (Ibaraki University), Masahiro Osa (Ibaraki University)

27PM1-1-5 Visualization of Searching System of Thematic Equity Funds

Ziyi Dai (Ibaraki University), Tomoya Suzuki (Ibaraki University)

27PM1-2: Image Processing and Recognition

Date: February 27, 14:00-15:40 (February, 28, 9:00-10:40 (JST))

Room: Room 2 (Zoom)

Chair: Taishi Iriyama (Saitama University)

27PM1-2-1 Generation of Ideal Makeup Face Images based on StarGAN-v2 using Interactive Evolutionary Computation

Siwei Wang (Meiji University), Kaoru Arakawa (Meiji University)

27PM1-2-2 A Random Ensemble of Encrypted models for Enhancing Robustness against Adversarial Examples

Ryota Iijima (Tokyo Metropolitan University), Sayaka Shiota (Tokyo Metropolitan University), Hitoshi Kiya (Tokyo Metropolitan University)

27PM1-2-3 Study on Digital Watermarking Using PPM Method Based on Two-Dimensional ZCZ Sequences

Makoto Onitsuka (Kagoshima University), Takahiro Matsumoto (Kagoshima University), Yasuaki Ohira (Kagoshima University), Hideyuki Torii (Kanagawa Institute of Technology), Yuta Ida (Yamaguchi University)

27PM1-2-4 Detection of three-dimensional anomalies for weld with DETR

Rikuto Kawaguchi (National Institute of Technology, Niihama College), Hironori Kumeno (National Institute of Technology, Niihama College)

27PM1-2-5 Road Surface Recognition Using 3D-LiDAR for Automated Driving Vehicles

Kuta Shimizu (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Takashi Yasuno (Tokushima University)

27PM2-1:Speech Processing and Recognition

Date: February 27, 15:50-17:50 (February, 28, 10:50-12:50 (JST))

Room: Room 1 (Zoom)

Chair: Mousumi Haque (Saitama University)

27PM2-1-1 Performance Comparison of Energy Detection Based Spectrum Sensing for Cognitive Radio Networks

Md. Ahmed (Saitama University), Mousumi Haque (Saitama University), Tetsuya Shimamura (Saitama University)

27PM2-1-2 Joint Deep Neural Network for Single-Channel Speech Separation

Peng Chen (Ritsumeikan University), Yuting Geng (Ritsumeikan University), Kenta Iwai (Ritsumeikan University), Takanobu Nishiura (Ritsumeikan University)

27PM2-1-3 Importance of the window function in phase reconstruction using DNN for audio super-resolution

Yanqiao Yan (Ritsumeikan University), Yuting Geng (Ritsumeikan University), Kenta Iwai (Ritsumeikan University), Takanobu Nishiura (Ritsumeikan University)

27PM2-1-4 Linear Model Approach to Investigate the Comprehensive Entrainment in Conversation

Yuning Liu (Japan Advanced Institute of Science and Technology), Masashi Unoki (Japan Advanced Institute of Science and Technology)

27PM2-1-5 Study on Inaudible Speech Watermarking Method Based on Spread-Spectrum Using Linear Prediction Residue

Aulia Adila (Japan Advanced Institute of Science and Technology), Takuto Isoyama (Japan Advanced Institute of Science and Technology), Candy Olivia Mawalim (Japan Advanced Institute of Science and Technology), Masashi Unoki (Japan Advanced Institute of Science and Technology)

27PM2-2:Optical and Wireless Communications (1)

Date: February 27, 15:50-17:50 (February, 28, 10:50-12:50 (JST))

Room: Room 2 (Zoom)

Chair: Yasutaka Igarashi (Tokyo University of Science)

27PM2-2-1 The Realistic Effects of Multi-BSS Collision in Dense Network

Wenkai Han (Kyushu Institute of Technology), Yuhei Nagao (Kyushu Institute of Technology), Hiroshi Ochi (Kyushu Institute of Technology)

27PM2-2-2 Channel Capacity Evaluation of Digital Color Shift Keying with Spatial Modulation Technique

Naoki Ishitsuka (Ibaraki University), Yusuke Kozawa (Ibaraki University), Hiromasa Habuchi (Ibaraki University)

27PM2-2-3 Suitable Color Toning for MIMO LED Illumination-Light Communication System

Tianhe Huang (Ibaraki University), Yusuke Kozawa (Ibaraki University), Hiromasa Habuchi (Ibaraki University)

27PM2-2-4 Study on Generation Method of 2D Optical ZCZ Sequences Suitable for 2D-PPM-OCDMA

Yasuaki Ohira (Kagoshima University), Takahiro Matsumoto (Kagoshima University), Hideyuki Torii (Kanagawa Institute of Technology), Yuta Ida (Yamaguchi University)

27PM2-2-5 Study on Generation Method of Optical ZCZ Sequence with ZCZ Size of $2^n(2z - 1)$

Yasuaki Ohira (Kagoshima University), Takahiro Matsumoto (Kagoshima University), Hideyuki Torii (Kanagawa Institute of Technology), Yuta Ida (Yamaguchi University)

27PM2-3:Fuzzy Systems and Bio-Signal Processing

Date: February 27, 15:50-17:50 (February, 28, 10:50-12:50 (JST))

Room: Room 3 (Zoom)

Chair: Hisashi Aomori (Chukyo University)

27PM2-3-1 Inhibitory Control System of Downhill Turning Using Friction Brakes for Manual Wheelchair

Minoru Muto (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Takashi Yasuno (Tokushima University)

27PM2-3-2 Obstacle Avoidance Behaviors of Multiple Mobile Robots with 2D-LiDAR

Tatsuya Miyake (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Takashi Yasuno (Tokushima University)

27PM2-3-3 Travel Control of Autonomous Mobile Robot Cart for Implementation into Horticulture House

Kohei Kanatani (Tokushima University), Hiroshi Suzuki (Tokushima University), Takahiro Kitajima (Tokushima University), Akinobu Kuwahara (Tokushima University), Anuar Kassim (UTeM), Takashi Yasuno (Tokushima University)

27PM2-3-4 Detection of Bolus in Ultrasound Video Using YOLOv5 for Evaluation Swallowing

Hideaki Muramatsu (The University of Electro-Communications), Yutaka Suzuki (Toyo University)

27PM2-3-5 Method for Extracting Specific Shapelets from Ripple Firing with Episodic Experience

Yuta Ishihara (Kagawa University), Yuto Tomohara (Kagawa University), Ken'ichi Fujimoto (Kagawa University), Hiroshi Murai (Yamaguchi University), Junko Ishikawa (Yamaguchi University), Dai Mitsushima (Yamaguchi University)

27PM2-3-6 Influences on Muscles Around Buttock for Fixation Position of Buttock Muscle-Assist Orthosis

Aoi Morimoto (Tokushima university), Hiroshi Suzuki (Tokushima university), Takahiro Kitajima (Tokushima university), Akinobu Kuwahara (Tokushima university), Takashi Yasuno (Tokushima university)

27PM3-1:Circuits, Nonlinear Circuits, Bifurcation and Chaos

Date: February 27, 18:50-20:50 (February, 28, 13:50-15:50 (JST))

Room: Room 1 (Zoom)

Chair: Xiuqin Wei (Chiba Institute of Technology)

27PM3-1-1 Proposal on enhancing the resistance of chaotic stream ciphers including Rabin ciphers

Masaki Onoue (Meiji University), Hiroyuki Kamata (Meiji University)

27PM3-1-2 Synchronization in Three Coupled van der Pol Oscillators with Different Memristor Coupling Strength

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

27PM3-1-3 Gait Characteristics of Multi-legged Robot with Electric Fiber Artificial Muscles

Ryota Kataoka (Tokushima-University), Hiroshi Suzuki (Tokushima-University), Takahiro Kitajima (Tokushima-University), Akinobu Kuwahara (Tokushima-University), Takashi Yasuno (Tokushima-University)

27PM3-1-4 Sound Field Reproduction Based on Early Reflection Control Using Parametric and Electro-dynamic Loudspeakers

Yoto Ikezaki (Ritsumeikan University), Yuna Harada (Ritsumeikan University), Yuting Geng (Ritsumeikan University), Masato Nakayama (Osaka Sangyo University), Takanobu Nishiura (Ritsumeikan University)

27PM3-1-5 Investigation of Relationship between Crossing Angle Measurement Performance and Bending Position of Flexible Printed Spiral Inductor

Ryota Masumoto (Hiroshima Institute of Technology), Mizuki Mantani (Hiroshima Institute of Technology), Masayuki Yamachi (Hiroshima Institute of Technology)

27PM3-1-6 Algorithm to calculate the Jacobian matrix of Poincare map for a gear transmission system

Yuu Miino (Naruto University of Education)

27PM3-2:Optical and Wireless Communications (2)

Date: February 27, 18:50-20:50 (February, 28, 13:50-15:50 (JST))

Room: Room 2 (Zoom)

Chair: Hideyuki Torii (Kanagawa Institute of Technology)

27PM3-2-1 Improving Frequency Resource Allocation in High Throughput Satellite Communications Using Genetic Algorithms

Ayato Nagaji (Meiji University), Takahiro Ebihara (Meiji University), Tetsushi Ikegami (Meiji University)

27PM3-2-2 Maximizing Transmission Rate of Variable xASK-CodeSK with Illumination Device

Yu Ichitsuka (Ibaraki University), Yusuke Kozawa (Ibaraki University), Hiromasa Habuchi (Ibaraki University)

27PM3-2-3 Evaluation of the Impact of Channel Estimation Error on Inter-User Orthogonal Transmission in MU-MIMO Downlink

Yoshitaka Taniyama (National Institute of Technology, Kagoshima College), Teruji Ide (National Institute of Technology, Kagoshima College), Tadatomo Sato (National Institute of Technology, Kagoshima College)

27PM3-2-4 A Study on Theoretical Analysis of Iterative Detection of Precoded OFDM using MMSE Equalizer

Tadatomo Sato (National Institute of Technology, Kagoshima College), Teruji Ide (National Institute of Technology, Kagoshima College)

27PM3-2-5 Data-driven Reconfigurable Convolutional Encoder for Physical Layer Security

Eli Hwang (Illinois Institute of Technology), Guillermo Atkin (Illinois Institute of Technology)

27PM3-2-6 A Novel Tight Closed-Form Capacity Analysis for Rician Fading Wireless Channel Using Small Limit Argument Approximation

Md. Sohiful Islam (Saitama University), Yosuke Sugiura (Saitama University), Tetsuya Shimamura (Saitama University)

28AM1-1:Speech Processing and Recognition (1)

Date: February 28, 8:40-10:20

Room: Room 1 (PLUMERIA)

Chair: Tomohiro Takahashi (Tokai University)

28AM1-1-1 Similarity analysis between a robust cicada song and a human voice using formant frequency ratios

Leo Misono (Shibaura Institute of Technology), Kenji Muto (Shibaura Institute of Technology)

28AM1-1-2 Cross-Cultural Analysis of Emotional Expression in Bone-Conducted Speech

Md. Sarwar Hosain (Saitama University), Yosuke Sugiura (Saitama University), M. Shahidur Rahman (Shahjalal University of Science and Technology), Tetsuya Shimamura (Saitama University)

28AM1-1-3 Verification of Effectiveness of F-Cutmix for Several Speech Enhancement Models

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

28AM1-1-4 Speech rate Conversion Method with Variable Stretch Rate

Miou Oyama (Graduate School of Tokyo Denki University), Hiroto Saito (Tokyo Denki University)

28AM1-1-5 Parameterization of Speech Using Face-Type Diffusion Models for Flexible Speech Synthesis

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

28AM1-2:Wireless Communications (1)

Date: February 28, 8:40-10:20

Room: Room 2 (CARENATION)

Chair: Shintaro Mori (Fukuoka University)

28AM1-2-1 Training Received Point Reduction Using Predictive Variance of Gaussian Process Regression in Radio Map Estimation

Seina Nakamura (Shibaura Institute of Technology), Norisato Suga (Shibaura Institute of Technology)

28AM1-2-2 Digital Twin-Aided Bayesian Channel Estimation in Indoor Propagation Environment

Itsuki Ichikawa (Shibaura Institute of Technology), Norisato Suga (Shibaura Institute of Technology)

28AM1-2-3 A Study on Decoding LDM-BST-OFDM Combining Sequential Decoding and Direct Decoding

Yoko Tanaka (Tokyo University of Science), Akira Nakamura (Kanagawa University), Makoto Itami (Tokyo University of Science)

28AM1-2-4 Performance Evaluation of Orthogonal Signal Division Multiplexing Schemes with Large Delay and Doppler Spread in Underwater Acoustic Communication Channel

Naomasa Urasaki (University of Tsukuba), Masatoshi Yano (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba)

28AM1-3:Optimization

Date: February 28, 8:40-10:20

Room: Room 3 (PAKALANA & ANTHURIUM)

Chair: Hiroyuki Kamata (Meiji University)

28AM1-3-1 Machine learning of economic sensitive industries for domestic equity management

Nozomu Orita (Ibaraki University), Takashi Suzuki (The Joyo Bank, Ltd.), Tomoya Suzuki (Ibaraki University)

28AM1-3-2 Multi-objective optimization support tool for global equity management

Eisuke Sawahata (Ibaraki University), Yoshitsugu Hanawa (The Joyo Bank, Ltd.), Hiromitsu Kawamata (The Joyo Bank, Ltd.), Tomoya Suzuki (Ibaraki University)

28AM1-3-3 A Search Method for Binary Codes Compressed to Several Sub-pulses Using Quantum Annealing and Search Experiment by Ising Machine

Keigo Kimura (Nippon Institute of Technology), Hiroshi Takase (Nippon Institute of Technology)

28AM1-3-4 An Efficient Hyper-Rectangle Generation Algorithm for CONBQA

Tetsutaro Kataoka (Osaka University), Hiroshi Yamashita (Osaka University), Hideyuki Suzuki (Osaka University)

28AM1-3-5 Heuristic Method by Using Tabu Search for Solving Min-Max multiple Bike Sharing System Routing Problem

Takafumi Matsuura (Nippon Institute of Technology)

28AM2-1:Speech Processing and Recognition (2)

Date: February 28, 10:40-12:40

Room: Room 1 (PLUMERIA)

Chair: Hiroshi Tanaka (Kanagawa Institute of Technology)

28AM2-1-1 Automatic Switching between Visual Feedback and Auditory Feedback in Speech Rate Converted Conversation

Kazuma Ban (Tokyo Denki University), Hiroto Saito (Tokyo Denki University)

28AM2-1-2 Data Augmentation of Acoustic and Text Features in Latent Space for Speech Emotion Recognition

Natsumi Kobayashi (University of Tsukuba), Takeshi Yamada (University of Tsukuba), Kenkichi Ishizuka (RevComm Inc.), Taiichi Hashimoto (RevComm Inc.)

28AM2-1-3 Cross-language Adaptation of Speech Emotion Recognition with Acoustic and Text Features

Yurina Machida (University of Tsukuba), Takeshi Yamada (University of Tsukuba), Kenkichi Ishizuka (RevComm Inc.), Taiichi Hashimoto (RevComm Inc.)

28AM2-1-4 A study on PLS-based TV-CAR speech analysis

Keiichi Funaki (University of the Ryukyus)

28AM2-1-5 Relationship between the long- and short-term temporal variation of fundamental frequency and subjective hoarseness

Sasuke Tomimatsu (Kyusyu Institute of Technology), Mitsunori Mizumachi (Kyusyu Institute of Technology)

28AM2-2:Wireless Communications (2)

Date: February 28, 10:40-12:40

Room: Room 2 (CARENATION)

Chair: Makoto Itami (Tokyo University of Science)

28AM2-2-1 USRP-Based CIR Measurement System and Evaluation of CIR Replica from Digital Twin of Wireless Environment

Shunsuke Fujinuma (Shibaura Institute of Technology), Norisato Suga (Shibaura Institute of Technology)

28AM2-2-2 Measurement of Impulse Response in an Underwater Acoustic Channel in Shallow Water

Taiga Saito (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba)

28AM2-2-3 Evaluating Cooperative Spectrum Sensing Performance for MIMO-OFDM Systems

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

28AM2-2-4 Contents acquisition method using the list of shared cash in the information-centric wireless multi-hop networking

Shogo Hinata (Kanagawa Institute of Technology), Shigeki Shiokawa (Kanagawa Institute of Technology)

28AM2-2-5 Transmission control method considering node moving information and neighboring node in DTN

Kenta Oikawa (Kanagawa inspitute of Technology), Shigeki Shiokawa (Kanagawa Institute of Technology)

28AM2-3:Nonlinear Circuits and Systems

Date: February 28, 10:40-12:40

Room: Room 3 (PAKALANA & ANTHURIUM)

Chair: Takeshi Kumaki (Ritsumeikan University)

28AM2-3-1 Reconstruction of NMR-NUS Spectra based on Dynamic Truncated Nuclear Norm Minimization

Satoshi Ogawa (Tokai University), Tomohiro Takahashi (Tokai University), Tomoki Nakao (JEOL), Hironobu Yoshimura (JEOL)

28AM2-3-2 Predicting multiple aspects of plant growth using a single model

Masahiro Ogawa (Ritsumeikan University), Takeshi Kumaki (Ritsumeikan University)

28AM2-3-3 Synchronization Patterns in Nonlinear Circuit Networks Altered by Learning Rules

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

28AM2-3-4 Improvement of Single-Electron Information-Processing Circuit Based on Principle of Molecular Computing

Kairi Yokoyama (Yokohama National University) , Takahide Oya (Yokohama National University)

28AM2-3-5 On the Resolution of Physics Informed Neural Network

Naoki Watamura (Osaka University), Hiroshi Yamashita (Osaka University), Hideyuki Suzuki (Osaka University)

28AM2-3-6 Emulation of Distortion Effector with Knob based on WaveNet

Kota Konno (Tokai University), Tomohiro Takahashi (Tokai University)

28PM1-1:Image Processing and Recognition (1)

Date: February 28, 13:40-15:40

Room: Room 1 (PLUMERIA)

Chair: Kota Yoshida (Ritsumeikan University)

28PM1-1-1 Comparative investigation of Removal Performance for Various Noises in Recorded Speech using U-Net

Hiromu Shimada (Kanagawa Institute of Technology), Mari Ueda (Kanagawa Institute of Technology), Yuusuke Kawakita (Kanagawa Institute of Technology), Tsuyoshi Miyazaki (Kanagawa Institute of Technology), Hiroshi Tanaka (Kanagawa Institute of Technology)

28PM1-1-2 Consideration of Disparity Image Generation Networks Using Monocular Images

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

28PM1-1-3 Accelerated Graph Cut for Image Segmentation excluding Seed Region from Graph Structure

Noriya Kondoh (Tamagawa University), Tsuyoshi Otake (Tamagawa University), Masatoshi Sato (Tamagawa University)

28PM1-1-4 Verification of Odd-even Pixel-scale Counting-based Image Manipulation Detection with Morphological Pattern Spectrum for Grayscale

Kyosuke Kageyama (Kindai University), Takeshi Kumaki (Ritsumeikan University)

28PM1-1-5 Study on Improving Accuracy of Sound Classification in a Room using Multiple Image Transformation Methods

Naohiro Aihara (Kanagawa Institute of Technology), Mari Ueda (Kanagawa Institute of Technology), Yuusuke Kawakita (Kanagawa Institute of Technology), Tsuyoshi Miyazaki (Kanagawa Institute of Technology), Hiroshi Tanaka (Kanagawa Institute of Technology)

28PM1-1-6 Bit Depth Expansion via Swin Transformer with Channel Attention Layers

Ai Tsuchihashi (Tamagawa University), Taishi Iriyama (Saitama University), Masatoshi Sato (Tamagawa University), Hisashi Aomori (Chukyo University), Tsuyoshi Otake (Tamagawa University)

28PM1-2:Wireless Communications (3)

Date: February 28, 13:40-15:40

Room: Room 2 (CARENATION)

Chair: Hiroyuki Yashima (Tokyo University of Science)

28PM1-2-1 Experiment of Underwater Optical Camera Communication System Under Sunlight Condition Using Rolling-Shutter Sensor and Diffusion Filter

Emi Kitano (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba)

28PM1-2-2 Performance Improvement of Underwater Acoustic Communication and Ranging System Using Orthogonal Signal Division Multiplexing

Ryoichi Ishijima (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba), Yuka Maeda (University of Tsukuba), Koichi Mizutani (University of Tsukuba)

28PM1-2-3 LDPC Coded DBICM System for Multiple Access Channels

Masato Kawasumi (Tokyo University of Science), Hiroyuki Yashima (Tokyo University of Science), Ryo Shibata (Shinshu University)

28PM1-2-4 Prediction Model for IRS Channel Estimation Using CNN with Frequency Domain

Yoshihiko Tsuchiya (Tokyo University of Science), Norisato Suga (Shibaura Institute of Technology), Kazunori Uruma (Kogakuin University), Masaya Fujisawa (Tokyo University of Science)

28PM1-3:Complex Networks and Nonlinear Systems

Date: February 28, 13:40-15:40

Room: Room 3 (PAKALANA & ANTHURIUM)

Chair: Takuya Shindo (Nippon Institute of Technology)

28PM1-3-1 Concept of virtual RFID reader writer system with RAIN RFID devices

Yukina Miwa (Aichi Institute of Technology), Rena Koura (Aichi Institute of Technology), Katsuhiko Naito (Aichi Institute of Technology), Tadanori Mizuno (Aichi Institute of Technology), Masaki Ehara (AIM Japan)

28PM1-3-2 A chaotic search method by using an effective adaptive time penalty coefficients for vehicle routing problem with time windows

Syunsuke Haga (Nippon Institute of Technology), Kazuma Nakajima (Nippon Institute of Technology), Takayuki Kimura (Nippon Institute of Technology)

28PM1-3-3 An investigation of the relationship between homophily and friendship paradox in networks from the perspective biases

Kota Kato (Saitama University), Yutaka Shimada (Saitama University)

28PM1-3-4 An analysis of the influence of music on audience's behavior at a concert

Takahiro Ban (Saitama University), Manami Kimura (Waseda University), Ryota Nomura (Waseda University), Yutaka Shimada (Saitama University)

28PM1-3-5 Attractor reconstruction using diffeomorphic statistics

Satoshi Oishi (Osaka University), Hideyuki Suzuki (Osaka University), Sho Shirasaka (Osaka University)

28PM1-3-6 Study on the relationship between fixed-point arithmetic and shift operation in chaotic stream cipher when the synchronization is lost due to transmission errors

Shunta Kono (Meiji University), Hiroyuki Kamata (Meiji University)

28PM2-1:Image Processing and Recognition (2)

Date: February 28, 16:00-18:00

Room: Room 1 (PLUMERIA)

Chair: Masatoshi Sato (Tamagawa University)

28PM2-1-1 Streaming Quality Control Using Deep Reinforcement Learning for Object-Detection

Nobuaki Akutsu (Nippon Institute of Technology), Takuya Shindo (Nippon Institute of Technology), Hideaki Yoshino (Nippon Institute of Technology), Nobuhiko Itoh (Nippon Institute of Technology)

28PM2-1-2 Image Classification Using Neural Network for Feature Extractable CMOS Image Sensor

Yu Osuka (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Shunsuke Okura (Ritsumeikan University)

28PM2-1-3 Analysis of the Effectiveness of Skeletal Data in Individual Pig Behavior

Hiroki Ichikura (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba), Yuka Maeda (University of Tsukuba)

28PM2-1-4 Three-dimensional ultrasonic imaging using L1 norm minimization

Yuki Mimura (Yamagata University), Hisanobu Oishi (Yamagata University), Yudai Suzuki (Yamagata University), Hirotaka Yanagida (Yamagata University)

28PM2-1-5 Conditional Image Completion Network for Photographic Images Using Aerial Photographs

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

28PM2-1-6 Extraction and quantification of fracture prediction images of the proximal femur using CNN

Akari Matsushima (Teikyo University), Koharu Kimura (Teikyo University), Mizuki Sato (Teikyo University), Tai-Been Chen (Teikyo University/Infinity Ltd.), Shih-Yen Hsu (I-Shou University), Nobuyuki Takenaka (Fukushima Medical University), Takahide Okamoto (Teikyo University)

28PM2-2:Sensor Network

Date: February 28, 16:00-18:00

Room: Room 2 (CARENATION)

Chair: Norisato Suga (Shibaura Institute of Technology)

28PM2-2-1 Information-Centric Wireless Sensor Networking Platform for Decentralized and Co-creative Digital Twin Eco-system

Shintaro Mori (Fukuoka University)

28PM2-2-2 An Efficient Method of Frequency Bandwidth Limitation for Wireless-based Ultrasonic Data Collection System

Rio Shigyo (Kyushu Institute of Technology), Daiki Nobayashi (Kyushu Institute of Technology), Kazuya Tsukamoto (Kyushu Institute of Technology), Mitsunori Mizumachi (Kyushu Institute of Technology), Takeshi Ikenaga (Kyushu Institute of Technology)

28PM2-2-3 Telemetry system for solar cars using LPWA

Takehito Nagashima (Kanagawa Institute of Technology), Yasuhiro Sudo (Kanagawa Institute of Technology)

28PM2-2-4 Proposal and Evaluation of Sign Language Sentence Segmentation Method Based on Acceleration Information

Yoshimori Umeda (Kanagawa Institute of Technology), Yuusuke Kawakita (Kanagawa Institute of Technology), Hiromitsu Nishimura (Kanagawa Institute of Technology), Hiroshi Tanaka (Kanagawa Institute of Technology), Jin Mitsugi (Keio University)

29AM1-1:Bio-Signal Processing (1)

Date: February 29, 9:40-10:40

Room: Room 1 (PLUMERIA)

Chair: Yutaka Suzuki (Toyo University)

29AM1-1-1 A Method for Converting Ultrasound Images to X-ray CT Images Using Deep Learning

Yuki Mimura (Yamagata University), Yuki Watanabe (Yamagata University), Hirotaka Yanagida (Yamagata University)

29AM1-1-2 Non-Contact Respiration Measurement Inside and Outside Electromagnetic Anechoic Chamber Using Millimeter-Wave Radar

Hiroto Fujii (Okayama University of Science), Shintaro Arai (Okayama University of Science), Kohei Saeki (Okayama University of Science), Ryohei Yoshitake (Okayama University of Science), Eri Iwata (Okayama University of Science), Suguru Kameda (Hiroshima University), Ataru Yamaoka (S-Takaya Electronics Industry Co., Ltd.)

29AM1-1-3 The evaluation of the impact of the differences between sound perception and imagination on BCI systems

Kosei Nakada (Keio University), Yasue Mitsukura (Keio University)

29AM1-2:Adaptive Systems

Date: February 29, 9:40-10:40

Room: Room 2 (CARENATION)

Chair: Masashi Unoki (Japan Advanced Institute of Science and Technology)

29AM1-2-1 Frequency-Domain Feedback Active Noise Control with Simplified Adaptive Weight

Ryota Noguchi (Saitama university), Yosuke Sugiura (Saitama university), Tetsuya Shimamura (Saitama university)

29AM1-2-2 Sound Source Separation Utilizing Directionality in High-Noise Environments from Specific Directions

Toshiya Yahata (SaitamaUniversity), Yosuke Sugiura (SaitamaUniversity), Tetsuya Shimamura (SaitamaUniversity)

29AM1-2-3 Performance investigation of Adaptive Ant Colony Optimization with 2-Opt method

Nozomi Kotake (Nippon Institute of Technology), Rikuto Shibutani (Nippon Institute of Technology), Kazuma Nakajima (Nippon Institute of Technology), Takafumi Matsuura (Nippon Institute of Technology), Takayuki Kimura (Nippon Institute of Technology)

29AM2-1:Bio-Signal Processing (2)

Date: February 29, 11:00-12:40

Room: Room 1 (PLUMERIA)

Chair: Shintaro Arai (Okayama University of Science)

29AM2-1-1 Exploration of Causal Networks in Large-Scale Data Using Nonlinear Dimensionality Reduction

Shusuke Tohno (Tokyo University of Science), Shun Sawada (Tokyo University of Science), Hidefumi Ohmura (Tokyo University of Science), Kouichi Katsurada (Tokyo University of Science)

29AM2-1-2 EEG changes owing to the physical properties of swallowed objects

Haruto Fukushima (Toyo University), Shuya Sida (Toyo University), Kyoko Yamazaki (Toyo University), Yutaka Suzuki (Toyo University)

29AM2-1-3 Noise Reduction Method based on Wavelet Decomposition for Real-time Processing of Biological Sound Separation for Disease Precaution System

Sogo Miura (Ritsumeikan University), Yosuke Nakamura (Ritsumeikan University), Hiroto Nakashima (Ritsumeikan University), Yohei Fukumizu (Ritsumeikan University)

29AM2-1-4 Proficiency assessment of violin-playing techniques based on time variation of sharpness from staccato commencement

Hayaki Ito (Toyo University), Shuya Shida (Toyo University), Yutaka Suzuki (Toyo University)

29AM2-2:Adaptive Systems and Detection

Date: February 29, 11:00-12:40

Room: Room 2 (CARENATION)

Chair: Nozomiko Yasui (National Institute of Technology, Kisarazu College)

29AM2-2-1 Improvement of room sound environment for active window vibration control simulator avoiding the impact of reflected waves

Naoya Nakajima (Shibaura Institute of Technology), Kenji Muto (Shibaura Institute of Technology)

29AM2-2-2 Rainfall Attenuation Countermeasures for Satellite Communication Using Bandwidth Control and ACM

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

29AM2-2-3 Improvement of mute performance of Frequency Domain Hybrid Active Noise Control

Shosuke Namekawa (Saitama university), Yosuke Sugiura (Saitama university), Tetsuya Shimamura (Saitama university)

29AM2-2-4 Effects of Passive Noise Control during Electric Vehicle Operation on In-Car Conversational Intelligibility

Minoru Masumoto (Hiroshima City University), Shunsuke Ishimitsu (Hiroshima City University), Yasuto Fujii (TOYOBO MC Corporation), Tomoko Kanatani (TOYOBO MC Corporation)

29AM2-2-5 Pursuit of Realistic Vehicle Acceleration Sounds Based on Discomfort Index

Misaki Nitta (Hiroshima City University), Shunsuke Ishimitsu (Hiroshima City University), Satoshi Fujikawa (Mazda Motor Corporation), Kiyooki Iwata (Mazda Motor Corporation), Mayuko Niimi (Mazda Motor Corporation), Masakazu Kikuchi

(Mazda Motor Corporation), Mitsunori Matsumoto (Mazda Motor Corporation)

1AM1-1:[Special Session] Advanced Image Processing and AI Applications in Data and Life Sciences

Date: March 1, 11:00-12:40

Room: Room 1 (PLUMERIA)

Chair: Tomohiro Fujita (Ritsumeikan University)

1AM1-1-1 A Novel Stochastic Model for Analyzing Heart Rate Variability in the Heart-Brain Signal Communication System

Thi Thi Zin (University of Miyazaki), Tunn Cho Lwin (University of Miyazaki), Pyke Tin (University of Miyazaki)

1AM1-1-2 Transition-Aware Elderly Action Recognition: Unveiling Insights with CNN-RNN Integration

Ye Htet (University of Miyazaki), Thi Thi Zin (University of Miyazaki), Hiroki Tamura (University of Miyazaki), Kazuhiro Kondo (University of Miyazaki), Etsuo Chosa (University of Miyazaki)

1AM1-1-3 Enhancing Precision Agriculture: Innovative Tracking Solutions for Black Cattle Monitoring

Su Myat Noe (University of Miyazaki), Thi Thi Zin (University of Miyazaki), Pyke Tin (University of Miyazaki), Ikuo Kobayashi (University of Miyazaki)

1AM1-1-4 Kalman Velocity-based Multi-Stage Classification Approach for Recognizing Black Cow Actions

Cho Cho Aye (University of Miyazaki), Thi Thi Zin (University of Miyazaki), Masaru Aikawa (University of Miyazaki), Ikuo Kobayashi (University of Miyazaki)

1AM1-2:Circuit Design and Analysis

Date: March 1, 11:00-12:40

Room: Room 2 (CARENATION)

Chair: Wenqi Zhu (Chiba University)

1AM1-2-1 Load-independent Class-E Inverter with Switchable Output Voltage

Wenqi Zhu (Chiba University), Ayano Komanaka (Chiba University), Yutaro Komiyama (Chiba University), Kien Nguyen (Chiba University), Hiroo Sekiya (Chiba University)

1AM1-2-2 Resonant Converter with Class-E⁻¹ inverter with Constant Voltage

Ayano Komanaka (Chiba University), Wenqi Zhu (Chiba University), Xiuqin Wei (Chiba Institute of Technology), Kien Nguyen (Chiba University), Hiroo Sekiya (Chiba University)

1AM1-2-3 Verification of ITCAM-based Reservoir Computing with Speech Learning

Sayaka Akiyama (Ritsumeikan University), Yuta Kunito (Ritsumeikan University), Seiran Suzuki (Ritsumeikan University), Tomohiro Fujita (Ritsumeikan University), Takeshi Ogura (Ritsumeikan University), Takeshi Kumaki (Ritsumeikan University)

1AM1-2-4 Study of Load-Independent Class-ED Converter

Soraki Aizawa (Chiba Institute of Technology), Tsukasa Yasuda (Chiba Institute of Technology), Azuma Uchida (Chiba

Institute of Technology), Weisen Luo (Chiba Institute of Technology), Xiuqin Wei (Chiba Institute of Technology)

1AM1-2-5 Innovative Approach to Visual Lip Reading for Real-Time Japanese Viseme Classification

Yuta Nashimoto (Keio University), Yasue Mitsukura (Keio University)

1PM1-1:Computer Vision (1)

Date: March 1, 13:40-15:20

Room: Room 1 (PLUMERIA)

Chair: Thi Thi Zin (University of Miyazaki)

1PM1-1-1 Study on lunar crater recognition using SNN

Yosuke Noda (Meiji University), Hiroyuki Kamata (Meiji University)

1PM1-1-2 A Study on Mask Face Recognition Using a Spatial Directional Attention Mechanism Considering the Receptive Field

Jintaro Kawai (Meiji University), Hiroyuki Kamata (Meiji University)

1PM1-1-3 Development of a Wayfinding Function Using AR Head Mounted Display

Yuhei Oguro (Takushoku University), Yihsin Ho (Takushoku University), Eri Shimokawara (Tokyo Metropolitan University), Takenori Obo (Tokyo Metropolitan University), Hiroki Shibata (Tokyo Metropolitan University), Ichiro Kobayashi (Takushoku University)

1PM1-1-4 A Study on Advantages in Interactive Systems using Electromyography

Shinnosuke Hanawa (Takushoku University), Yihsin Ho (Takushoku University), Eri Sato-Shimokawara (Tokyo Metropolitan University), Takenori Obo (Tokyo Metropolitan University), Hiroki Shibata (Tokyo Metropolitan University), Ichiro Kobayashi (Takushoku University)

1PM1-2:Estimation

Date: March 1, 13:40-15:20

Room: Room 2 (CARENATION)

Chair: Shuichi Aono (Tamagawa University))

1PM1-2-1 Recording and Analysis of Emitting Sounds of Whiteflies on Paraffin Membrane Using a High-Density Microphone Array

Fumina Utsumi (University of Tsukuba), Hirotaka Obo (University of Tsukuba), Tadashi Ebihara (University of Tsukuba), Naoto Wakatsuki (University of Tsukuba), Yuka Maeda (University of Tsukuba), Koichi Mizutani (University of Tsukuba)

1PM1-2-2 Visualization of the Proficiency Level of Assembly Work Using Inertial and Sound Sensors

Tomoya Hirade (Shizuoka University), Reiki Shirasawa (Yamaha Motor Co., Ltd.), Takayuki Nakano (Yamaha Motor Co., Ltd.), Takahiro Aoki (Shizuoka University, Yamaha Motor Co., Ltd.), Yoshitaka Yamamoto (Shizuoka University), Masafumi Nishimura (Shizuoka University, Aichi Sangyo University)

1PM1-2-3 Development of Chord Recognition System Using Sparse Signal Processing and Cosine Similarity

Hiroaki Osawa (Saitama University), Nozomiko Yasui (National Institute of Technology, Kisarazu College), Yosuke Sugiura

(Saitama University), Tetsuya Shimamura (Saitama University)

1PM1-2-4 Estimation of 3D Data from 2D Cross-Sectional Data Using Physics Informed Neural Networks

Haruto Yokoyama (Osaka University), Naoki Watamura (Osaka University), Hiroshi Yamashita (Osaka University), Hideyuki Suzuki (Osaka University), Sho Shirasaka (Osaka University)

1PM1-2-5 Time difference of arrival estimation using audible sound

Kazuya Yamamoto (Saitama university), Yosuke Sugiura (Saitama university), Tetsuya Shimamura (Saitama university)

1PM2-1:Computer Vision (2)

Date: March 1, 15:40-17:20

Room: Room 1 (PLUMERIA)

Chair: Pyke Tin (University of Miyazaki)

1PM2-1-1 Study on Generating a Map by Feature Points for High Accuracy Landing on Unknown Celestial Bodies

Hiroaki Miura (Meiji University), Hiroyuki Kamata (Meiji University)

1PM2-1-2 Estimation of Up and Down Stairs Slope Angle by 3D Image Measurement

Kazuhiro Terada (Tokyo Denki University), Shigeo Wada (Tokyo Denki University)

1PM2-1-3 Rotation Assessment of Jumps in Figure Skating Using Broadcasted Footage

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

1PM2-1-4 Study on the Reinforcement Learning RANSAC Rapid and High-accurate Estimation of Disturbance Image Matching

Tomoya Wakagi (Meiji University), Hiroyuki Kamata (Meiji University)

1PM2-1-5 Study on improving the accuracy of image self-position estimation by NG-RANSAC

Yoshiya Gojo (Meiji University), Hiroyuki Kamata (Meiji University)

1PM2-2:Information Security

Date: March 1, 15:40-17:20

Room: Room 2 (CARENATION)

Chair: Yosuke Sugiura (Saitama University)

1PM2-2-1 A Feasibility Study of Data Poisoning against On-device Learning Edge AI by Physical Attack against Sensors

Takahito Ino (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Hiroki Matsutani (Keio University), Takeshi Fujino (Ritsumeikan University)

1PM2-2-2 Evaluation of Side-channel Attacks against Error Correction Circuit for Arbiter PUF

Soma Watanabe (Ritsumeikan University), Yuta Fukuda (Ritsumeikan University), Tatsuya Oyama (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Takeshi Fujino (Ritsumeikan University)

1PM2-2-3 Improvement of Side-channel Attack Performance by Utilizing Data Augmentation on Differential Deep-learning Analysis

Seiya Shimada (Ritsumeikan University), Yuta Fukuda (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Takeshi Fujino (Ritsumeikan University)

1PM2-2-4 Input Image Recovery Attacks by Exploiting Countermeasures for Black-box Adversarial Examples

Kohei Taguchi (Ritsumeikan University), Kota Yoshida (Ritsumeikan University), Takeshi Fujino (Ritsumeikan University)

1PM2-2-5 A Lightweight Information Sharing System with Access Control in Disaster Management with Security against Dishonest Users

Yuki Kawahara (Tokyo University of Science), Masaya Fujisawa (Tokyo University of Science), Ahmad Akmal Aminuddin Mohd Kamal (Tokyo University of Science)