

APSIPA ASC 2017 TECHNICAL PROGRAM

Session WA-01

Recent Advances in Intelligent Audio Processing

Type: Special Session

Venue: Ballroom A

Wednesday – 13 December

Time: 1100 – 1240

Chairs:

Jia-Ching Wang, National Central University (Taiwan)

Yu Tsao, Academia Sinica (Taiwan)

WA-01.1 @ 11:00

155 A Segmental DNN/i-vector Approach for Digit-Prompted Speaker Verification

Yan Jie, Northwestern Polytechnical University (China)

Lei Xie, Northwestern Polytechnical University (China)

Wang Guangsen, Tencent AI Lab (China)

Zhong-hua Fu, Northwestern Polytechnical University (China)

WA-01.2 @ 11:20

178 Raw Waveform-based Speech Enhancement by Fully Convolutional Networks

Szu-Wei Fu, Academia Sinica (Taiwan)

Yu Tsao, Academia Sinica (Taiwan)

Xugang Lu, National Institute of Information and Communications Technology (Japan)

Hisashi Kawai, National Institute of Information and Communications Technology (Japan)

WA-01.3 @ 11:40

224 Generalized Atom and Dictionary Design and Compressive Sensing for Vocal Signal Expansion

Jian-Jiun Ding, National Taiwan University (Taiwan)

Shiang-Chih Hua, National Taiwan University (Taiwan)

Ronald Y. Chang, Academia Sinica (Taiwan)

Yih-Cherng Lee, National Taiwan University (Taiwan)

WA-01.4 @ 12:00

343 Acoustic Scene Classification using Self-Determination Convolutional Neural Network

Chien-Yao Wang, National Central University (Taiwan)

Andri Santoso, National Central University (Taiwan)

Jia-Ching Wang, National Central University (Taiwan)

WA-01.5 @ 12:20

360 Prediction Techniques for Wavelet Based 1-D Signal Compression

I-Hsiang Wang, National Taiwan University (Taiwan)

Jian-Jiun Ding, National Taiwan University (Taiwan)

Hung-Wei Hsu, National Taiwan University (Taiwan)

Session WA-02

Signal processing for measurement and Internet-of-Things (IoT) applications

Type: Special Session

Venue: Ballroom B

Wednesday - 13 December

Time: 1100 - 1240

Chairs:

Yohei Kawaguchi, Hitachi, Ltd. (Japan)

Akira Hirabayashi, Ritsumeikan University (Japan)

WA-02.1 @ 11:00

214 An Empirical Study on Performance Optimization at District Cooling Plant of Universiti Teknologi PETRONAS

Zhang Xiaoming, Hitachi Asia Ltd. (Singapore)

Hidetaka Aoki, Hitachi Asia (Malaysia)

Akiko Sato, Hitachi Asia Ltd. (Singapore)

Mohd Amin Abd Majid, Universiti Teknologi PETRONAS (Malaysia)

WA-02.2 @ 11:20

313 Sequential Decomposition of 2D Apparent Motion Field Based on Low-Rank and Sparse Approximation

Tomoya Sakai, Nagasaki University (Japan)

Shun Ogawa, Nagasaki University (Japan)

Hiroki Kuhara, Nagasaki University (Japan)

WA-02.3 @ 11:40

321 Classifying Road Surface Conditions Using Vibration Signals

Lounell Gueta, Hitachi Asia Ltd (Singapore)

Akiko Sato, Hitachi Asia Ltd (Singapore)

WA-02.4 @ 12:00

349 Fast High-Quality Three-Dimensional Reconstruction from Compressive Observation of Phased Array Weather Radar

Ryosuke Kawami, Ritsumeikan University (Japan)

Hidetomo Kataoka, Ritsumeikan University (Japan)

Daichi Kitahara, Ritsumeikan University (Japan)

Akira Hirabayashi, Ritsumeikan University (Japan)

Takashi Ijiri, Shibaura Institute of Technology (Japan)

Shigeharu Shimamura, Osaka University (Japan)

Hiroshi Kikuchi, Tokyo Metropolitan University (Japan)

Tomoo Ushio, Tokyo Metropolitan University (Japan)

WA-02.5 @ 12:20

386 Graph Reduction Method Using Localization Operator and Its Application to Pyramid Transform

Akie Sakiyama, Tokyo University of Agriculture and Technology (Japan)

Yuichi Tanaka, PRESTO Japan Science and Technology Agency (Japan)

Session WA-03

Towards Human - Robot Collaboration: Enabling Technologies, Interfaces, Learning and Interaction (Part 1)

Type: Special Session

Venue: Tactic 1

Wednesday – 13 December

Time: 1100 – 1240

Chairs:

Ayşe Küçükylmaz, Yeditepe University (Turkey)

Dimitri Ognibene, Universitat Pompeu Fabra (Spain)

Qinyuan Ren, Zhejiang University (China)

Yan Wu, Institute for Infocomm Research (Singapore)

WA-03.1 @ 11:00

33 Automatic Object Searching by a Mobile Robot with Single RGB-D Camera

Miaolong Yuan, Institute for Infocomm Research (Singapore)

Vui Ann Shim, Institute for Infocomm Research (Singapore)

Tan Boon Hwa, Institute for Infocomm Research (Singapore)

WA-03.2 @ 11:20

66 Investigation on the Roles of Human and Robot in Collaborative Storytelling

Yan Wu, Institute for Infocomm Research (Singapore)

Ruohan Wang, Imperial College London (UK)

Yong Ling Tay, Raffles Girls School (Singapore)

Clarice J. Wong, Raffles Girls School (Singapore)

WA-03.3 @ 11:40

5 Sentiment Analysis in Indonesian and French by SentiSAIL

Gayane Shalunts, Sail Labs Technology GmbH (Austria)

Gerhard Backfried, Sail Labs Technology GmbH (Austria)

Helmy Syakh Alam, University of Vienna (Austria)

WA-03.4 @ 12:00

109 An Integrated Framework for Multimodal Human-Robot Interaction

Luis Fernando D'Haro, Institute for Infocomm Research (Singapore)

Andreea I. Niculescu, Institute for Infocomm Research (Singapore)

Caixia Cai, TUMCREATE (Singapore)

Suraj Nair, TUMCREATE (Singapore)

Rafael E. Banchs, Institute for Infocomm Research (Singapore)

Alois Knoll, Robotics and Embedded Systems (Germany)

Haizhou Li, Institute for Infocomm Research (Singapore)

WA-03.5 @ 12:20

153 When industrial robots become social: on the design and evaluation of a multimodal interface for welding robots

Andreea I. Niculescu, Institute for Infocomm Research (Singapore)

Luis Fernando D'Haro, Institute for Infocomm Research (Singapore)

Rafael E. Banchs, Institute for Infocomm Research (Singapore)

Session WA-04

Recent Developments in Theory and Applications of Fractional and Sparse Signal Processing (Part 1)

Type: Special Session

Venue: Tactic 2

Wednesday - 13 December

Time: 1100 - 1240

Chairs:

Ran Tao, Beijing Institute of Technology (China)

Bing-Zhao Li, Beijing Institute of Technology (China)

WA-04.1 @ 11:00

70 Spread Spectrum Compressed Sensing Magnetic Resonance Imaging via Fractional Fourier Transform

Xiaozhi Zhang, Guangdong University of Technology (China)

Ya Li, Guangdong University of Technology (China)

Bingo Wing Kuen Ling, Guangdong University of Technology (China)

Chao Song, University of South China (China)

Kok Lay Teo, Curtin University (Australia)

WA-04.2 @ 11:20

107 Nonuniform sampling theorems for random signals in the offset linear canonical transform domain

Yi-Ping Bao, Beijing Institute of Technology (China)

Yan-Na Zhang, Beijing Institute of Technology (China)

Yu-E Song, Beijing Polytechnic College (China)

Bing-Zhao Li, Beijing Institute of Technology (China)

Pei Dang, Macau University of Science and Technology (China)

WA-04.3 @ 11:40

121 Convolution theorem and Wigner-Ville distribution

Yonggang Li, Zhengzhou University of Aeronautics (China)

Xiaoling Meng, Zhengzhou University of Aeronautics (China)

WA-04.4 @ 12:00

276 The Fractional Fourier Transform on Graphs

Yiqian Wang, Beijing Institute of Technology (China)

Bing-Zhao Li, Beijing Institute of Technology (China)

Qi-yuan Cheng, Beijing Institute of Technology (China)

WA-04.5 @ 12:20

421 Digital Computation of Fractional Fourier and Linear Canonical Transforms and Sparse Image Representation

Aykut Koc, Aselsan Research Center (Turkey)

Haldun M. Ozaktas, Bilkent University (Turkey)

Burak Bartan, Stanford University (USA)

Erhan Gundogdu, Aselsan Research Center (Turkey)

Tolga Cukur, Bilkent University (Turkey)

Session WA-05

Recent Topics on Active Control of Sound (Part 1)

Type: Special Session

Venue: Tactic 3

Wednesday - 13 December

Time: 1100 - 1240

Chairs:

Yoshinobu Kajikawa, Kansai University (Japan)

WA-05.1 @ 11:00

15 Maximum A Posteriori Adjustment of Adaptive Transversal Filters in Active Noise Control

Iman Tabatabaei Ardekani, Unitec Institute of Technology (New Zealand)

Hamid Sharifzadeh, Unitec Institute of Technology (New Zealand)

Xiao Zhang, Unitec Institute of Technology (New Zealand)

Jari Kaipio, Unitec Institute of Technology (New Zealand)

WA-05.2 @ 11:20

50 Understanding Multiple-Input Multiple-Output Active Noise Control from a Perspective of Sampling and Reconstruction

Chuang Shi, University of Electronic Science and Technology of China (China)

Huiyong Li, University of Electronic Science and Technology of China (China)

Dongyuan Shi, Nanyang Technological University (Singapore)

Bhan Lam, Nanyang Technological University (Singapore)

Woon Seng Gan, Nanyang Technological University (Singapore)

WA-05.3 @ 11:40

87 Synchronized Amplitude-and-Frequency Modulation for a Parametric Loudspeaker

Masato Nakayama, Ritsumeikan University (Japan)

Takanobu Nishiura, Ritsumeikan University (Japan)

WA-05.4 @ 12:00

141 Statistical-Mechanical Analysis of The FXLMS Algorithm For Multiple-channel Active Noise Control

Tomoki Murata, Kansai University (Japan)

Yoshinobu Kajikawa, Kansai University (Japan)

Seiji Miyoshi, Kansai University (Japan)

WA-05.5 @ 12:20

369 Active Noise Control for Muffler

Michael Anthony, Chung Yuan Christian University (Taiwan)

Cheng-Yuan Chang, Chung Yuan Christian University (Taiwan)

Sen M. Kuo, Chung Yuan Christian University (Taiwan)

Session WA-06

Speech enhancement and segmentation based on CASA and machine learning (Part 1)

Type: Special Session

Venue: Tactic 4

Wednesday - 13 December

Time: 1100 - 1240

Chairs:

Changchun Bao, Beijing University of Technology (China)

WA-06.1 @ 11:00

26 Speech Enhancement based on Binaural Cues Derived from DNN

Nan Chen, Beijing University of Technology (China)

Changchun Bao, Beijing University of Technology (China)

Xianyun Wang, Beijing University of Technology (China)

WA-06.2 @ 11:20

44 Codebook-driven Speech Enhancement Using DNN and Harmonic Emphasis

Yan Yang, Beijing University of Technology (China)

Changchun Bao, Beijing University of Technology (China)

Xianyun Wang, Beijing University of Technology (China)

WA-06.3 @ 11:40

209 A Maximum Likelihood Approach to Deep Neural Network Based Speech Dereverberation

Xin Wang, University of Science and Technology of China (China)

Jun Du, University of Science and Technology of China (China)

Yannan Wang, University of Science and Technology of China (China)

WA-06.4 @ 12:00

287 Speech Separation by Cost-Sensitive Deep Learning

Xiao-Lei Zhang, Northwestern Polytechnical University (China)

WA-06.5 @ 12:20

366 Using Optimal Ratio Mask as Training Target for Supervised Speech Separation

Shasha Xia, Inner Mongolia University (China)

Hao Li, Inner Mongolia University (China)

Xueliang zhang, Inner Mongolia University (China)

Session WA-07

Advanced Technology for End-to-End Speech Processing

Type: Special Session

Venue: Tactic 5

Wednesday – 13 December

Time: 1100 – 1240

Chairs:

Minghui Dong, Institute for Infocomm Research, A-Star (Singapore)

Bin Ma, Institute for Infocomm Research, A-Star (Singapore)

WA-07.1 @ 11:00

213 Representing Raw Linguistic Information in Chinese Text-to-Speech System

Minghui Dong, Institute for Infocomm Research (Singapore)

Zhengchen Zhang, Institute for Infocomm Research (Singapore)

Huaiping Ming, Institute for Infocomm Research (Singapore)

WA-07.2 @ 11:20

284 An End-to-End Neural Network Approach to Story Segmentation

Jia Yu, Northwestern Polytechnical University (China)

Lei Xie, Northwestern Polytechnical University (China)

Xiong Xiao, Technological University (Singapore)

Eng Siong Chng, Nanyang Technological University (Singapore)

WA-07.3 @ 11:40

318 Deep Speaker Verification: Do We Need End to End?

Dong Wang, Tsinghua University (China)

Lantian Li, Tsinghua University (China)

Zhiyuan Tang, Tsinghua University (China)

Thomas Fang Zheng, Tsinghua University (China)

WA-07.4 @ 12:00

353 Non-Native Speech Conversion with Consistency-Aware Recursive Network and Generative Adversarial Network

Keisuke Oyamada, University of Tsukuba (Japan)

Hirokazu Kameoka, NTT Corporation (Japan)

Takuhiro Kaneko, NTT Corporation (Japan)

Hiroyasu Ando, University of Tsukuba (Japan)

Kaoru Hiramatsu, NTT Corporation (Japan)

Kunio Kashino, NTT Corporation (Japan)

WA-07.5 @ 12:20

372 End-to-End Speech Emotion Recognition Using Multi-Scale Convolution Networks

Tatinati Sivanagaraja, Nanyang Technological University (Singapore)

Ho Mun Kit, Nanyang Technological University (Singapore)

Andy W H Khong, Nanyang Technological University (Singapore)

Yubo Wang, Xidian University (China)

Session WA-08

Advances in Multimedia Security and Forensic

Type: Special Session

Venue: Tactic 6

Wednesday - 13 December

Time: 1100 - 1240

Chairs:

Shoko Imaizumi, Chiba University (Japan)

SimYing Ong, Tunku Abdul Rahman University College (Malaysia)

WA-08.1 @ 11:00

298 Speech Watermarking Scheme Based on Singular-Spectrum Analysis for Tampering Detection and Identification

Jessada Karnjana, National Electronics and Computer Technology Center (Thailand)

Kasorn Galajit, National Electronics and Computer Technology Center (Thailand)

Pakinee Aimmanee, Thammasat University (Thailand)

Chai Wutiwiewatchai, National Electronics and Computer Technology Center (Thailand)

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

WA-08.2 @ 11:20

306 Integrated Algorithm for Block-Permutation-Based Encryption with Reversible Data Hiding

Anu Aryal, Chiba University (Japan)

Shoko Imaizumi, Chiba University (Japan)

Takahiko Horiuchi, Chiba University (Japan)

Hitoshi Kiya, Tokyo Metropolitan University (Japan)

WA-08.3 @ 11:40

411 Redesigning Data Hiding: Interpolation-based Scrambling-Embedding Method

SimYing Ong, Tunku Abdul Rahman University College (Malaysia)

KokSheik Wong, Monash University Malaysia (Malaysia)

Kiyoshi Tanaka, Shinshu University (Japan)

WA-08.4 @ 12:00

463 Rewritable Data Insertion in Encrypted JPEG using Coefficient Prediction Method

KuanYew Tan, University of Malaya (Malaysia)

KokSheik Wong, Monash University Malaysia (Malaysia)

SimYing Ong, Tunku Abdul Rahman University College (Malaysia)

Kiyoshi Tanaka, Shinshu University (Japan)

WA-08.5 @ 12:20

465 Recent Advances in Biometric Security: A Case Study of Liveness Detection in Face Recognition

Koichi Ito, Tohoku University (Japan)

Takehisa Okano, Tohoku University (Japan)

Takafumi Aoki, Tohoku University (Japan)

Poster Session 1

Digital Signal, Image, and Video Processing Processing

Type: Regular Session

Venue: Level 3 - Foyer

Wednesday – 13 December

Time: 1100 – 1240

Chairs:

Hitoshi Kiya, Tokyo Metropolitan University (Taiwan)

Yoong Choon Chang, Universiti Tunku Abdul Rahman (Malaysia)

WA-P1.1

450 **A New Bilateral Filter for Post-removing the Noise of Synthesis View in 3D Video**

Meng Yang, Xi'an Jiaotong University (China)

Nanning Zheng, Xi'an Jiaotong University (China)

Fei Wang, Xi'an Jiaotong University (China)

Ce Zhu, University of Electronic Science & Technology of China (China)

WA-P1.2

149 **A New Active Contour Model Based on Complexity of Textures for Segmentation of Natural Image**

Hongsheng Liu, University of Electronic Science and Technology of China (China)

Baozhu Guo, University of Electronic Science and Technology of China (China)

Zhizhong Fu, University of Electronic Science and Technology of China (China)

Xiaofeng Li, University of Electronic Science and Technology of China (China)

WA-P1.3

183 **Subpixel Mapping of Hyperspectral Images with Hybrid Endmember Library and Optimized Abundances**

Yifan Zhang, Northwestern Polytechnical University (China)

Ting Wang, Northwestern Polytechnical University (China)

Renjie He, Northwestern Polytechnical University (China)

Mingyi He, Northwestern Polytechnical University (China)

WA-P1.4

184 **Hyperspectral and Multispectral Image Fusion Using Local Spatial-Spectral Dictionary Pair**

Yifan Zhang, Northwestern Polytechnical University (China)

Tuo Zhao, Northwestern Polytechnical University (China)

Mingyi He, Northwestern Polytechnical University (China)

WA-P1.5

190 **A Fast Non-Convex Regularizer for Low Rank Matrix Completion**

Cho-Ying Wu, National Taiwan University (Taiwan)

Jian-Jiun Ding, National Taiwan University (Taiwan)

WA-P1.6

195 **Identifying and Filling Occlusion Holes on Planar Surfaces for 3-D Scene Editing**

Chia-Wei Wang, National Chiao Tung University (Taiwan)

Tzu-Chieh Yang, National Chiao Tung University (Taiwan)

Sheng-Ho Chiang, National Chiao Tung University (Taiwan)

Tsaipei Wang, National Chiao Tung University (Taiwan)

WA-P1.7

228 **Initial Depth Estimation using EPs and Structure Tensor**

Wisarut Chantara, Gwangju Institute of Science and Technology (South Korea)

Yo-Sung Ho, Gwangju Institute of Science and Technology (South Korea)

WA-P1.8

323 **Panchromatic and Multi-spectral Image Fusion Method Based on Two-step Sparse Representation and Wavelet Transform**

Guiqing He, Northwestern Polytechnical University (China)
Siyuan Xing, Northwestern Polytechnical University (China)
Dandan Dong, Northwestern Polytechnical University (China)
Ximei Zhao, Northwestern Polytechnical University (China)

WA-P1.9

380 Pseudo Multi-Exposure Fusion Using a Single Image

Yuma Kinoshita, Tokyo Metropolitan University (Japan)
Taichi Yoshida, Nagaoka University of Technology (Japan)
Sayaka Shiota, Tokyo Metropolitan University (Japan)
Hitoshi Kiya, Tokyo Metropolitan University (Japan)

WA-P1.10

395 Multi-layer Background Sprite Model for 2D-to-3D Video Conversion

Wen-Nung Lie, National Chung Cheng University (Taiwan)
Chih-Hao Hu Hu, National Chung Cheng University (Taiwan)
Yi-Kai Chen, National Chung Cheng University (Taiwan)
Jui-Chiu Chiang Chiang, National Chung Cheng University (Taiwan)

WA-P1.11

398 Image Ordinal Estimation: Classification and Regression Benefit Each Other

Chao Zhang, University of Electronic Science & Technology of China (China)
Ce Zhu, University of Electronic Science & Technology of China (China)
Yipeng Liu, University of Electronic Science & Technology of China (China)
Hongdiao Wen, University of Electronic Science & Technology of China (China)
Zhengtao Wang, University of Electronic Science & Technology of China (China)

WA-P1.12

434 Dictionary Design and Disparity Interpolation on Distributed Compressed Sensing for Light Field Image

Yusaku Akiyoshi, National Institute of Technology, Kurume College (Japan)
Yoshimitsu Kuroki, National Institute of Technology, Kurume College (Japan)

WA-P1.13

436 Digital Hologram Data Representation Method

Kwan-Jung Oh, Electronics and Telecommunications Research Institute (South Korea)
Minsik Park, Electronics and Telecommunications Research Institute (South Korea)
Jinwoong Kim, Electronics and Telecommunications Research Institute (South Korea)

WA-P1.14

9 Image Fusion Algorithm Based on Gradient Similarity Filter

Zhizhong Fu, University of Electronic Science and Technology of China (China)
Zhao YuFei, University of Electronic Science and Technology of China (China)
Xu Jin, University of Electronic Science and Technology of China (China)
Mao Linghua, University of Electronic Science and Technology of China (China)

WA-P1.15

27 Pose-Invariant Kinematic Features for Action Recognition

Manoj Ramanathan, Nanyang Technological University (Singapore)
Wei-Yun Yau, Institute of Infocomm Research, A-STAR (Singapore)
Eam Khwang Teoh, Nanyang Technological University (Singapore)
Nadia Magnenat Thalmann, Nanyang Technological University (Singapore)

WA-P1.16

52 Salient Object Detection Using Array Images

Tingtian Li, The Hong Kong Polytechnic University (China)
Daniel P.K. Lun, The Hong Kong Polytechnic University (China)

WA-P1.17

- 92 **Accurate Subset Selection for Pose Estimation from Uncertain Points and Lines**
Jia Du, Institute for Infocomm Research (Singapore);
Wei Xiong, Institute for Infocomm Research (Singapore)
Wenyu Chen, Institute for Infocomm Research (Singapore)
Jierong Cheng, Institute for Infocomm Research (Singapore)
Ying Gu, Institute for Infocomm Research (Singapore)

WA-P1.18

- 437 **A Real Time Micro-expression Detection System with LBP-TOP on a Many-core Processor**
Xin Rong Soh, Multimedia University (Malaysia)
Vishnu Monn Baskaran, Multimedia University (Malaysia)
Adamu Muhammad Buhari, Multimedia University (Malaysia)
Raphael Phan, Multimedia University (Malaysia)

WA-P1.19

- 260 **A Summary of Blind Guiding Methods Converting Images to Sounds**
Botao Wang, Beijing University of Technology (China)
Yuhan Liu, Beijing University of Technology (China)
Ximeng Li, Beijing University of Technology (China)

WA-P1.20

- 373 **Sliced Voxel Representations with LSTM and CNN for 3D Shape Recognition**
Ryo Miyagi, Toyohashi University of Technology (Japan)
Masaki Aono, Toyohashi University of Technology (Japan)

WA-P1.21

- 73 **Localization of Harmonic Source Using a Single Moving Sensor of Known Trajectory**
Yi Yang Ang, Nanyang Technological University of Singapore (Singapore)
Nam Nguyen, Halliburton Far East Pte. Ltd. (Singapore)
Joni Polili Lie, Halliburton Far East Pte. Ltd. (Singapore)
Woon Seng Gan, Nanyang Technological University of Singapore (Singapore)

WA-P1.22

- 74 **Grid-free Compressive Beamforming Using a Single Moving Sensor of Known Trajectory**
Yi Yang Ang, Nanyang Technological University of Singapore (Singapore)
Nam Nguyen, Halliburton Far East Pte. Ltd. (Singapore)
Joni Polili Lie, Halliburton Far East Pte. Ltd. (Singapore)
Woon Seng Gan, Nanyang Technological University of Singapore (Singapore)

WA-P1.23

- 166 **Understanding the Effect of Cannabis Abuse on the ANS and Cardiac Physiology of the Indian Women Paddy-field Workers Using RR Interval and ECG Signal Analyses**
Suraj Nayak, National Institute of Technology (India)
Karan Pande, National Institute of Technology (India)
Shikshya Nayak, VSSUT Burla (India)
Pratyush Kumar Patnaik, National Institute of Technology (India)
Shankar Jaykishan Patel, Jagnyaseni Hospital (India)
Anilesh Dey, Kaziranga University (India)
Arfat Anis, King Saud University, Riyadh (Saudi Arabia)
Kunal Pal, National Institute of Technology, Rourkela

WA-P1.24

- 245 **Robust Voice Activity Detection Based on LSTM Recurrent Neural Networks and Modulation Spectrum**
Phuttipong Sertsri, National Electronics and Computer Technology Center (Thailand)
Surasak Boonkla, National Electronics and Computer Technology Center (Thailand)
Vataya Chunwijitra, National Electronics and Computer Technology Center (Thailand)
Nattapong Kurpukdee, National Electronics and Computer Technology Center (Thailand)
Chai Wutiw WATCHAI, National Electronics and Computer Technology Center (Thailand)

WA-P1.25

335 Music Thumbnailing via Neural Attention Modeling of Music Emotion

Yu-Siang Huang, Academia Sinica (Taiwan)

Szu-Yu Chou, Academia Sinica (Taiwan)

Yi-Hsuan Yang, Academia Sinica (Taiwan)

Session WP-01

Overview Session 1

Type: Overview

Venue: Ballroom A

Wednesday - 13 December

Time: 1400 - 1540

Chairs:

Eliathamby Ambikairajah, University of New South Wales (Australia)

Yukihiro Bandoh, NTT Corporation (Japan)

WP-01.1 @ 14:00

460 Augmented Visualization: Observing as Desired

Shohei Mori, Keio University (Japan)

Hideo Saito, Keio University (Japan)

WP-01.2 @ 14:30

462 QoE-estimation Models for Video Streaming Services

Kazuhisa Yamagishi, NTT (Japan)

WP-01.3 @ 15:00

472 Trends in Efficient Representation of 3D Point Clouds

Kazuo Sugimoto, Mitsubishi Electric Corporation (Japan)

Robert A. Cohen, Mitsubishi Electric Research Laboratories, Cambridge (USA)

Dong Tian, Mitsubishi Electric Research Laboratories, Cambridge (USA)

Anthony Vetro, Mitsubishi Electric Research Laboratories, Cambridge (USA)

Session WP-02

Recent Advances in Signal Processing Application with Internet of Things (IoT) and Industrial IoT (Industry 4.0)

Type: Special Session

Venue: Ballroom B

Wednesday – 13 December

Time: 1400 – 1540

Chairs:

Yiqi Tew, Tunku Abdul Rahman University College (Malaysia)

Wah Pheng Lee, Tunku Abdul Rahman University College (Malaysia)

WP-02.1 @ 14:00

122 Time-Domain Subsampling and Reconstruction for Microphone Array

Yohei Kawaguchi, Hitachi, Ltd. (Japan)

Ryoichi Takashima, Hitachi Ltd. (Japan)

Takashi Endo, Hitachi, Ltd. (Japan)

Masahito Togami, Hitachi, Ltd. (Japan)

WP-02.2 @ 14:20

415 A Study on Enhanced Educational Platform with Adaptive Sensing Devices using IoT Features

Yiqi Tew, Tunku Abdul Rahman University College (Malaysia)

Tiong Yew Tang, Tunku Abdul Rahman University College (Malaysia)

Yoon Ket Lee, Tunku Abdul Rahman University College (Malaysia)

WP-02.3 @ 14:40

416 Real Time Image Processing Based Obstacle Avoidance and Navigation System for Autonomous Wheelchair Application

Yoon Ket Lee, Tunku Abdul Rahman University College (Malaysia)

Jay Ming Lim, Tunku Abdul Rahman University College (Malaysia)

Kok Seng Eu, Tunku Abdul Rahman University College (Malaysia)

Yeh Huann Goh, Tunku Abdul Rahman University College (Malaysia)

Yiqi Tew, Tunku Abdul Rahman University College (Malaysia)

WP-02.4 @ 15:00

445 Automated Classroom Monitoring with Connected Visioning System

Jian Han Lim, Tunku Abdul Rahman University College (Malaysia)

Eng Yeow Teh, Tunku Abdul Rahman University College (Malaysia)

Ming Han Geh, Tunku Abdul Rahman University College (Malaysia)

Chern Hong Lim, Tunku Abdul Rahman University College (Malaysia)

WP-02.5 @ 15:20

16 Techniques for Overheating Detection and Sensor Allocation in a Real Dual-Core Processor

Xin Li, Northwestern Polytechnical University (China)

Xueting Wei, Northwestern Polytechnical University (China)

Wei Zhou, Northwestern Polytechnical University (China)

Zheming Duan, Northwestern Polytechnical University (China)

Session WP-03

Towards Human-Robot Collaboration: Enabling Technologies, Interfaces, Learning and Interaction (Part 2)

Type: Special Session

Venue: Tactic 1

Wednesday – 13 December

Time: 1400 – 1540

Chairs:

Ayşe Küçükylmaz, Yeditepe University (Turkey)

Dimitri Ognibene, Universitat Pompeu Fabra (Spain)

Qinyuan Ren, Zhejiang University (China)

Yan Wu, Institute for Infocomm Research (Singapore)

WP-03.1 @ 14:00

157 A Perception System for Robot Arms To Convey Objects To In-Car Passengers

Li Jun, Institute for Infocomm Research (Singapore)

Tee Keng Peng, Institute for Infocomm Research (Singapore)

Chen Lawrence, Institute for Infocomm Research (Singapore)

Wan Kong Wah, Institute for Infocomm Research (Singapore)

Yau Wei Yun, Institute for Infocomm Research (Singapore)

WP-03.2 @ 14:20

198 Motion Planning of a 6-Dofs Robot Arm for Bandaging Nursing Task

Yi Feng, Guangdong University of Technology (China)

Zhifeng Huang, Guangdong University of Technology (China)

Yun Zhang, Guangdong University of Technology (China)

WP-03.3 @ 14:40

254 Locomotion Control of a Serpentine Crawling Robot Inspired by Central Pattern Generators

Jiadong Wang, Zhejiang University (China)

Wenjuan Ouyang, Zhejiang University (China)

Wenchao Gao, Institute for Infocomm Research, Agency for Science, Technology and Research (Singapore)

Qinyuan Ren, Zhejiang University (China)

WP-03.4 @ 15:00

363 Towards Event-Based MCTS for Autonomous Cars

Nicola Catenacci Volpi, University of Hertfordshire (UK)

Yan Wu, Institute for Infocomm Research (Singapore)

Dimitri Ognibene, Universitat Pompeu Fabra (Spain)

WP-03.5 @ 15:20

119 Analysis of Efficient Multimodal Features for Estimating User's Willingness to Talk: Comparison of Human-Machine and Human-Human Dialog

Yuya Chiba, Tohoku University (Japan)

Takashi Nose, Tohoku University (Japan)

Akinori Ito, Tohoku University (Japan)

Session WP-04

Recent developments in theory and applications of fractional and sparse signal processing (Part 2)

Type: Special Session

Venue: Tactic 2

Wednesday - 13 December

Time: 1400 - 1540

Chairs:

Ran Tao, Beijing Institute of Technology (China)

Bing-Zhao Li, Beijing Institute of Technology (China)

WP-04.1 @ 14:00

152 Sparse-based Disturbance Cancellation Approach for Passive Radar

Xia Bai, Beijing Institute of Technology (China)

Jiatong Han, Beijing Institute of Technology (China)

Juan Zhao, Beijing Institute of Technology (China)

WP-04.2 @ 14:20

250 An Improved Orthogonal Matching Pursuit Based on Randomly Enhanced Adaptive Subspace Pursuit

Juan Zhao, Beijing Institute of Technology (China)

Xia Bai, Beijing Institute of Technology (China)

WP-04.3 @ 14:40

146 Residual Drum Sound Estimation for RPCA Singing Voice Extraction

Shiori Mikami, Osaka University (Japan)

Arata Kawamura, Osaka University (Japan)

Youji Iiguni, Osaka University (Japan)

WP-04.4 @ 15:00

432 Background Subtraction via Truncated Nuclear Norm Minimization

Hyeong gwon Kim, Yonsei University (Korea)

Yoonsik Choe, Yonsei University (Korea)

WP-04.5 @ 15:20

65 Sub-Nyquist Non-Uniform Sampling for Low-Cost Sound Monitoring

Yohei Kawaguchi, Hitachi, Ltd. (Japan)

Sandra Ramaswami, Hitachi, Ltd. (Japan)

Ryoichi Takashima, Hitachi Ltd. (Japan)

Takashi Endo, Hitachi, Ltd. (Japan)

Rintaro Ikeshita, Hitachi, Ltd. (Japan)

Session WP-05

Recent Topics on Active Control of Sound (Part 2)

Type: Special Session

Venue: Tactic 3

Wednesday - 13 December

Time: 1400 - 1540

Chairs:

Chuang Shi, University of Electronic Science and Technology of China (China)

WP-05.1 @ 14:00

401 Psychoacoustic Subband Active Noise Control Algorithm

Valiantsin Belyi, Nanyang Technological University (Singapore)

Woon Seng Gan, Nanyang Technological University (Singapore)

WP-05.2 @ 14:20

453 Effectiveness of Headrest ANC System with Virtual Sensing Technique for Factory Noise

Shun Hirose, Kansai University (Japan)

Yoshinobu Kajikawa, Kansai University (Japan)

WP-05.3 @ 14:40

461 Effect of the Audio Amplifier's Distortion on Feedforward Active Noise Control

Dongyuan Shi, Nanyang Technological University (Singapore)

Chuang Shi, University of Electronic Science and Technology of China (China)

Woon Seng Gan, Nanyang Technological University (Singapore)

WP-05.4 @ 15:00

46 A Frequency-Domain Adaptive Feedback Cancellation Algorithm Based on Convex Combination

Caixia Lu, University of Chinese Academy of Science (China)

Feiran Yang, University of Chinese Academy of Science (China)

Jun Yang, University of Chinese Academy of Science (China)

WP-05.5 @ 15:20

332 Abnormal Sound Detection by Two Microphones Using Virtual Microphone Technique

Kouei Yamaoka, University of Tsukuba (Japan)

Nobutaka Ono, National Institute of Informatics (Japan)

Shoji Makino, University of Tsukuba (Japan)

Takeshi Yamada, University of Tsukuba (Japan)

Session WP-06

Speech enhancement and segmentation based on CASA and machine learning (Part 2)

Type: Special Session

Venue: Tactic 4

Wednesday – 13 December

Time: 1400 – 1540

Chairs:

Waleed H. Abdullah, University of Auckland (New Zealand)

WP-06.1 @ 14:00

20 Signal Power Estimation Based on Convex Optimization for Speech Enhancement

Feng Bao, University of Auckland (New Zealand)

Waleed H. Abdulla, University of Auckland (New Zealand)

WP-06.2 @ 14:20

358 LSTM-Based Iterative Mask Estimation and Post-Processing for Multi-Channel Speech Enhancement

Yan-Hui Tu, University of Science and Technology of China (China)

Jun Du, University of Science and Technology of China (China)

Lei Sun, University of Science and Technology of China (China)

Chin-Hui Lee, Georgia Institute of Technology (USA)

WP-06.3 @ 14:40

97 A New Data-driven Band-weighting Function for Predicting the Intelligibility of Noise-suppressed Speech

Zexin Liu, Southern University of Science and Technology (China)

Heather T. Ma, Harbin Institute of Technology Shenzhen Graduate School (China)

Fei Chen, Southern University of Science and Technology (China)

WP-06.4 @ 15:00

311 Speaker Recognition with Cough, Laugh and “Wei”

Miao Zhang, Tsinghua University (China)

Yixiang Chen, Tsinghua University (China)

Lantian Li, Tsinghua University (China)

Dong Wang, Tsinghua University (China)

WP-06.5 @ 15:20

165 Robust Children and Adults Speech Identification and Confidence Measure Based on DNN Posteriorgram

Hosana Kamiyama, NTT (Japan)

Atsushi Ando, NTT (Japan)

Satoshi Kobashikawa, NTT (Japan)

Yushi Aono, NTT Corporation (Japan)

Session WP-07

Recent Advances in Video Coding and Transmission

Type: Special Session

Venue: Tactic 5

Wednesday – 13 December

Time: 1400 – 1540

Chairs:

Huihui Bai, Beijing Jiaotong University (China)

Anhong Wang, Taiyuan University of Science and Technology (China)

Ce Zhu, University of Electronic Science & Technology of China (China)

WP-07.1 @ 14:00

319 Visual Attention Guided Eye Movements for 360 Degree Images

Feng Li, Beijing Jiaotong University (China)

Huihui Bai, Beijing Jiaotong University (China)

Yao Zhao, Beijing Jiaotong University (China)

WP-07.2 @ 14:20

361 Random Aliasing Modulation with Decision-Directed Demodulation

Cairong Xing, Taiyuan University of Science and Technology (China)

Anhong Wang, Taiyuan University of Science and Technology (China)

Suyue Li, Taiyuan University of Science and Technology (China)

Peihao Li, Taiyuan University of Science and Technology (China)

Jing Zhang, Taiyuan University of Science and Technology (China)

WP-07.3 @ 14:40

391 Enhancing Wedgelet-based Depth Modeling in 3D-HEVC

Chang Duan, University of Electronic Science and Technology of China (China)

Yuhuan Shen, University of Electronic Science and Technology of China (China)

Yingying Zhang, University of Electronic Science and Technology of China (China)

Shuai Wang, University of Electronic Science and Technology of China (China)

Ce Zhu, University of Electronic Science and Technology of China (China)

Meng Yang, Xi'an Jiaotong University (China)

WP-07.4 @ 15:00

435 A New Intra Prediction Method Based on Consistent Luminance Changes

Xiaoqiang Cao, University of Electronic Science & Technology of China (China)

Ce Zhu, University of Electronic Science & Technology of China (China)

Minjie Yang, University of Electronic Science & Technology of China (China)

Yongbing Lin, HiSilicon Technologies Co. Ltd. (China)

Jianhua Zheng, HiSilicon Technologies Co. Ltd. (China)

WP-07.5 @ 15:20

30 Collagen Image Compression Using the JPEG-based Predictive Lossless Coding Scheme

Szu-Wei Fu, National Taiwan University (Taiwan)

Jian-Jiun Ding, National Taiwan University (Taiwan)

Ying-Wun Huang, National Taiwan University (Taiwan)

Ching-Wen Hsiao, National Taiwan University (Taiwan)

Hsin-Hui Chen, National Taiwan University (Taiwan)

Session WP-08

Computer Vision

Type: Regular Session

Venue: Tactic 6

Wednesday – 13 December

Time: 1400 – 1540

Chairs:

Yo-Sung Ho, Gwangju Institute of Science and Technology, (South Korea)

Chee Seng Chan, University Malaya (Malaysia)

WP-08.1 @ 14:00

54 Micro-expression Recognition using Apex Frame with Phase Information

Sze Teng Liong, Xiamen University

KokSheik Wong, Monash University Malaysia

WP-08.2 @ 14:20

105 Detection of Meaningful Line Segment Configurations

Jierong Cheng, A*STAR Institute for Infocomm Research (Singapore)

Wei Xiong, A*STAR Institute for Infocomm Research (Singapore)

Jia Du, A*STAR Institute for Infocomm Research (Singapore)

Wenyu Chen, A*STAR Institute for Infocomm Research (Singapore)

Ying Gu, A*STAR Institute for Infocomm Research (Singapore)

WP-08.3 @ 14:40

134 Disparity Map Refinement Method Using Coarse-to-Fine Image Segmentation

Jinyoung Jang, Gwangju Institute of Science and Technology (South Korea)

Dong Won Shin, Gwangju Institute of Science and Technology (South Korea)

Yo-Sung Ho, Gwangju Institute of Science and Technology (South Korea)

WP-08.4 @ 15:00

199 Local Patch Descriptor Using Deep Convolutional Generative Adversarial Network for Loop Closure Detection in SLAM

Dong Won Shin, Gwangju Institute of Science and Technology (South Korea)

Yo-Sung Ho, Gwangju Institute of Science and Technology (South Korea)

WP-08.5 @ 15:20

368 Exploring Confusing Scene Classes for the Places Dataset: Insights and Solutions

Chen Chen, University of Southern California (USA)

Shangwen Li, University of Southern California (USA)

Xiang Fu, University of Southern California (USA)

Yuzhuo Ren, University of Southern California (USA)

Yueru Chen, University of Southern California (USA)

C.-C. Jay Kuo, University of Southern California (USA)

Poster Session 2

Voice/Audio and Language Processing

Type: Regular Session

Wednesday – 13 December

Venue: Level 3-Foyer

Time: 1400 – 1540

Chairs:

Yoshinobu Kajikawa, Kansai University (Japan)

Dennis Wong Mou Ling, Herold Watt (Malaysia)

WP-P2.1

48 On the Convergence of INCA Algorithm

Nirmesh Shah, Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT) (India)

Hemant Patil, Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT) (India)

WP-P2.2

63 Combining Evidences from Detection Sources for Query-by-Example Spoken Term Detection

Maulik Madhavi, Dhirubhai Ambani Institute of Information and Communication Technology (India)

Hemant Patil, DAICT, Gujrat (India)

WP-P2.3

68 Compressed High Dimensional Features for Speaker Spoofing Detection

Yuanjun Zhao, The University of Western Australia (Australia)

Roberto Togneri, The University of Western Australian (Australia)

Victor Sreeram, University of Western Australia (Australia)

WP-P2.4

98 Importance of Non-Uniform Prosody Modification for Speech Recognition in Emotion Conditions

Vishnu Vidyadhara Vegesna, International Institute of Information Technology Hyderabad (India)

Hari Krishna Vydana, International Institute of Information Technology Hyderabad (India)

Prof. Suryakanth V Gangashetty, International Institute of Information Technology Hyderabad (India)

Anil Vuppala, International Institute of Information Technology Hyderabad (India)

WP-P2.5

110 Perceptual Evaluation of Singing Quality

Chitrallekha Gupta, National University of Singapore (Singapore)

Haizhou Li, National University of Singapore (Singapore)

Ye Wang, National University of Singapore (Singapore)

WP-P2.6

137 Experimental Study on Source-Filter Interaction Using Physical Model of The Vocal Folds

Kishin Migimatsu, Ritsumeikan University (Japan)

Takuya Wakazono, Ritsumeikan University (Japan)

Isao T. Tokuda, Ritsumeikan University (Japan)

WP-P2.7

185 Fast Locally Linear Embedding Algorithm for Exemplar-based Voice Conversion

Yu-Huai Peng, National Tsing Hua University (Taiwan)

Chin-Cheng Hsu, Institute of Information Science, Academia Sinica (Taiwan)

Yi-Chiao Wu, Academia Sinica (Taiwan)

Hsin-Te Hwang, Institute of Information Science, Academia Sinica (Taiwan)

Yi-Wen Liu, National Tsing Hua University (Taiwan)

Yu Tsao, Academia Sinica (Taiwan)

Hsin-Min Wang, Academia Sinica (Taiwan)

WP-P2.8

258 DNN-based Feature Transformation for Speech Recognition Using Throat Microphone

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

WP-P2.9

262 Robust i-Vector Extraction Tightly Coupled with Voice Activity Detection Using Deep Neural Networks

Hitoshi Yamamoto, NEC Corporation (Japan)
Koji Okabe, NEC Corporation (Japan)
Takafumi Koshinaka, NEC Corporation (Japan)

WP-P2.10

273 Plastic Multi-Resolution Auditory Model Based Neural Network for Speech Enhancement

Chen-Yen Lai, National Chiao Tung University (Taiwan)
Yu-Wen Lo, National Chiao Tung University (Taiwan)
Yih-Liang Shen, National Chiao Tung University (Taiwan)
Tai-Shih Chi, National Chiao Tung University (Taiwan)

WP-P2.11

339 Electrolaryngeal Speech Modification towards Singing Aid System for Laryngectomees

Kazuho Morikawa, Nagoya University (Japan)
Tomoki Toda, Nagoya University (Japan)

WP-P2.12

67 Topic Classification Based on Distributed Document Representation and Latent Topic Information

Peixin Chen, University of Science and Technology of China (China)
Wu Guo, University of Science and Technology of China (China)
Qingnan Wang, University of Science and Technology of China (China)
Yan Song, University of Science and Technology of China (China)

WP-P2.13

84 Exploiting Imbalanced Textual and Acoustic Data for Training Prosodically-enhanced RNNLMs

Michael Hentschel, Nara Institute of Science and Technology (Japan)
Atsunori Ogawa, NTT Communication Science Laboratories (Japan)
Marc Delcroix, NTT Communication Science Laboratories (Japan)
Tomohiro Nakatani, NTT Communication Science Laboratories (Japan)
Yuji Matsumoto, Nara Institute of Science and Technology (Japan)

WP-P2.14

114 Feedforward Sequential Memory Networks based Encoder-Decoder Model for Machine Translation

Junfeng Hou, University of Science and Technology of China (China)
Shiliang Zhang, University of Science and Technology of China (China)
Lirong Dai, University of Science and Technology of China (China)
Hui Jiang, York University (Canada)

WP-P2.15

244 A Study of High Level Tone in Standard Chinese Produced by Prelingual Deaf Adults

Yu Chen, Tianjin University of Technology (China)
Yanting Chen, Tianjin University of Technology (China)
Hua Lin, University of Victoria (Canada)
Jie Hou, Tianjin University of Technology (China)
Yutong Xing, Tianjin University of Technology (China)
Jianwu Dang, Tianjin University (China)

WP-P2.16

255 Energy Distribution Analysis and Nonlinear Dynamical Analysis of Phonation in Patients with Parkinson's Disease

Hao Zhang, Shenzhen Institutes of Advanced Technology (China)

Nan Yan, Shenzhen Institutes of Advanced Technology (China)
Lan Wang, Institutes of Advanced Technology (China)
Manwa Ng, University of Hong Kong (China)

WP-P2.17

357 A Study on Landmark Detection Based on CTC and Its Application to Pronunciation Error Detection

Chuanying Niu, Beijing Language and Culture University (China)
Jinsong Zhang, Beijing Language and Culture University (China)
Xuesong Yang, University of Illinois at Urbana-Champaign (USA)
Yanlu Xie, Beijing Language and Culture University (China)

WP-P2.18

412 Investigating Siamese LSTM Networks for Text Categorization

Chin-Hong Shih, National Taiwan Normal University (Taiwan)
Bi-Cheng Yan, National Taiwan Normal University (Taiwan)
Shih-Hung Liu, Delta Research Center (Taiwan)
Berlin Chen, National Taiwan Normal University (Taiwan)

WP-P2.19

419 The Acoustic Characteristics of Tone 3 in Standard Chinese Produced by Prelingually Deaf Adults

Yu Chen, Tianjin University of Technology (China)
Jie Hou, Tianjin University of Technology (China)
Yutong Xing, Tianjin University of Technology (China)
Yanting Chen, Tianjin University of Technology (China)
Hua Lin, University of Victoria (Canada)
Jianwu Dang, Tianjin University (China)

WP-P2.20

270 Dynamic semantic boundary detection for speech translation

Nina Zhou, Institute for Inforcomm Research (Singapore)
Xuancong Wang, Institute for Inforcomm Research (Singapore)
AiTi Aw, Institute for Inforcomm Research (Singapore)

Session TA-01

Artificial Intelligence Approaches to Visual Understanding

Type: Special Session

Venue: Ballroom A

Thursday - 14 December

Time: 1100 - 1240

Chairs:

Jing-Ming Guo, National Taiwan University of Science and Technology (Taiwan)

Hsueh-Ming Hang, National Chiao Tung University (Taiwan)

TA-01.1 @ 11:00

362 FasterMDNet: Learning Model Adaptation by RNN in Tracking-by-Detection based Visual Tracking

Hung-Wei Hsu, National Taiwan University (Taiwan)

Jian-Jiun Ding, National Taiwan University (Taiwan)

TA-01.2 @ 11:20

458 Efficient CTU-based Intra Frame Coding for HEVC Based on Deep Learning

Zheng-Teng Zhang, National Sun Yat-sen University (Taiwan)

Chia-Hung Yeh, National Sun Yat-sen University (Taiwan)

Li-Wei Kang, National Yunlin University of Science and Technology (Taiwan)

Min-Hui Lin, National Sun Yat-sen University (Taiwan)

TA-01.3 @ 11:40

467 Multimodal Decomposition for Enhanced Subtle Emotion Recognition

Zun-Ci Lee, Multimedia University (Malaysia)

Raphael Phan, Multimedia University (Malaysia)

Su-Wei Tan, Multimedia University (Malaysia)

Kuan-Heng Lee, Motorola (Malaysia)

TA-01.4 @ 12:00

469 Enhanced Block Truncation Coding Image using Digital Multitone Screen

Jing-Ming Guo, National Taiwan University of Science and Technology (Taiwan)

Sankarasrinivasan Seshathiri, National Taiwan University of Science and Technology (Taiwan)

TA-01.5 @ 12:20

22 Detection of Sculpted Faces on Building Facades

Gayane Shalunts, Sail Labs Technology GmbH (Austra)

Martin Cerman, Anyline GmbH (Austra)

Daniel Albertini, Anyline GmbH (Austra)

Session TA-02

Recent Advances in Deep Learning with Applications (Part 1)

Type: Special Session

Venue: Ballroom B

Thursday - 14 December

Time: 1100 - 1240

Chairs:

Li-Wei Kang, National Yunlin University of Science and Technology (Taiwan)

Wen Huang Cheng, Academia Sinica (Taiwan)

Yuichi Nakamura, NEC Corp (Japan)

Jia-Ching Wang, National Central University (Taiwan)

TA-02.1 @ 11:00

12 A Deep Learning Approach to Drone Monitoring

Yueru Chen, University of Southern California (USA)

Pranav Aggarwal, University of Southern California (USA)

Jongmoo Choi, University of Southern California (USA)

C.-C. Jay Kuo, University of Southern California (USA)

TA-02.2 @ 11:20

18 Stop Line Detection and Distance Measurement for Road Intersection based on Deep Learning Neural Network

Guan-Ting Lin, National Chiao Tung University (Taiwan)

Patrisia Sherryl Santoso, Industrial Technology Research Institute (Taiwan)

Che-Tsung Lin, Industrial Technology Research Institute (Taiwan)

Chia-Chi Tsai, National Chiao Tung University (Taiwan)

Jiun-In Guo, National Chiao Tung University (Taiwan)

TA-02.3 @ 11:40

130 Future Trend of Deep Learning Frameworks - From the perspective of Big Data analytics and HPC -

Takuya Araki, NEC (Japan)

Yuichi Nakamura, NEC (Japan)

TA-02.4 @ 12:00

206 Speech Emotion Recognition Based on Multi-Task Learning Using a Convolutional Neural Network

Nam Kyun Kim, Gwangju Institute of Science and Technology (South Korea)

Jiwon Lee, Gwangju Institute of Science and Technology (South Korea)

Hun Kyu Ha, Acryl (South Korea)

Geon Woo Lee, Gwangju Institute of Science and Technology (South Korea)

Jung Hyuk Lee, Gwangju Institute of Science and Technology (South Korea)

Hong Kook Kim, Gwangju Institute of Science and Technology (South Korea)

TA-02.5 @ 12:20

402 Robust Template Matching Using Scale-Adaptive Deep Convolutional Features

Jonghee Kim, KAIST (South Korea)

Jinsu Kim, KAIST (South Korea)

Seokeon Choi, KAIST (South Korea)

Muhammad Hasan, KAIST (South Korea)

Changik Kim, KAIST (South Korea)

Session TA-03

Recent Progress on Human Computer/Machine Interface (HCI/HMI) and its Applications

Type: Special Session

Venue: Tactic 1

Thursday - 14 December

Time: 1100 - 1240

Chairs:

Sung Chan Jun, Gwangju Institute of Science and Technology (South Korea)

Sung-Phil Kim, Ulsan National Institute of Science and Technology (South Korea)

TA-03.1 @ 11:00

231 Development of A Multi-Modal Personal Authentication Interface

Sung-Phil Kim, Ulsan National Institute of Science and Technology (South Korea)

Jae-Hwan Kang, Ulsan National Institute of Science and Technology (South Korea)

Young Chang Jo, Korea Electronics Technology Institute (South Korea)

Ian Oakley, Ulsan National Institute of Science and Technology (South Korea)

TA-03.2 @ 11:20

317 A Drag-and-Drop Type Human Computer Interaction Technique Based on Electrooculogram

Shohei Oogai, Tokyo University of Agriculture and Technology (Japan)

Toshihisa Tanaka, Tokyo University of Agriculture and Technology (Japan)

TA-03.3 @ 11:40

448 Hybrid EEG-NIRS Brain-Computer Interface Under Eyes-Closed Condition

Jaeyoung Shin, Hanyang University (South Korea)

Klaus-Robert Müller, Technische Universität Berlin (Germany)

Han-Jeong Hwang, Kumoh National Institute of Technology (South Korea)

TA-03.4 @ 12:00

454 Simultaneous Bio-signal Measurement System for Multiple Users - Development and Validation

Sunghan Lee, Gwangju Institute of Science and Technology (South Korea)

Hohyun Cho, Gwangju Institute of Science and Technology (South Korea)

Sung Chan Jun, Gwangju Institute of Science and Technology (South Korea)

TA-03.5 @ 12:20

367 Voichap: A Standalone Voice Change Application in IOS Platform

Xiaoling Wu, National University of Singapore (Singapore)

Shuhua Gao, National University of Singapore (Singapore)

Dongyan Huang, Institute for Infocomm Research (Singapore)

Cheng Xiang, National University of Singapore (Singapore)

Session TA-04

Multilingual Speech and Language Processing for Minority Languages (Part 1)

Type: Special Session

Venue: Tactic 2

Thursday – 14 December

Time: 1100 – 1240

Chairs:

Dong Wang, Tsinghua University (China)

Guanyu Li, Northwest Minzu University (China)

Mijit Ablimit, Xinjiang University (China)

TA-04.1 @ 11:00

142 Free Linguistic and Speech Resources for Tibetan

Guanyu Li, Northwest Minzu University (China)

Hongzhi Yu, Northwest Minzu University (China)

Thomas Fang Zheng, CSLT, Tsinghua University (China)

Jinghao Yan, Northwest Minzu University (China)

Shipeng Xu, Northwest Minzu University (China)

TA-04.2 @ 11:20

177 A Multilingual Language Processing Tool for Uyghur, Kazak and Kirghiz

Mijit Ablimit, Xinjiang University (China)

Sardar Parhat, Xinjiang University (China)

Askar Hamdulla, Xinjiang University (China)

Thomas Fang Zheng, CSLT, Tsinghua University (China)

TA-04.3 @ 11:40

230 Language Resource Construction for Mongolian

Shipeng Xu, Northwest Minzu University (China)

Hongzhi Yu, Northwest Minzu University (China)

Thomas Fang Zheng, CSLT, Tsinghua University (China)

Guanyu Li, Northwest Minzu University (China)

Gegeentana, Northwest Minzu University (China)

TA-04.4 @ 12:00

256 A Free Kazakh Speech Database and a Speech Recognition Baseline

Ying Shi, Tsinghua University (China)

Askar Hamdulla, Xinjiang University (China)

Zhiyuan Tang, Tsinghua University (China)

Dong Wang, Tsinghua University (China)

Thomas Fang Zheng, CSLT, Tsinghua University (China)

TA-04.5 @ 12:20

283 AP17-OLR Challenge: Data, Plan, and Baseline

Zhiyuan Tang, Tsinghua University (China)

Dong Wang, Tsinghua University (China)

Yixiang Chen, Tsinghua University (China)

Qing Chen, SpeechOcean (China)

Session TA-05

Use of Signal/Image Processing Techniques for Computational Biology and Medical Applications (Part 1)

Type: Special Session

Venue: Tactic 3

Thursday – 14 December

Time: 1100 – 1240

Chairs:

Bonnie Ngai-Fong Law, The Hong Kong Polytechnic University (China)

TA-05.1 @ 11:00

81 Portable Vision Screenings System

Yuen Lok Lin, The Hong Kong Polytechnic University (China)

Ngai-Fong Law, The Hong Kong Polytechnic University (China)

Chi-wai Do, The Hong Kong Polytechnic University (China)

TA-05.2 @ 11:20

111 Compressing Population DNA Sequences using Multiple Reference Sequences

Kin-On Cheng, The Hong Kong Polytechnic University (China)

Ngai-Fong Law, The Hong Kong Polytechnic University (China)

Wan-Chi Siu, The Hong Kong Polytechnic University (China)

TA-05.3 @ 11:40

163 Lung Sound Classification based on Hilbert-Huang Transform Features and Multilayer Perceptron Network

Yun-Xia Liu, University of Jinan (China)

Yang Yang, Shandong University (China)

Yue-Hui Chen, University of Jinan (China)

TA-05.4 @ 12:00

164 Automatic Detection of Circulating Tumor Cells based on Microscopic Images

Yun-Xia Liu, University of Jinan (China)

Yang Yang, Shandong University (China)

Yue-Hui Chen, University of Jinan (China)

TA-05.5 @ 12:20

286 A Markerless Visual-motor Tracking System for Behavior Monitoring in DCD Assessment

Shenyan Li, Chu Hai College of Higher Education (Hong Kong)

Bin Li, Chu Hai College of Higher Education (Hong Kong)

Shixiong Zhang, Chu Hai College of Higher Education (Hong Kong)

Hong Fu, Chu Hai College of Higher Education (Hong Kong)

Wai-Lun Lo, Chu Hai College of Higher Education (Hong Kong)

Jie Yu, The Chinese University of Hong Kong (Hong Kong)

Cindy H. P. Sit, The Chinese University of Hong Kong (Hong Kong)

Ruimin Li, Chu Hai College of Higher Education (Hong Kong)

Session TA-06

New Perspectives in Signal Processing for Hearing Devices: Combining Neural and Psychophysical Factors

Type: Special Session

Venue: Tactic 4

Thursday – 14 December

Time: 1100 – 1240

Chairs:

Chin-Tuan Tan, University of Texas at Dallas (USA)

Nai Ding, Zhejiang University (China)

TA-06.1 @ 11:00

95 Perceptual Roles of Temporal and Segmentation Cues in Single-Channel Noise Reduction Processing

Lei Wang, Southern University of Science and Technology (China)

Zexin Liu, Southern University of Science and Technology (China)

Fei Chen, Southern University of Science and Technology (China)

TA-06.2 @ 11:20

187 Improving Speech Intelligibility for Bilateral Cochlear Implant Users Using Weiner Filters and Its Impact on Cognitive Load

Alan Kan, University of Wisconsin-Madison (USA)

TA-06.3 @ 11:40

229 Electrically-Evoked Frequency Following Responses (EFFRs) and Electrically-Evoked Auditory Brainstem Responses (EABRs) in Guinea Pigs

Chen Jing, Peking University (China)

Zhen Fu, Peking University (China)

Xiuyong Ding, Capital Medical University (China)

Jiping Wu, Peking University (China)

Xihong Wu, Peking University (China)

TA-06.4 @ 12:00

340 Objective Neurophysiological Assessment for Sound Quality Perception by Hearing-Impaired Listeners

Rebecca Millman, University of Manchester (UK)

Michael Stone, University of Manchester (UK)

Chin-Tuan Tan, University of Texas at Dallas (USA)

TA-06.5 @ 12:20

341 Deep Learning Noise Reduction Approach to Improve Speech Intelligibility for Cochlear Implant Recipients in the Presence of Competing Speech Noise

Syu-Siang Wang, Academia Sinica (Taiwan)

Yu Tsao, Academia Sinica (Taiwan)

Hsiao-Lan Sharon Wang, National Taiwan Normal University (Taiwan)

Ying-Hui Lai, National Yang-Ming University (Taiwan)

Lieber Po-Hung Li, Cheng Hsin General Hospital (Taiwan)

Session TA-07

Signal Processing Methods and Algorithms for Next Generation Communications Systems

Type: Special Session

Venue: Tactic 5

Thursday - 14 December

Time: 1100 - 1240

Chairs:

Shang-Ho (Lawrence) Tsai, National Chiao Tung University (Taiwan)

Pei-Yun Tsai, National Central University (Taiwan)

TA-07.1 @ 11:00

135 Resource Allocation and Minimum Rate for Precoded Non-orthogonal Multiple Access

Chih-Chiang Chen, National Chiao Tung University (Taiwan)

Shang-Ho Tsai, National Chiao Tung University (Taiwan)

Yuan-Pei Lin, National Chiao Tung University (Taiwan)

Chia-Hua Lin, National Chiao Tung University (Taiwan)

TA-07.2 @ 11:20

295 MSE-Optimized CP-Based CFO Estimation in OFDM Systems over Multipath Channels

Tzu-Chiao Lin, National Taiwan University (Taiwan)

See-May Phoong, National Taiwan University (Taiwan)

TA-07.3 @ 11:40

312 Successive MMSE Group Decoding and Max-Min Power Control for Uplink Multicell NOMA Systems under Pilot Contamination

Y.-W. Peter Hong, National Tsing Hua University (Taiwan)

An-An Lee, National Tsing Hua University (Taiwan)

Yu-An Chen, National Tsing Hua University (Taiwan)

TA-07.4 @ 12:00

350 Trellis Coded Generalized Spatial Modulation with Spatial Multiplexing

Syu-Siang Long, National Central University (Taiwan)

Pei-Yun Tsai, National Central University (Taiwan)

Yuan-Hao Huang, National Tsing Hua University (Taiwan)

I-Wei Lai, National Taiwan Normal University (Taiwan)

TA-07.5 @ 12:20

375 Low-Complexity Zero-Forcing Detector for large-scale MIMO-OFDM systems

Chia-Yang Mei, National Sun-Yat Sen University (Taiwan)

Wan-Jen Huang, National Sun-Yat Sen University (Taiwan)

Session TA-08

Multimedia Security and Forensics (Part 1)

Type: Special Session

Venue: Tactic 6

Thursday – 14 December

Time: 1100 – 1240

Chairs:

Xiangui Kang, Sun Yat-sen University (China)

KokSheik Wong, Monash University Malaysia (Malaysia)

TA-08.1 @ 11:00

201 A New Detector for JPEG Decompressed Bitmap Identification

Yanhong Wu, Beijing Jiaotong University (China)

Xiaolong Li, Beijing Jiaotong University (China)

Yao Zhao, Beijing Jiaotong University (China)

Rongrong Ni, Beijing Jiaotong University (China)

TA-08.2 @ 11:20

328 Block-DCT Based Alterable-Coding Restorable Fragile Watermarking Scheme with Superior Localization

Omer Hemida, Southwest Jiaotong University (China)

Yaoran Huo, Southwest Jiaotong University (China)

Fan Chen, Southwest Jiaotong University (China)

Hongjie He, Southwest Jiaotong University (China)

TA-08.3 @ 11:40

379 Robust Image Identification without any Visible Information for Double-Compressed JPEG Images

Kenta Iida, Tokyo Metropolitan University (Japan)

Hitoshi Kiya, Tokyo Metropolitan University (Japan)

TA-08.4 @ 12:00

383 Image Manipulation on Social Media for Encryption-then-Compression Systems

Tatsuya Chuman, Tokyo Metropolitan University (Japan)

Kenta Iida, Tokyo Metropolitan University (Japan)

Hitoshi Kiya, Tokyo Metropolitan University (Japan)

TA-08.5 @ 12:20

440 Detection and Classification of Malicious Patterns in Network Traffic Using Benford's Law

Liuying Sun, Wuhan University of Technology (China)

Anthony Ho, University of Surrey (UK)

Zhe Xia, Wuhan University of Technology (China)

Jiageng Chen, Central China Normal University (China)

Xuzhe Huang, Central China Normal University (China)

Yidan Zhang, Central China Normal University (China)

Poster Session 3

Signal Processing + Wireless Communication and Networking

Type: Special Session

Venue: Level 3-Foyer

Thursday – 14 December

Time: 1100 – 1240

Chairs:

Chung-Nan Lee, National Sun Yat-sen University (China)

David Chuah, University of Malaya (Malaysia)

TA-P3.1

374 Wavelet Scattering Transform for Variability Reduction in Cortical Potentials Evoked by Pitch Matched Electroacoustic Stimulation in Unilateral Cochlear Implant Patients

Mehrdad Heydarzadeh, University of Texas at Dallas (USA)

Sara Akbarzadeh, The University of Texas at Dallas (USA)

Chin-Tuan Tan, University of Texas at Dallas (USA)

TA-P3.2

72 On the Selection and Design of Filter Banks in Normalised Subband Adaptive Filters (NSAF)

John Håkon Husøy, University of Stavanger (Norway)

TA-P3.3

113 Between Homomorphic Signal Processing and Deep Neural Networks: Constructing Deep Algorithms for Polyphonic Music Transcription

Li Su, Academia Sinica (Taiwan)

TA-P3.4

212 Array Shape Calibration Using Near Field Pilot Sources with Unknown Distance

Soichiro Aoki, Meiji University (Japan)

Hiroki Tanji, Meiji University (Japan)

Takahiro Murakami, Meiji University (Japan)

TA-P3.5

226 Density-based Multi-Manifold ISOMAP for Data Classification

Xiangyuan Li, Northwest A&F University (China)

Cheng Cai, Northwest A&F University (China)

Jinrong He, Northwest A&F University (China)

TA-P3.6

267 Doubly Adaptive Kernel Filtering

Tomoya Wada, Tokyo University of Agriculture and Technology (Japan)

Toshihisa Tanaka, Tokyo University of Agriculture and Technology (Japan)

TA-P3.7

268 Active Enumeration of Local Minima for IIR Filter Design Using PSO

Kenzo Yamamoto, Tokyo Denki University (Japan)

Kenji Suyama, Tokyo Denki University (Japan)

TA-P3.8

381 A Fairness Aware and Resource Reuse Algorithm for LTE Layered Video Multicast Service

Chung-Nan Le, National Sun Yat-sen University (Taiwan)

Sheng-Wei Chu, National Sun Yat-sen University (Taiwan)

TA-P3.9

305 A study on Quantitative Computation for Prosodic Strength of Mandarin Speech

Wei Zhang, Beijing Language and Culture University (China)

Lixia Hao, Beijing Language and Culture University (China)

Yanlu Xie, Beijing Language and Culture University (China)
Jinsong Zhang, Beijing Language and Culture University (China)

TA-P3.10

396 Joint Estimation of Signal and Mutual Coupling Parameters Based on Spatially Spread Polarization Sensitive Array

Zihui Luo, University of Electronic Science and Technology of China (China)

TA-P3.11

88 Min-Max IIR Filter Design for Feedback Quantizers

Shuichi Ohno, Hiroshima University (Japan)
M. Rizwan Tariq, Hiroshima University (Japan)
Masaaki Nagahara, The University of Kitakyushu (Japan)

TA-P3.12

215 Diffusion LMS Using Consensus Propagation

Ayano Nakai, Kyoto University (Japan)
Kazunori Hayashi, Osaka City University (Japan)

TA-P3.13

101 Fast Electromagnetic Tracking Algorithms with Coplanar Transmitting Coil Array

Zhifei Li, Shenzhen Institutes of Advanced Technology (China)
Fengqi Yu, Shenzhen Institutes of Advanced Technology (China)
Lan Li, Shenzhen Institutes of Advanced Technology (China)

TA-P3.14

125 Enhanced Array Manifold Matrices for L-Shaped Microphone Array-based 2-D DOA Estimation

Bandhit Suksiri, Kochi University of Technology (Japan)
Masahiro Fukumoto, Kochi University of Technology (Japan)

TA-P3.15

236 Swallowing Function Evaluation Using Deep-Learning-Based Acoustic Signal Processing

Chisa Kodama, Gifu University (Japan)
Kunihito Kato, Gifu University (Japan)
Satoshi Tamura, Gifu University (Japan)
Satoru Hayamizu, Gifu University (Japan)

TA-P3.16

457 A Fast and Energy Efficient FPGA-Based System for Real-Time Object Tracking

Xiaobai Chen, Sun Yat-Sen University (China)
Jinglong Xu, Sun Yat-Sen University (China)
Zhiyi Yu, Sun Yat-Sen University (China)

TA-P3.17

78 Optimal Kernel in Kernel Regression Problems with Autocorrelation Prior

Yuuki Saito, Hokkaido University (Japan)
Akira Tanaka, Hokkaido University (Japan)

TA-P3.18

154 An Efficient Method for Adapting Step-size Parameters of Primal-dual Hybrid Gradient Method in Application to Total Variation Regularization

Tatsuya Yokota, Nagoya Institute of Technology (Japan)
Hidekata Hontani, Nagoya Institute of Technology (Japan)

TA-P3.19

218 Fo Estimation Using Empirical Mode Decomposition and Complex Cepstrum Analysis in Reverberant Environments

Surasak Boonkla, National Electronics and Computer Technology Center (Thailand)

Masashi Unoki, Japan Advanced Institute of Science and Technology (Japan)
Chai Wutiwiwatchai, National Electronics and Computer Technology Center (Thailand)
Stanislav S. Makhanov, Thammasat University (Thailand)

TA-P3.20

346 Construction of Semi-Markov Ergodic Maps with Selectable Spectral Characteristics via the Solution of the Inverse Eigenvalue Problem

Andre McDonald, Council of Scientific and Industrial Research (South Africa)

Anton van Wyk, University of the Witwatersrand (South Africa)

TA-P3.21

303 A New Pool Control Method for Boolean Compressed Sensing Based Adaptive Group Testing

Yujia Lu, Kyoto University (Japan)

Kazunori Hayashi, Osaka City University (Japan)

TA-P3.22

106 Defence Mechanisms Evaluation against RA Flood Attacks for Linux-Victim Node

Sam Kolahi, Unitec Institute of Technology (New Zealand)

Bashar Baramda, Unitec Institute of Technology (New Zealand)

Keysha Mudaliar, Unitec Institute of Technology (New Zealand)

Session TP-01

Overview Session 2

Type: Overview

Venue: Ballroom A

Thursday - 14 December

Time: 1400 - 1540

Chairs:

Sun Ming Ting, University of Washington (USA)

TP-01.1 @ 14:00

470 Automatic Meeting Transcription System for the Japanese Parliament (Diet)

Tatsuya Kawahara, Kyoto University (Japan)

TP-01.2 @ 14:30

471 Common Visual Pattern Discovery and Search

Zhenzhen Wang, Nanyang technological University (Singapore)

Jingjing Meng, Nanyang Technological University (Singapore)

Yu Tan, Nanyang Technological University (Singapore)

Junsong Yuan, Nanyang Technological University (Singapore)

TP-01.3 @ 15:00

473 Online Unsupervised Kernel Learning Algorithms

Anthony Kuh, University of Hawaii (USA)

Mohammad Sharif Uddin, University of Hawaii (USA)

Phyllis Ng, University of Hawaii (USA)

Session TP-02

Recent Advances in Deep Learning with Applications (Part 2)

Type: Special Session

Venue: Ballroom B

Thursday - 14 December

Time: 1400 - 1540

Chairs:

Li-Wei Kang, National Yunlin University of Science and Technology (Taiwan)

Wen-Huang Cheng, Academia Sinica (Taiwan)

Yuichi Nakamura, NEC (Japan)

Jia-Ching Wang, National Central University (Taiwan)

TP-02.1 @ 14:00

86 Multi-Query Image Retrieval using CNN and SIFT Features

Shiuan Huang, National Chiao Tung University (Taiwan)

Hsueh-Ming Hang, National Chiao Tung University (Taiwan)

TP-02.2 @ 14:20

51 Understanding Multi-layer Perceptrons on Spatial Image Steganalysis Features

Lilei Zheng, Institute for Infocomm Research (Singapore)

Ying Zhang, Institute for Infocomm Research (Singapore)

Vrizlynn Thing, Institute for Infocomm Research (Singapore)

TP-02.3 @ 14:40

334 Cross-lingual Speaker Verification with Deep Feature Learning

Lantian Li, Tsinghua University (China)

Dong Wang, Tsinghua University (China)

Askar Rozi, Tsinghua University (China)

Thomas Fang Zheng, Cslt, Tsinghua University (China)

TP-02.4 @ 15:00

444 Accelerating Deep Learning by Binarized Hardware

Shinya Takamaeda, Hokkaido University (Japan)

Kodai Ueyoshi, Hokkaido University (Japan)

Kota Ando, Hokkaido University (Japan)

Ryota Uematsu, Hokkaido University (Japan)

Kazutoshi Hirose, Hokkaido University (Japan)

Masayuki Ikebe, Hokkaido University (Japan)

Tetsuya Asai, Hokkaido University (Japan)

Masato Motomura, Hokkaido University (Japan)

TP-02.5 @ 15:20

7 Understanding CNN via Deep Features Analysis

Hao Xu, University of Southern California (USA)

Yueru Chen, University of Southern California (USA)

Ruiyuan Lin, University of Southern California (USA)

C.-C. Jay Kuo, University of Southern California (USA)

Session TP-03

Intelligent Autonomous Driving Systems and IoT driven Applications

Type: Special Session

Venue: Tactic 1

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Li-Wei Kang, National Yunlin University of Science and Technology (Taiwan)

Min Chun Hu, National Cheng Kung University (Taiwan)

Yuichi Nakamura, NEC Corp (Japan)

Jia-Ching Wang, National Central University (Taiwan)

TP-03.1 @ 14:00

49 A Multiple-Lane Vehicle Tracking Method for Forward Collision Warning System Applications

Yuan-Fu Li, National Chiao Tung University (Taiwan)

Chia-Chi Tsai, National Chiao Tung University (Taiwan)

Yi-Ting Lai, National Chiao Tung University (Taiwan)

Jiun-In Guo, National Chiao Tung University (Taiwan)

TP-03.2 @ 14:20

333 Highly-Distributed Sensor Processing using IoT for Critical Infrastructure Monitoring

Mehrdad Babazadeh, Imperial College London (UK)

Sokratis Kartakis, Imperial College London (UK)

Julie McCann, Imperial College London (UK)

TP-03.3 @ 14:40

342 Automatic Vehicle Classification Using Center Strengthened Convolutional Neural Network

Kuan-Chung Wang, National Central University (Taiwan)

Yoga Dwi Pranata, National Central University (Taiwan)

Jia-Ching Wang, National Central University (Taiwan)

TP-03.4 @ 15:00

430 Zynq-based Full HD Around View Monitor System for Intelligent Vehicle

Cong Lai, Xi'an Jiaotong University (China)

Wen Luo, Xi'an Jiaotong University (China)

Shiqiang Chen, Xi'an Jiaotong University (China)

Qinhua Li, Xi'an Jiaotong University (China)

Qingyu Yang, Xi'an Jiaotong University (China)

Hongbin Sun, Xi'an Jiaotong University (China)

Nanning Zheng, Xi'an Jiaotong University (China)

TP-03.5 @ 15:20

205 Wide Angle Virtual View Synthesis Using Two-by-Two Kinect V2

Huan-Rui Chang, National Chiao Tung University (Taiwan)

Hsueh-Ming Hang, National Chiao Tung University (Taiwan)

Session TP-04

Multilingual Speech and Language Processing for Minority Languages (Part 2)

Type: Special Session

Venue: Tactic 2

Thursday - 14 December

Time: 1400 - 1540

Chairs:

Dong Wang, Tsinghua University (China)

Guanyu Li, Northwest Minzu University (China)

Mijit Ablimit, Xinjiang University (China)

TP-04.1 @ 14:00

257 Memory-augmented Chinese-Uyghur Neural Machine Translation

Shiyue Zhang, University of Posts and Telecommunications (China)

Gulnigar Mahmut, Xinjiang University (China)

Dong Wang, Tsinghua University (China)

Askar Hamdulla, Xinjiang University (China)

TP-04.2 @ 14:20

464 Development of Under-Resourced Bahasa Indonesia Speech Corpus

Elok Cahyaningtyas, Institut Teknologi Sepuluh Nopember (Indonesia)

Dhany Arifianto, Institut Teknologi Sepuluh Nopember (Indonesia)

TP-04.3 @ 14:40

378 Generalization of Thai Tone Contour in HMM-Based Speech Synthesis

Anocha Rugchatjaroen, National Science and Technology Development Agency (Thailand)

Sittipong Saychum, National Science and Technology Development Agency (Thailand)

Keiichiro Oura, Nagoya Institute of Technology (Japan)

Keiichi Tokuda, Nagoya Institute of Technology (Japan)

TP-04.4 @ 15:00

406 The Longitudinal Development of Focus Duration for Korean Chinese Learners

Aijun Li, Institute of Linguistics, CASS (China)

Gongping Wang, Jinan University (China)

TP-04.5 @ 15:20

208 Patterns of Vowels in Uyghur Tri-syllabic Words

Hankiz Yilahun, Xinjiang University (China)

Aynur Nurtay, Xinjiang University (China)

Askar Hamdulla, Xinjiang University (China)

Session TP-05

Use of Signal/Image Processing Techniques for Computational Biology and Medical Applications (Part 2)

Type: Special Session

Venue: Tactic 3

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Bonnie Ngai-Fong Law, The Hong Kong Polytechnic University (China)

TP-05.1 @ 14:00

269 Correlation Between Different DNA Period-3 Signals: An Analytical Study for Exons Prediction

Ismail El-Badawy, Universiti Teknologi Malaysia (Malaysia)

Ashraf Mamdouh Abd El-Aziz, Al-Baha University (Saudi Arabia)

Zaid Omar, Universiti Teknologi Malaysia (Malaysia)

Malarvili Bala Krishnan, Universiti Teknologi Malaysia (Malaysia)

TP-05.2 @ 14:20

103 Comparison Analysis of ICA versus MCA-KSVD Blind Source Separation on Task-related fMRI Data

Nam Le, Vietnamese-German University (Vietnam)

Khang Nguyen, Vietnamese-German University (Vietnam)

Hien M. Nguyen, Vietnamese-German University (Vietnam)

TP-05.3 @ 14:40

210 Toward Effective Noise Reduction for Sub-Nyquist High-Frame-Rate MRI Techniques with Deep Learning

Yudai Suzuki, Gifu University (Japan)

Keigo Kawaji, Chicago University (USA)

Amit R Patel, Chicago University (USA)

Satoshi Tamura, Gifu University (Japan)

Satoru Hayamizu, Gifu University (Japan)

TP-05.4 @ 15:00

377 Compressed Sensing Reconstruction of MR Phase-varied Images using Multi-scale Complex Sparsifying Transform

Satoshi Ito, Utsunomiya University (Japan)

TP-05.5 @ 15:20

94 Distinction between Healthy Individuals and Patients with Confident Abnormal Respiration

Masaru Yamashita, Nagasaki University (Japan)

Tasuku Miura, Nagasaki University (Japan)

Shoichi Matsunaga, Nagasaki University (Japan)

Session TP-06

Learning Approaches and Video Scene Restoration

Type: Special Session

Venue: Tactic 4

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Wan-Chi Siu, The Hong Kong Polytechnic University (China)

David Junhui Hou, City University of Hong Kong, Hong Kong (China)

TP-06.1 @ 14:00

417 Light Field Scene Flow with Occlusion Regularization

Jie Chen, Nanyang Technological University (Singapore)

Yun Ni, Nanyang Technological University (Singapore)

Junhui Hou, City University of Hong Kong, Hong Kong (China)

Lap-Pui Chau, Nanyang Technological University (Singapore)

TP-06.2 @ 14:20

452 Single Image Superresolution by Multiple Geometrical Regressors

Yu Zhou, Shenzhen University (China)

Sam Kwong, City University of Hong Kong (China)

Junhui Hou, City University of Hong Kong (China)

TP-06.3 @ 14:40

222 Efficient Edge-Oriented Based Image Interpolation Algorithm for Non-Integer Scaling Factor

Chia-Chun Hsu, National Taiwan University (Taiwan)

Jian-Jiun Ding, National Taiwan University (Taiwan)

Yih-Cherng Lee, National Taiwan University (Taiwan)

TP-06.4 @ 15:00

384 Image Super-Resolution Based on Error Compensation with Convolutional Neural Network

Wei-Ting Lu, National Cheng Kung University (Taiwan)

Chien-Wei Lin, National Cheng Kung University (Taiwan)

Chih-Hung Kuo, National Cheng Kung University (Taiwan)

Ying-Chan Tung, National Cheng Kung University (Taiwan)

TP-06.5 @ 15:20

148 Exemplar-Based Image Inpainting Based on Pixel Inhomogeneity Factor

Qinhui Fan, University of Electronic Science and Technology of China (China)

Hongsheng Liu, University of Electronic Science and Technology of China (China)

Zhizhong Fu, University of Electronic Science and Technology of China (China)

Xiaofeng Li, University of Electronic Science and Technology of China (China)

Session TP-07

Image Processing

Type: Regular Session

Venue: Tactic 5

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Kai-Kuang Ma, Nanyang Technological University (Singapore)

TP-07.1 @ 14:00

71 A Parallel Computation Algorithm for Super-Resolution Methods Using Convolutional Neural Networks

Yusuke Sugawara, Tokyo Metropolitan University (Japan)

Sayaka Shiota, Tokyo Metropolitan University (Japan)

Hitoshi Kiya, Tokyo Metropolitan University (Japan)

TP-07.2 @ 14:20

326 Infrared and Visible Image Fusion Based on Innovation Feature Simultaneous Decomposition

Guiqing He, Northwestern Polytechnical University (China)

Dandan Dong, Northwestern Polytechnical University (China)

Siyuan Xing, Northwestern Polytechnical University (China)

Ximei Zhao, Northwestern Polytechnical University (China)

TP-07.3 @ 14:40

392 Joint Bilateral based Image Denoising using Multi-sized 2D Hard Threshold

Takuro Yamaguchi, Keio University (Japan)

Masaaki Ikehara, Keio university (Japan)

TP-07.4 @ 15:00

408 Multi-focus Image Fusion Using Gaussian Filter and Dynamic Programming

Shumin Liu, Singapore University of Technology and Design (Singapore)

Jiaxuan Zhang, Singapore University of Technology and Design (Singapore)

Jiajia Chen, Singapore University of Technology and Design (Singapore)

TP-07.5 @ 15:20

280 Natural Scene Statistics Based Publication Classification Algorithm Using Convolutional Neural Network

Hyewon Song, Yonsei University (South Korea)

Doyoung Kim, Yonsei University (South Korea)

Hyuck-Joo Kwon, Yonsei University (South Korea)

Sanghoon Lee, Yonsei University (South Korea)

Session TP-08

Multimedia Security and Forensics (Part 2)

Type: Special Session

Venue: Tactic 6

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Xiangui Kang, Sun Yat-sen University (China)

KokSheik Wong, Monash University Malaysia (Malaysia)

TP-08.1 @ 14:00

1 Data Embedding in Scalable Coded Video

LieLin Pang, University of Malaya (Malaysia)

KokSheik Wong, Monash University Malaysia (Malaysia)

Sze Teng Liong, Xiamen University (Malaysia)

TP-08.2 @ 14:20

348 Investigating the use of Scattering Coefficients for Replay Attack Detection

Kaavya Sriskandaraja, The University of New South Wales (Australia)

Gajan Suthokumar, The University of New South Wales (Australia)

Vidhyasaharan Sethu, University of New South Wales (Australia)

Eliathamby Ambikairajah, The University of New South Wales (Australia)

TP-08.3 @ 14:40

371 Study on Method for Protecting Speech Privacy by Actively Controlling Speech Transmission Index in Simulated Room

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

Yuta Kashiwara, Japan Advanced Institute of Science and Technology (Japan)

Maori Kobayashi, Japan Advanced Institute of Science and Technology (Japan)

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

TP-08.4 @ 15:00

200 Reversible Data Hiding for Compression-friendly Image Encryption Method

KokSheik Wong, Monash University Malaysia (Malaysia)

Hitoshi Kiya, Tokyo Metropolitan University (Japan)

TP-08.5 @ 15:20

393 Multi-Channel Neural Network for Steganalysis

Kai Liu, Sun Yat-sen University (China)

Xuan Li, Sun Yat-sen University (China)

Qiong Zhang, Sun Yat-sen University (China)

Xiangui Kang, Sun Yat-sen University (China)

Poster Session 4

Multimedia Security and Forensics (Part 2)

Type: Regular Session

Venue: Level 3-Foyer

Thursday – 14 December

Time: 1400 – 1540

Chairs:

Chris Lee Gwo Giun, National Cheng Kung University (Taiwan)

John See, Multimedia University (Malaysia)

TP-P4.1

56 Tibetan-Mandarin Bilingual Speech Recognition Based on End-to-End Framework

Qingnan Wang, University of Science and Technology of China (China)

Wu Guo, University of Science and Technology of China (China)

Peixin Chen, University of Science and Technology of China (China)

Yan Song, University of Science and Technology of China (China)

TP-P4.2

59 Learning the Number of Nodes in DNNs with Activation Mask

Huang Chen, University of Science and Technology of China (China)

Shiliang Zhang, University of Science and Technology of China (China)

Junfeng Hou, University of Science and Technology of China (China)

Lirong Dai, University of Science and Technology of China (China)

TP-P4.3

108 Data Augmentation and Feature Extraction using Variational Autoencoder for Acoustic Modeling

Hiromitsu Nishizaki, University of Yamanashi (Japan)

TP-P4.4

118 End-to-end Speech Recognition for Languages with Ideographic Characters

Hitoshi Ito, NHK Science and Technology Research Laboratories (Japan)

Aiko Hagiwara, NHK Science and Technology Research Laboratories (Japan)

Manon Ichiki, NHK Science and Technology Research Laboratories (Japan)

Takeshi Mishima, NHK Science and Technology Research Laboratories (Japan)

Shoei Sato, NHK Science and Technology Research Laboratories (Japan)

Akio Kobayashi, NHK Science and Technology Research Laboratories (Japan)

TP-P4.5

128 Multimodal Speech Recognition Using Mouth Images from Depth Camera

Yuki Yasui, Tokyo Institute of Technology (Japan)

Nakamasa Inoue, Tokyo Institute of Technology (Japan)

Koji Iwano, Tokyo City University (Japan)

Koichi Shinoda, Tokyo Institute of Technology (Japan)

TP-P4.6

133 Deep Learning-Based Speaking Rate-Dependent Hierarchical Prosodic Model for Mandarin TTS

Yen Ting Lin, National Taipei University (Taiwan)

Chen-Yu Chiang, National Taipei University (Taiwan)

TP-P4.7

151 Automatic Identification of Pathological Voice Quality Based on the GRBAS Categorization

Akira Sasou, AIST (Japan)

TP-P4.8

196 Selecting Type of Response for Chat-like Spoken Dialogue Systems Based on Acoustic Features of User Utterances

Kengo Ohta, National Institute of Tech. Anan College (Japan)

Rikito Marumoto, Kobe University (Japan)
Ryota Nishimura, Tokushima University (Japan)
Norihide Kitaoka, Tokushima University (Japan)

TP-P4.9

204 An Investigation to Transplant Emotional Expressions in DNN-based TTS Synthesis

Katsuki Inoue, Okayama University (Japan)
Sunao Hara, Okayama University (Japan)
Masanobu Abe, Okayama University (Japan)
Nobukatsu Hojo, NTT (Japan)
Yusuke Ijima, NTT (Japan)

TP-P4.10

233 Voice Conversion Based on Deep Neural Networks for Time-Variant Linear Transformations

Gaku Kotani, The University of Tokyo (Japan)
Daisuke Saito, The University of Tokyo (Japan)
Nobuaki Minematsu, The University of Tokyo (Japan)

TP-P4.11

239 Exploiting End of Sentences and Speaker Alternations in Language Modeling For Multiparty Conversations

Hiroto Ashikawa, Waseda University (Japan)
Naohiro Tawara, Waseda University (Japan)
Atsunori Ogawa, NTT Corporation (Japan)
Tomoharu Iwata, NTT Corporation (Japan)
Tetsunori Kobayashi, Waseda University (Japan)
Tetsuji Ogawa, Waseda University (Japan)

TP-P4.12

241 Word Level Prosody Prediction Using Large Audiobook Dataset

Yanfeng Lu, Institute for Infocomm Research (Singapore)
Chenyu Yang, Institute for Infocomm Research (Singapore)
Minghui Dong, Institute for Infocomm Research (Singapore)

TP-P4.13

296 Deep Acoustic-to-Articulatory Inversion Mapping with Latent Trajectory Modeling

Patrick Lumban Tobing, Nagoya University (Japan)
Hirokazu Kameoka, NTT Corporation (Japan)
Tomoki Toda, Nagoya University (Japan)

TP-P4.14

394 CNN-based Bottleneck Feature for Noise Robust Query-by-Example Spoken Term Detection

Hyungjun Lim, Korea Advances Institute of Science and Technology (South Korea)
Younggwon Kim, Korea Advances Institute of Science and Technology (South Korea)
Yoonhoe Kim, Korea Advances Institute of Science and Technology (South Korea)
Hoirin Kim, Korea Advances Institute of Science and Technology (South Korea)

TP-P4.15

23 Age/Gender Classification with Whole-Component Convolutional Neural Networks (WC-CNN)

Chun-Ting Huang, University of Southern California (USA)
Yueru Chen, University of Southern California (USA)
Ruiyuan Lin, University of Southern California (USA)
C.-C. Jay Kuo, University of Southern California (USA)

TP-P4.16

278 Multi-Scale Salient Object Detection with Pyramid Spatial Pooling

Jing Zhang, Northwestern Polytechnical University (China)
Yuchao Dai, The Australian National University (Australia)

Fatih Porikli, The Australian National University (Australia)

Mingyi He, Northwestern Polytechnical University (China)

TP-P4.17

290 An Effective Segmentation Algorithm of Apple Watercore Disease Region Using Fully Convolutional Neural Networks

Zeng PENG, Northwest A&F University (China)

Cheng Cai, Northwest A&F University (China)

Session FA-01

Advanced Signal Processing and Machine Learning for Audio and Speech Applications (Part 1)

Type: Special Session

Venue: Ballroom A

Friday - 15 December

Time: 1030 - 1210

Chairs:

Shoji Makino, University of Tsukuba (Japan)

Hiroshi Saruwatari, The University of Tokyo (Japan)

FA-01.1 @ 10:30

143 Utilizing Neural Network and Critical Band Processing for Speech Enhancement

Pei Chee Yong, Curtin University (Australia)

Kit Yan Chan, Curtin University (Australia)

Sven Nordholm, Curtin University (Australia)

FA-01.2 @ 10:50

160 A Unified Network for Multi-Speaker Speech Recognition with Multi-Channel Recordings

Conggui Liu, Tokyo Institute of Technology (Japan)

Nakamasa Inoue, Tokyo Institute of Technology (Japan)

Koichi Shinoda, Tokyo Institute of Technology (Japan)

FA-01.3 @ 11:10

174 Modulation Spectrum-based Speech Parameter Trajectory Smoothing for DNN-based Speech Synthesis using FFT Spectra

Shinnosuke Takamichi, The University of Tokyo (Japan)

FA-01.4 @ 11:30

189 Music Chord Recognition from Audio Data using Bidirectional Encoder-decoder LSTMs

Takeshi Hori, Meiji University (Japan)

Kazuyuki Nakamura, Meiji University (Japan)

Shigeki Sagayama, Meiji University (Japan)

FA-01.5 @ 11:50

247 Online Sound Structure Analysis based on Generative Model of Acoustic Feature Sequences

Keisuke Imoto, Ritsumeikan University (Japan)

Nobutaka Ono, National Institute of Informatics (Japan)

Masahiro Niitsuma, Ritsumeikan University (Japan)

Yoichi Yamashita, Ritsumeikan University (Japan)

Session FA-02

Signal processing and artificial intelligence for multimedia surveillance

Type: Special Session

Venue: Ballroom B

Friday - 15 December

Time: 1030 - 1210

Chairs:

Norihide Kitaoka, Tokushima University (Japan)

Tran Huy Dat, Institute for Infocomm Research (Singapore)

FA-02.1 @ 10.30

64 Low-Resource Spoken Keyword Search Strategies in Georgian Inspired by Distinctive Feature Theory

Nancy Chen, Institute for Infocomm Research (Singapore)

Boon Pang Lim, Institute for Infocomm Research (Singapore)

Van Hai Do, Advanced Digital Sciences Center (Singapore)

Van Tung Pham, Nanyang Technology University (Singapore)

Chongjia Ni, Institute for Infocomm Research (Singapore)

Haihua Xu, Nanyang Technological University (Singapore)

Mark Hasegawa-Johnson, University of Illinois Urbana-Champaign (USA)

Wenda Chen, University of Illinois Urbana-Champaign (USA)

Xiong Xiao, Nanyang Technological University (Singapore)

Sunil Sivadas, Institute for Infocomm Research (Singapore)

Eng Siong Chng, Nanyang Technological University (Singapore)

Bin Ma, Institute for Infocomm Research (Singapore)

Haizhou Li, Institute for Infocomm Research (Singapore)

FA-02.2 @ 10.50

161 Sound Sensing using Smartphones as A Crowdsourcing Approach

Sunao Hara, Okayama University (Japan)

Asako Hatakeyama, Okayama University (Japan)

Shota Kobayashi, Okayama University (Japan)

Masanobu Abe, Okayama University (Japan)

FA-02.3 @ 11:10

292 An Investigation of Recurrent Neural Network for Daily Activity Recognition using Multi-modal Signals

Akira Tamamori, Nagoya University (Japan)

Tomoki Hayashi, Nagoya University (Japan)

Tomoki Toda, Nagoya University (Japan)

Kazuya Takeda, Nagoya University (Japan)

FA-02.4 @ 11.30

352 An Acoustic Monitoring System and Its Field Trials

Tatsuya Komatsu, NEC Corporation (Japan)

Masahiro Tani, NEC Corporation (Japan)

Takahiro Toizumi, NEC Corporation (Japan)

Narisetty Chaitanya, NEC Corporation (Japan)

Masanori Kato, NEC Corporation (Japan)

Yumi Arai, NEC Corporation (Japan)

Osamu Hoshuyama, NEC Corporation (Japan)

Yuzo Senda, NEC Corporation (Japan)

Reishi Kondo, NEC Corporation (Japan)

FA-02.5 @ 11:50

359 Convolutional Neural Network with Multi-Task Learning Scheme for Acoustic Scene Classification

Tin Lay Nwe, Institute for Infocomm Research (Singapore)

Tran Huy Dat, Institute for Infocomm Research (Singapore)

Bin Ma, Institute for Infocomm Research (Singapore)

Session FA-03

Affect and Emotion Processing in Human-Machine Interaction

Type: Special Session

Venue: Tactic 1

Friday - 15 December

Time: 1030 - 1210

Chairs:

Dong Yan Huang, I2R - Agency for Science, Technology and Research (Singapore)

Ming Li, Sun Yat-Sen University (China)

FA-03.1 @ 10.30

123 Speech Emotion Recognition via Ensembling Neural Networks

Danqing Luo, Peking University (China)

Yuexian Zou, Peking University (China)

Dongyan Huang, Institute for Infocomm Research (Singapore)

FA-03.2 @ 10.50

193 Emotion Recognition by Combining Prosody and Sentiment Analysis for Expressing Reactive Emotion by Humanoid Robot

Yuanchao Li, Kyoto University (Japan)

Carlos Toshinori Ishi ATR Hiroshi Ishiguro Labs (Japan)

Nigel Ward, University of Texas (USA)

Koji Inoue, Kyoto University (Japan)

Shizuka Nakamura, Kyoto University (Japan)

Katsuya Takanashi, Kyoto University (Japan)

Tatsuya Kawahara, Kyoto University (Japan)

FA-03.3 @ 11:10

345 Mandarin Electrolaryngeal Voice Conversion with Combination of Gaussian Mixture Model and Non-negative Matrix Factorization

Ming Li, Sun Yat-sen University (China)

Luting Wang, Sun Yat-sen University (China)

Zhicheng Xu, Sun Yat-sen University (China)

Danwei Cai, Sun Yat-sen University (China)

FA-03.4 @ 11.30

388 On the Construction of more Human-like Chatbots: Affect and Emotion Analysis of Movie Dialogue Data

Rafael E. Banchs, Institute for Infocomm Research (Singapore)

FA-03.5 @ 11:50

424 Facial Action Recognition using Very Deep Networks for Highly Imbalanced Class Distribution

Wan Ding, CCNU (China)

Dongyan Huang, Institute for Infocomm Research (Singapore)

Zhuo Chen, Nanyang Technological University (Singapore)

Xinguo Yu, Central China Normal University (China)

Weisi Lin, Nanyang Technological University (Singapore)

Session FA-04

Advanced topics in linear and nonlinear adaptive signal and information processing in adverse environments

Type: Special Session
Friday – 15 December

Venue: Tactic 2
Time: 1030 – 1210

Chairs:

Felix Albu, Valahia University of Targoviste (Romania)
Arata Kawamura, Osaka University (Japan)
Kiyoshi Nishikawa, Tokyo Metropolitan University (Japan)

FA-04.1 @ 10.30

13 A Combined Variable Step Size Strategy for Two Microphones Acoustic Feedback Cancellation using Proportionate Algorithms

Felix Albu, Valahia University of Targoviste (Romania)
Linh Tran, Curtin University (Australia)
Sven Nordholm, Curtin University (Australia)

FA-04.2 @ 10.50

31 A Fast Affine Projection Algorithm Based on a Modified Toeplitz Matrix

Feiran Yang, Chinese Academy of Sciences (China)
Jun Yang, Chinese Academy of Sciences (China)

FA-04.3 @ 11:10

85 Impulsive Noise Suppression Using Interpolated Zero Phase Signal

Ryo Takehara, Osaka University (Japan)
Arata Kawamura, Osaka University (Japan)
Youji Iiguni, Osaka University (Japan)

FA-04.4 @ 11.30

124 Binaural Beamforming with Spatial Cues Preservation for Hearing Aids in Real-life Complex Acoustic Environments

Hala As'ad, University of Ottawa (Canada)
Martin Bouchard, University of Ottawa (Canada)
Homayoun Kamkar-Parsi, Sivantos Group (Germany)

FA-04.5 @ 11:50

266 Application of Mean-shift Clustering for Removing Flux Trapping Noise from Geomagnetic Field Signals Measured using HTS-SQUID Magnetometers

Kiyoshi Nishikawa, Tokyo Metropolitan University (Japan)
Kan Okubo, Tokyo Metropolitan University (Japan)
Yuta Katori, Tokyo Metropolitan University (Japan)
Nobunao Takeuchi, Tohoku University (Japan)

Session FA-05

Bioinformatics and Applications

Type: Special Session

Venue: Tactic 3

Friday - 15 December

Time: 1030 - 1210

Chairs:

Kosin Chamnongthai, King Mongkut's University of Technology (Thailand)

FA-05.1 @ 10.30

28 Reduced Contact Lifting of Latent Fingerprint

Mohammad Mogharen Askarin, University of Malaya (Malaysia)

KokSheik Wong, Monash University Malaysia (Malaysia)

Raphael Phan, Multimedia University (Malaysia)

FA-05.2 @ 10.50

168 Two-Dimensional Winner-Takes-All Hashing in Template Protection based on Fingerprint and Voice Feature Level Fusion

Kong Yik Chee, Universiti Tunku Abdul Rahman (Malaysia)

Zhe Jin, Monash University Malaysia (Malaysia)

Wun-She Yap, Universiti Tunku Abdul Rahman (Malaysia)

Bok-Min Goi, Universiti Tunku Abdul Rahman (Malaysia)

FA-05.3 @ 11:10

227 SCFT: Sector-based Cancelable Fingerprint Template

Tohari Ahmad, Institut Teknologi Sepuluh Nopember (Indonesia)

Burhanudin Rasyid, Institut Teknologi Sepuluh Nopember (Indonesia)

FA-05.4 @ 11.30

277 Epileptic Focus Localization Based on Bivariate Empirical Mode Decomposition and Entropy

Tatsunori Itakura, Tokyo University of Agriculture and Technology (Japan)

Toshihisa Tanaka, Tokyo University of Agriculture and Technology (Japan)

FA-05.5 @ 11:50

399 Real-time Digitized Neural-Spike Storage Scheme in Multiple Channels for Biomedical Applications

Anand Kumar Mukhopadhyay, Indian Institute of Technology (India)

Indrajit Chakrabarti, Indian Institute of Technology (India)

Mrigank Sharad, Indian Institute of Technology (India)

Session FA-06

Advanced Image Processing and Computer Vision Techniques (Part 1)

Type: Special Session

Venue: Tactic 4

Friday - 15 December

Time: 1030 - 1210

Chairs:

Chang-Su Kim, Korea University (South Korea)

Jae-Young Sim, Korea University (South Korea)

FA-06.1 @ 10.30

202 An Image Compression Algorithm Based on the Karhunen Loeve Transform

Jae Woong Soh, Seoul National University (Korea)

Hyun-Seung Lee, Seoul National University (Korea)

Nam Ik Cho, Seoul National University (Korea)

FA-06.2 @ 10.50

234 A Rail Detection Algorithm Based on Pair Particles Filtering

Ji-Sang Bae, Korea University (Korea)

Jong-Ok Kim, Korea University (Korea)

FA-06.3 @ 11:20

310 Gradient-based Contrast Enhancement and Color Correction for Underwater Images

Eunpil Park, Ulsan National Institute of Science and Technology (Korea)

Jae-Young Sim, Ulsan National Institute of Science and Technology (Korea)

FA-06.4 @ 11.40

385 Ensemble of Binary Tree Structured Deep Convolutional Network for Image Classification

Ji-Eun Lee, Ewha Womans University (Korea)

Min-Joo Kang, Ewha Womans University (Korea)

Jewon Kang, Ewha Womans University (Korea)

FA-06.5 @ 12:00

455 Deep Recurrent Resnet for Video Super-Resolution

Bee Lim, Seoul National University (Korea)

Kyoung Mu Lee, Seoul National University (Korea)

Session FA-07

Open Source OAI and Algorithms to 5G Networking

Type: Special Session

Venue: Tactic 5

Friday - 15 December

Time: 1030 - 1210

Chairs:

Po-Chiang Lin, Yuan Ze University (Taiwan)

Wen-Ping Lai, Yuan Ze University (Taiwan)

FA-07.1 @ 10.30

76 Functional Verification and Performance Testing for OpenAirInterface (OAI) eNodeB

Chih-Yuan Lo, Institute for Information Industry (Taiwan)

Yu-Wei Hua, Institute for Information Industry (Taiwan)

Wei-Chuan Yu, Institute for Information Industry (Taiwan)

Yu-Min Chuang, Institute for Information Industry (Taiwan)

FA-07.2 @ 10.50

120 An Investigation of Application-aware Mobile Edge Computing in 5G Networks

Maxim Domnitskiy, National Chiao Tung University (Taiwan)

Chia-Nan Lin, Industrial Technology Research Institute (Taiwan)

FA-07.3 @ 11:20

285 Multiband Hierarchical Ad Hoc Network with Wireless Environment Recognition

Toshiyuki Shizuoka, The University of Electro-Communications (Japan)

Osamu Takyu, Shinshu University (Japan)

Mai Ohta, Fukuoka University (Japan)

Takeo Fujii, The University of Electro-Communications (Japan)

FA-07.4 @ 11.40

301 On the Performance Impact of Virtual Link Types to 5G Networking

Wen-Ping Lai, Yuan Ze University (Taiwan)

Yong-Hsiang Wang, Yuan Ze University (Taiwan)

FA-07.5 @ 12:00

351 Teaching and Learning Next Generation Mobile Communication Networks through Open Source OpenAirInterface Testbeds

Po-Chiang Lin, Yuan Ze University (Taiwan)

Sheng-Lun Huang, Yuan Ze University (Taiwan)

Xin-Yuan Li, Yuan Ze University (Taiwan)

Session FA-08

Multimedia Security and Privacy

Type: Special Session

Venue: Tactic 6

Friday - 15 December

Time: 1030 - 1210

Chairs:

Isao Echizen, National Institute of Informatics (Japan)

Minoru Kuribayashi, Okayama University (Japan)

FA-08.1 @ 10.30

83 Detection of Various Image Operations based on CNN

Hongshen Tang, Beijing Jiaotong University (China)

Rongrong Ni, Beijing Jiaotong University (China)

Yao Zhao, Beijing Jiaotong University (China)

Xiaolong Li, Beijing Jiaotong University (China)

FA-08.2 @ 10.50

145 Secure Data Management System with Traceability against Internal Leakage

Minoru Kuribayashi, Okayama University (Japan)

Takahiro Ueda, Okayama University (Japan)

Nobuo Funabiki, Okayama University (Japan)

FA-08.3 @ 11:10

173 Searchable Encryption of Image based on Secret Sharing Scheme

Ahmad Akmal Aminuddin Mohd Kamal, Tokyo University of Science (Japan)

Keiichi Iwamura, Tokyo University of Science (Japan)

Hyunho Kang, National Institute of Technology, Tokyo College (Japan)

FA-08.4 @ 11.30

281 Identifying Computer-Generated Text Using Statistical Analysis

Hoang-Quoc Nguyen-Son, National Institute of Informatics (Japan)

Ngoc-Dung T. Tieu, The Graduate University for Advanced Studies (Japan)

Huy Nguyen, The Graduate University for Advanced Studies (Japan)

Junichi Yamagishi, National Institute of Informatics (Japan)

Isao Echizen, National Institute of Informatics (Japan)

FA-08.5 @ 11:50

329 Image Origin Identification for Online Social Networks (OSNs)

Weiwei Sun, University of Macau (China)

Jiantao Zhou, University of Macau (China)

Poster Session 5

Multimedia Security and Privacy

Type: Regular Session

Venue: Level 3-Foyer

Friday – 15 December

Time: 1030 – 1210

Chairs:

Supavadee Aramvith, Chulalongkorn University (Thailand)

Vishnu Monn Baskaran, Multimedia University (Malaysia)

FA-P5.1

14 Delta-Modulated Cross-Correlation method for Delay Estimation on Source Localization

Jong Heui Hong, Research Institute of Industrial Science & Technology (South Korea)

Wonjoon Song, Research Institute of Industrial Science & Technology (South Korea)

FA-P5.2

41 An Investigation of How to Design Control Parameters for Statistical Voice Timbre Control

Kazutaka Kubo, Nara Institute of Science and Technology (Japan)

Kazuhiro Kobayashi, Nagoya University (Japan)

Tomoki Toda, Nagoya University (Japan)

Graham Neubig, Carnegie Mellon University (USA)

Sakriani Sakti, Nara Institute of Science and Technology (Japan)

Satoshi Nakamura, Nara Institute of Science and Technology (Japan)

FA-P5.3

47 Enhanced Fo generation for GPR-based speech synthesis considering syllable-based prosodic features

Decha Moungsri, Tokyo institute of technology (Japan)

Tomoki Koriyama, Tokyo institute of technology (Japan)

Takao Kobayashi, Tokyo institute of technology (Japan)

FA-P5.4

75 A Novel Filtering-based Fo Estimation Algorithm with an Application to Voice Conversion

Nirmesh Shah, DA-IICT (India)

Pramod Bachhav, EURECOM (France)

Hemant Patil, DAICT (India)

FA-P5.5

89 Personality Trait Perception from Speech Signals Using Multiresolution Analysis and Convolutional Neural Networks

Ming-Hsiang Su, National Cheng Kung University (Taiwan)

Chung-Hsien Wu, National Cheng Kung University (Taiwan)

Kun-Yi Huang, National Cheng Kung University (Taiwan)

Qian-Bei Hong, National Cheng Kung University (Taiwan)

Hsin-Min Wang, National Cheng Kung University (Taiwan)

FA-P5.6

96 Transformation of Prosody in Voice Conversion

Berrak Sisman, National University of Singapore (Singapore)

Haizhou Li, National University of Singapore (Singapore)

Kay Chen Tan, City University of Hong Kong (Hong Kong)

FA-P5.7

136 A Dual Alignment Scheme for Improved Speech-to-Singing Voice Conversion

Karthika Vijayan, National University of Singapore (Singapore)

Minghui Dong, Institute for Infocomm Research (Singapore)

Haizhou Li, National University of Singapore (Singapore)

FA-P5.8**138 Accurate estimation of fo and aperiodicity based on periodicity detector residuals and deviations of phase derivatives**

Hideki Kawahara, Wakayama University (Japan)
Ken-Ichi Sakakibara, Health Science University of Hokkaido (Japan)
Masanori Morise, University of Yamanashi (Japan)
Hideki Banno, Meijo University (Japan)
Tomoki Toda, Nagoya University (Japan)

FA-P5.9**144 Acceleration for Query-by-Example Using Posteriorgram of Deep Neural Network**

Masato Obara, Iwate Prefectural University (Japan)
Munehiro Moriya, Iwate Prefectural University (Japan)
Ryota Konno, Iwate Prefectural University (Japan)
Kazunori Kojima, University of Tsukuba (Japan)
Kazuyo Tanaka, University of Tsukuba (Japan)
Shi-wook Lee, National Institute of Advanced Industrial Science and Technology (Japan)
Yoshiaki Itoh, Iwate Prefectural University;

FA-P5.10**207 An Investigation of Spectral Feature Partitioning for Replay Attacks Detection**

Zhi Hao Lim, Nanyang Technological University (Singapore)
Xiaohai Tian, Nanyang Technological University (Singapore)
Wei Rao, Nanyang Technological University (Singapore)
Eng Siong Chng, Nanyang Technological University (Singapore)

FA-P5.11**211 I2R-NUS Submission to Oriental Language Recognition AP16-OL7 Challenge**

Hanwu Sun, Institute for Infocomm Research (Singapore)
Kong Aik Lee, Institute for Infocomm Research (Singapore)
Nguyen Trung Hieu, Institute for Infocomm Research (Singapore)
Bin Ma, Institute for Infocomm Research (Singapore)
Haizhou Li, National University of Singapore (Singapore)

FA-P5.12**232 A Comparison Study of Information Contributions of Phonemic Contrasts in Mandarin**

Yue Chen, Beijing Language and Culture University (China)
Yanlu Xie, Beijing Language and Culture University (China)
Jinsong Zhang, Beijing Language and Culture University (China)

FA-P5.13**251 Enhanced Neural Machine Translation by Learning from Draft**

Aodong Li, Tsinghua University (China)
Shiyue Zhang, Tsinghua University (China)
Dong Wang, Tsinghua University (China)
Thomas Fang Zheng, Tsinghua University (China)

FA-P5.14**259 Joint Unsupervised Adaptation of N-gram and RNN Language Models via LDA-based Hybrid Mixture Modeling**

Ryo Masumura, NTT Corporation (Japan)
Taichi Asami, NTT Corporation (Japan)
Hirokazu Masataki, NTT Corporation (Japan)
Yushi Aono, NTT Corporation (Japan)

FA-P5.15**127 An Applications of Noise-Robust Speech Translation Using Asynchronous Smart Devices**

Ryoichi Takashima, Hitachi Ltd. (Japan)

Yohei Kawaguchi, Hitachi Ltd. (Japan)
Qinghua Sun, Hitachi Ltd. (Japan)
Takashi Sumiyoshi, Hitachi Ltd. (Japan)
Masahito Togami, Hitachi Ltd. (Japan)

FA-P5.16

288 Improving N-gram Language Modeling for Code-switching Speech Recognition

Zhiping Zeng, Shang Hai University (China)
Haihua Xu, Nanyang Technological University (Singapore)
Tze Yuang Chong, Nanyang Technological University (Singapore)
Eng-Siong Chng, Nanyang Technological University (Singapore)
Haizhou Li, National University of Singapore (Singapore)

FA-P5.17

307 Topic Embedding of Sentences for Story Segmentation

Jia Yu, Northwestern Polytechnical University (China)
Xiong Xiao, Nanyang Technological University (Singapore)
Lei Xie, Northwestern Polytechnical University (China)
Eng Siong Chng, Nanyang Technological University (Singapore)

FA-P5.18

425 A Study of Automatic Annotation of PETs with Articulatory Features

Xing Wei, Beijing Language and Culture University (China)
Jingping Chen, Beijing Language and Culture University (China)
Wei Wang, Beijing Language and Culture University (China)
Yanlu Xie, Beijing Language and Culture University (China)
Jingsong Zhang, Beijing Language and Culture University (China)

FA-P5.19

443 Emotional Statistical Parametric Speech Synthesis Using LSTM-RNNs

Shumin An, University of Science and Technology of China (China)
Zhen-Hua Ling, University of Science and Technology of China (China)
Lirong Dai, University of Science and Technology of China (China)

FA-P5.20

446 Acoustic Modeling with a Shared Phoneme Set for Multilingual Speech Recognition without Code-Switching

Shogo Hara, University of Yamanashi (Japan)
Hiromitsu Nishizaki, University of Yamanashi (Japan)

Session FP-01

Advanced Signal Processing and Machine Learning for Audio and Speech Applications (Part 2)

Type: Special Session

Venue: Ballroom A

Friday - 15 December

Time: 1400 - 1540

Chairs:

Shoji Makino, University of Tsukuba (Japan)

Hiroshi Saruwatari, The University of Tokyo (Japan)

FP-01.1 @ 14.00

263 Sound Source Localization Using Binaural Different for Hose-Shaped Rescue Robot

Narumi Mae, University of Tsukuba (Japan)

Yoshiki Mitsui, The University of Tokyo (Japan)

Shoji Makino, University of Tsukuba (Japan)

Daichi Kitamura, The University of Tokyo (Japan)

Nobutaka Ono, National Institute of Informatics (Japan)

Takeshi Yamada, University of Tsukuba (Japan)

Hiroshi Saruwatari, The University of Tokyo (Japan)

FP-01.2 @ 14.20

300 Integrating Online i-vector into GMM-UBM for Text-dependent Speaker Verification

Xiaowei Jiang, SJTU (China)

Shuai Wang, SJTU (China)

Xu Xiang, SJTU (China)

Yanmin Qian, Shanghai Jiao Tong University (China)

FP-01.3 @ 14.40

156 Adaptive Feedback Control using Improved Variable Step-Size Affine Projection Algorithm for Hearing Aids

Linh Tran, Curtin University (Australia)

Henning Schepker, University of Oldenburg (Germany)

Simon Doclo, University of Oldenburg (Germany)

Hai H. Dam, Curtin University (Australia)

Sven E. Nordholm, Curtin University (Australia)

FP-01.4 @ 15.00

294 Modeling and Measuring a Moog Voltage-Controlled Filter

Effrosyni Paschou, University of Patras (Greece)

Fabián Esqueda, Aalto University (Finland)

Vesa Valimaki, Aalto University (Finland)

John Mourjopoulos, University of Patras (Greece)

FP-01.5 @ 15:20

90 Mood Disorder Identification Using Deep Bottleneck Features of Elicited Speech

Kun-Yi Huang, National Cheng Kung University (Taiwan)

Chung-Hsien Wu, National Cheng Kung University (Taiwan)

Ming-Hsiang Su, National Cheng Kung University (Taiwan)

Jia-Hui Chou, National Cheng Kung University (Taiwan)

Session FP-02

Signal processing and artificial intelligence for multimedia surveillance

Type: Special Session

Venue: Ballroom B

Friday - 15 December

Time: 1400 - 1540

Chairs:

Wai Lam Hoo, Tunku Abdul Rahman University College (Malaysia)

Chern Hong Lim, Tunku Abdul Rahman University College (Malaysia)

Chee Seng Chan, University of Malaya (Malaysia)

Norihide Kitaoka, Tokushima University (Japan)

Tran Huy Dat, Institute for Infocomm Research (Singapore)

FP-02.1 @ 14.00

159 Handling small motion without differential approximation

Siyang Liu, Institute for Infocomm Research (Singapore)

Karianto Leman, Institute for Infocomm Research (Singapore)

FP-02.2 @ 14.20

253 Tracking Objects using 3D Object Proposals

Ramanpreet Pahwa, Institute for Infocomm Research (Singapore)

Tian Tsong Ng, Institute for Infocomm Research (Singapore)

Minh Do, University of Illinois at Urbana-Champaign (USA)

FP-02.3 @ 14.40

382 A Deep Learning Architecture for Classifying Medical Images of Anatomy Object

Sameer Khan, Universiti Teknologi PETRONAS (Malaysia)

Suet-Peng Yong, Universiti Teknologi PETRONAS (Malaysia)

FP-02.4 @ 15.00

429 Fuzzy Qualitative Approach for Micro-Expression Recognition

Chern Hong Lim, Tunku Abdul Rahman University College (Malaysia)

Kam Meng Goh, Tunku Abdul Rahman University College (Malaysia)

FP-02.5 @ 15:20

438 LiDAR/Camera Sensor Fusion Technology for Pedestrian Detection

Tai-En Wu, National Chiao Tung University (Taiwan)

Chia-Chi Tsai, National Chiao Tung University (Taiwan)

Jiun-In Guo, National Chiao Tung University (Taiwan)

Session FP-03

Recent Advances in Spatial and Multichannel Speech and Audio Processing

Type: Special Session

Venue: Tactic 1

Friday - 15 December

Time: 1400 - 1540

Chairs:

Christian Ritz, University of Wollongong (Australia)

FP-03.1 @ 14.00

2 Multiple Source Localization by using Energy Weighted Single Source Zone Detection

Jundai Sun, Beijing University of Technology (China)

Maoshen Jia, Beijing University of Technology (China)

Changchun Bao, Beijing University of Technology (China)

FP-03.2 @ 14.20

40 Blind Speaker Counting in Highly Reverberant Environments by Clustering Coherence Features

Shahab Pasha, University of Wollongong (Australia)

Jacob Donley, University of Wollongong (Australia)

Christian Ritz, University of Wollongong (Australia)

FP-03.3 @ 14.40

221 Learning a Robust DOA Estimation Model with Acoustic Vector Sensor Cues

Yuexian Zou, Peking University (China)

Rongzhi Gu, Peking University (China)

Disong Wang, Peking University (China)

Aimin Jiang, HoHai University (China)

Christian H. Ritz, University of Wollongong (Australia)

FP-03.4 @ 15.00

279 Frequency-Invariant Differential Microphone Array Design in the STFT Domain

Zhong-hua Fu, Northwestern Polytechnical University (Singapore)

Lei Xie, Northwestern Polytechnical University (Singapore)

Peng Li, Unisound (China)

Jiaen Liang, Unisound (China)

FP-03.5 @ 15:20

19 Spatial Multi-Channel Linear Prediction for Dereverberation of Ad-Hoc Microphones

Shahab Pasha, University of Wollongong (Australia)

Christian Ritz, University of Wollongong (Australia)

Y.X Zou, Peking University (China)

Session FP-04

Emerging Techniques in Video Analytics and Video Coding System

Type: Special Session

Venue: Tactic 2

Friday - 15 December

Time: 1400 - 1540

Chairs:

Supavadee Aramvith, Chulalongkorn University (Thailand)

FP-04.1 @ 14.00

132 Distributed Video Coding Based on Compressive Sensing and Intra-Predictive Coding

Suguru Hirokawa, Niigata University (Japan)

Shin Kurihara, Niigata University (Japan)

Hisakazu Kikuchi, Niigata University (Japan)

FP-04.2 @ 14.20

347 Optimized Human Detection on the Embedded Computer Vision System

Savath Saypadith, Chulalongkorn University (Thailand)

Supavadee Aramvith, Chulalongkorn University (Thailand)

Watchara Ruangsang, Chulalongkorn University (Thailand)

FP-04.3 @ 14.40

182 Classification of Spectral Compressive Hyperspectral Images Using Morphological Profiles

Yanlong Gao, Northwestern Polytechnical University (China)

Yan Feng, Northwestern Polytechnical University (China)

FP-04.4 @ 15.00

309 SIMD Acceleration for HEVC Encoding on DSP

Yongfei Zhang, Beihang University (China)

Rui Fan, China Academy of Electronic and Information Technology (China)

Chao Zhang, Beihang University (China)

Gang Wang, Beihang University (China)

Zhe Li, Shandong University of Science and Technology (China)

FP-04.5 @ 15:20

456 Efficient Video Coding Using Rigid Object Tracking

Seishi Takamura, NTT (Japan)

Atsushi Shimizu, NTT (Japan)

Session FP-05

Acoustic Event Classification

Type: Regular Session

Venue: Tactic 3

Friday - 15 December

Time: 1400 - 1540

Chairs:

Chuang Shi, University of Electronic Science and Technology of China (China)

Woon-Seng Gan, Nanyang Technological University (Singapore)

FP-05.1 @ 14.00

354 Overlapping Acoustic Event Classification Based on Joint Training with Source Separation

Soo Hyun Bae, Seoul National University (South Korea)

Inkyu Choi, Seoul National University (South Korea)

Hyung Yong Kim, Seoul National University (South Korea)

Kang Hyun Lee, Seoul National University (South Korea)

Nam Soo Kim, Seoul National University (South Korea)

FP-05.2 @ 14.20

150 Weakly Labeled Acoustic Event Detection using Local Detector and Global Classifier

Inkyu Choi, Seoul National University (South Korea)

Soo Hyun Bae, Seoul National University (South Korea)

Sung Jun Cheon, Seoul National University (South Korea)

Won Ik Cho, Seoul National University (South Korea)

Nam Soo Kim, Seoul National University (South Korea)

FP-05.3 @ 14.40

219 Performance Evaluation of Acoustic Scene Classification Using DNN-GMM and Frame-Concatenated Acoustic Features

Gen Takahashi, University of Tsukuba (Japan)

Takeshi Yamada, University of Tsukuba (Japan)

Nobutaka Ono, National Institute of Informatics (Japan)

Shoji Makino, University of Tsukuba (Japan)

FP-05.4 @ 15.00

223 Speech Emotion Recognition using Convolutional Long Short-Term Memory Neural Network and Support Vector Machines

Nattapong Kurpukdee, Kasetsart University (Thailand)

Tomoki Koriyama, Tokyo Institute of Technology (Japan)

Takao Kobayashi, Tokyo Institute of Technology (Japan)

Sawit Kasuriya, National Science and Technology Development Agency (Thailand)

Chai Wutiw WATCHAI, National Science and Technology Development Agency (Thailand)

Poonlap Lamsrichan, Kasetsart University (Thailand)

FP-05.5 @ 15:20

246 Speech Emotion Recognition Using MPCRNN based on Gammatone auditory Filterbank

Zhichao Peng, Japan Advanced Institute of Science and Technology (Japan)

Zhi Zhu, Japan Advanced Institute of Science and Technology (Japan)

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

Jianwu Dang, Japan Advanced Institute of Science and Technology (Japan)

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

Session FP-06

Advanced Image Processing and Computer Vision Techniques (Part 2)

Type: Special Session

Venue: Tactic 4

Friday - 15 December

Time: 1400 - 1540

Chairs:

Chang-Su Kim, Korea University (South Korea)

Jae-Young Sim, Korea University (South Korea)

FP-06.1 @ 14.00

129 Multi-Resolution for Disparity Estimation with Convolutional Neural Networks

Samer Jammal, Liverpool University (UK)

Tammam Tillo, Libera Università di Bolzano-Bozen (Italy)

Jimin Xiao, Xi'an Jiaotong-Liverpool University (China)

FP-06.2 @ 14.20

243 PGT: Proposal-Guided Object Tracking

Han-Ul Kim, Korea University (South Korea)

Chang-Su Kim, Korea University (South Korea)

FP-06.3 @ 14.40

289 Single-shot High Dynamic Range Imaging via Deep Convolutional Neural Network

Vien Gia An, Pukyong National University (South Korea)

Chul Lee, Pukyong National University (South Korea)

FP-06.4 @ 15.00

194 Stereo Matching Using Relative Total Variation and Entropy

Eu-Tteum Baek, Gwangju Institute Technology and Scientist (South Korea)

Yo-Sung Ho, Gwangju Institute Technology and Scientist (South Korea)

FP-06.5 @ 15:20

248 A New Approach for Image Segmentation with Shape Priors Based on the Potts Model

Ying Gu, Institute for Infocomm Research (Singapore)

Rice Mark, Institute for Infocomm Research (Singapore)

Wei Xiong, Institute for Infocomm Research (Singapore)

Liyuan Li, Institute for Infocomm Research (Singapore)

Session FP-07

Large-Scale Stochastic Signal Processing for Wireless Communications

Type: Special Session

Venue: Tactic 5

Friday - 15 December

Time: 1400 - 1540

Chairs:

Shinsuke Ibi, Osaka University

FP-07.1 @ 14.00

69 Binary Vector Reconstruction via Discreteness-Aware Approximate Message Passing

Ryo Hayakawa, Kyoto University (Japan)

Kazunori Hayashi, Osaka City University (Japan)

FP-07.2 @ 14.20

115 Signal Detection with Belief Propagation in Faster-than-Nyquist Signaling

Kotaro Kihara, Hokkaido University (Japan)

Toshihiko Nishimura, Hokkaido University (Japan)

Takeo Ohgane, Hokkaido University (Japan)

Yasutaka Ogawa, Hokkaido University (Japan)

FP-07.3 @ 14.40

170 QR-Decomposed Generalized Belief Propagation with Smart Message Reduction for Low-Complexity MIMO Signal Detection

Akihide Shigyo, The University of Electro-Communications (Japan)

Koji Ishibashi, The University of Electro-Communications (Japan)

FP-07.4 @ 15.00

282 Design of Adaptively Scaled Belief in Large MIMO Detection for Higher-Order Modulation

Takumi Takahashi, Osaka University (Japan)

Shinsuke Ibi, Osaka University (Japan)

Seiichi Sampei, Osaka University (Japan)

FP-07.5 @ 15:20

389 A Study of Monitoring System for Radio Leak with Massive Radio Sensors

Shunsuke Imai, Shinshu University (Japan)

Osamu Takyu, Shinshu University (Japan)

Fumihito Sasamori, Shinshu University (Japan)

Shiro Handa, Shinshu University (Japan)

Session FP-08

Advanced Topics on Structured Dictionary for Multidimensional Signal Processing

Type: Special Session

Venue: Tactic 6

Friday - 15 December

Time: 1400 - 1540

Chairs:

Shogo Muramatsu, Niigata University, (Japan)

Seisuke Kyochi, The University of Kitakyushu (Japan)

FP-08.1 @ 14.00

91 Cube-based Encryption Connected Prior to Motion JPEG Standard

Kosuke Shimizu, University of Tsukuba (Japan)

Taizo Suzuki, University of Tsukuba (Japan)

FP-08.2 @ 14.20

216 A robust PET Image reconstruction using constrained non-negative matrix factorization

Kazuya Kawai, Nagoya Institute of Technology (Japan)

Junya Yamada, Nagoya Institute of Technology (Japan)

Hidekata Hontani, Nagoya Institute of Technology (Japan)

Tatsuya Yokota, Nagoya Institute of Technology (Japan)

Muneyuki Sakata, Tokyo Metropolitan Institute of Gerontology (Japan)

Yuichi Kimura, Kindai University (Japan)

FP-08.3 @ 14.40

237 Four-Dimensional Image Compression with Region of Interest Based on Non-separable Double Lifting Integer Wavelet Transform

Fairoza Amira Binti Hamzah, Nagaoka University of Technology (Japan)

Taichi Yoshida, Nagaoka University of Technology (Japan)

Masahiro Iwahashi, Nagaoka University of Technology (Japan)

FP-08.4 @ 15.00

261 Millimeter Wave Radar Image Denoising with Complex Nonseparable Oversampled Lapped Transform

Satoshi Nagayama, Niigata University (Japan)

Shogo Muramatsu, Niigata University (Japan)

Hiroyoshi Yamada, Niigata University (Japan)

Yuuichi Sugiyama, FUJITSU TEN LIMITED (Japan)

FP-08.5 @ 15:20

308 Multiscale Directional Transforms based on Cosine-Sine Modulated Filter Banks for Sparse Directional Image Representation

Yusuke Nomura, The University of Kitakyushu (Japan)

Ryutaro Ogawa, The University of Kitakyushu (Japan)

Seisuke Kyochi, The University of Kitakyushu (Japan)

Taizo Suzuki, University of Tsukuba (Japan)