

# Technical Program Overview

Tuesday, December 4, 2012

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10:20 - 12:00

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## OS.1-IVM.1 High Efficiency Video Coding (HEVC)

### An Efficient NEON-based Quarter-pel Interpolation Method for HEVC

Hao Lv *Peking University*, Ronggang Wang *Peking University*, Jie Wan *Peking University*, Huizhu Jia *Peking University*, Xiaodong Xie *Peking University*, Wen Gao *Peking University*

### Efficient SIMD Optimization of HEVC Encoder over X86 Processors

Keji Chen *Peking University*, Yizhou Duan *Peking University*, Leju Yan *Peking University*, Jun Sun *Peking University*, Zongming Guo *Peking University*

### Lossy and Lossless Intra Coding Performance Evaluation: HEVC, H.264/AVC, JPEG 2000 and JPEG LS

Qi Cai *Shanghai Jiao Tong University*, Li Song *Shanghai Jiao Tong University*, Guichun Li *Santa Clara University*, Nam Ling Santa Clara University

### An Adaptive Frame Complexity Based Rate Quantization Model for Intra-Frame Rate Control of High Efficiency Video Coding (HEVC)

Lin Sun *HKUST*, Oscar C. Au *HKUST*, Wei Dai *HKUST*, YuanFang Guo *HKUST*, Ruobing Zou *HKUST*

### Early Termination of Coding Unit Splitting for HEVC

Qin Yu *Peking University*, Xinfeng Zhang *Peking University*, Siwei Ma *Peking University*, Shiqi Wang *Peking University*

### Hardware Oriented Re-design and Matrix Approximation Analysis for Transform in High Efficiency Video Coding (HEVC)

Lin Sun *HKUST*, Oscar C. Au *HKUST*, Jiali Li *HKUST*, Ruobing Zou *HKUST*, Wei Dai *HKUST*

## OS.2-IVM.2 Camera-based Human Centric Computing: Technology and Applications

### RGBD Camera-based Activity Analysis

Chenyang Zhang *The City College of New York*, Yingli Tian *The City College of New York*

### Recognizing Object Manipulation Activities Using Depth and Visual Cues

Haowei Liu *Intel*, Matthai Philipose *Microsoft Research*, Ming-Ting Sun *University of Washington*

### Virtual Mirror By Fusing Multiple RGB-D Cameras

Ju Shen *University of Kentucky*, Sen-ching Samson Cheung *University of Kentucky*, Jian Zhao *Microsoft*

### Periodic Motion Detection With ROI-Based Similarity Measure And Extrema-Based Reference-Frame Selection

Xintong Han *Shanghai Jiao Tong University*, Gaojian Li *Fudan University*, Weiyao Lin *Shanghai Jiao Tong University*, Xiaoqiong Su *Shanghai Jiao Tong University*, Hongxiang Li *University of Louisville*, Hua Yang *Shanghai Jiao Tong University*, Hui Wei *Fudan University*

### Abnormal Crowd Behavior Detection Based on Local Pressure Model

Hua Yang *Shanghai Jiao Tong University*, Yihua Cao *Shanghai Jiao Tong University*, Shuang Wu *Shanghai Jiao Tong University*, Weiyao Lin *Shanghai Jiao Tong University*, Shibao Zheng *Shanghai Jiao Tong University*, Zhenghua Yu *Shanghai Jiao Tong University*

### Combining RGB and Depth Features for Human Activity Recognition

Yang Zhao *UESTC*, Zicheng Liu *Microsoft*, Lu Yang *UESTC*, Hong Cheng *UESTC*

## OS.3-SLA.1 Speech Processing and Its Applications

### Open Answer Scoring for S-CAT Automated Speaking Test System Using Support Vector Regression

Yutaka Ono *Chiba University*, Misuzu Otake *Chiba University*, Takahiro Shinozaki *Chiba University*, Ryuichi Nisimura *Wakayama University*, Takeshi Yamada *University of Tsukuba*, Kenkichi Ishizuka *University of Tsukuba*, Yasuo Horiuchi *Chiba University*, Shingo Kuroiwa *Chiba University*, Shingo Imai *University of Tsukuba*

### Singing Voice Conversion Method Based on Many-to-Many Eigenvoice Conversion and Training Data Generation Using a Singing-to-Singing Synthesis System

Hironori Doi *Nara Institute of Science and Technology*, Tomoki Toda *Nara Institute of Science and Technology*, Tomoyasu Nakano *National Institute of Advanced Industrial Science and Technology*, Masataka Goto *National Institute of Advanced Industrial Science and Technology*, Satoshi Nakamura *Nara Institute of Science and Technology*

### Response Generation based on Statistical Machine Translation for Speech-Oriented Guidance System

Kazuma Nishimura *Nara Institute of Science and Technology*, Hiromichi Kawanami *Nara Institute of Science and Technology*, Hiroshi Saruwatari *Nara Institute of Science and Technology*, Kiyohiro Shikano *Nara Institute of Science and Technology*

### Multi-Stream Acoustic Model Adaptation for Noisy Speech Recognition

Tamura Satoshi *Gifu University*, Hayamizu Satoru *Gifu University*

### Design of a Pitch Quantization and Pitch Correction System for Real-Time Music Effects Signal Processing

Corey Cheng *MIT*

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## **OS.4-SPS.1 Complexity-efficient Design and Implementation for Signal Processing Systems**

### **A Highly Parallel Design for Irregular LDPC Decoding on GPGPUs**

Tsou-Han Chiu *National Chiao Tung University*, Hsien-Kai Kuo *National Chiao Tung University*, Bo-Cheng Charles Lai *National Chiao Tung University*

### **Vehicular Signal Transmission Using Power Line Communications**

Yen-Chang Chen *National Chiao Tung University*, Shang-Ho Tsai *National Chiao Tung University*, Kai-jiun Yang *National Chiao Tung University*, Ping-Fan Ho *Industrial Technology Research Institute*, Kuo-Feng Tseng *National Chiao Tung University*, Ho-Shun Chen *National Chiao Tung University*

### **High-Performance Turbo-MIMO System Design with Iterative Soft-Detection and Decoding**

Der-Wei Yang *National Cheng Kung University*, Jing-Shiun Lin *National Cheng Kung University*, Shih-Hao Fang *National Cheng Kung University*, Chia-Fen Lin *National Cheng Kung University*, Ming-Der Shieh *National Cheng Kung University*

### **Hardware Architecture Design of Hybrid Distributed Video coding with Frame Level Coding Mode Selection**

Chieh-Chuan Chiu *National Taiwan University*, Hsin-Fang Wu *National Taiwan University*, Shao-Yi Chien *National Taiwan University*, Chia-han Lee *Academia Sinica*, V. Srinivasa Somayazulu *Intel Corporation*, Yen-Kuang Chen *Intel Corporation*

### **Hardware-Efficient EVD Processor Architecture in FastICA for Epileptic Seizure Detection**

Yi-Hsin Shih *National Chiao Tung University*, Tsan-Jieh Chen *National Chiao Tung University*, Chia-Hsiang Yang *National Chiao Tung University*, Herming Chiueh *National Chiao Tung University*

### **Tracking Performance Analysis of the Set-Membership NLMS Adaptive Filtering Algorithm**

Reza Arablouei *University of South Australia*, Kutluyil Dogancay *University of South Australia*

## **OS.5-IVM.3 Recent Topics in Computer Vision and Image Processing**

### **Facial Image Prediction Using Exemplar-based Algorithm and Non-negative Matrix Factorization**

Hsuan-Ting Chang *National Yunlin University of Science and Technology*, Hsiao-wei Peng *National Yunlin University of Science and Technology*

### **Video Prediction Block Structure and the Emerging High Efficiency Video Coding Standard**

Shan Liu *MediaTek USA Inc.*, Shawmin Lei *MediaTek USA Inc.*

### **Classification of Beverages Using Electronic Nose and Machine Vision Systems**

Mazlina Mamat *Universiti Kebangsaan*, Salina Abdul Samad *Universiti Kebangsaan*

### **A Subjective Comparison of Depth Image Based Rendering and Frame Compatible Stereo for Low Bit Rate 3D Video Coding**

Peshala Pahalawatta *DDD Inc.*, Kevin Stec *DDD Inc.*

### **Joint Perceptually-Based Intra Prediction and Quantization for HEVC**

Guoxin Jin *Northwestern University*, Robert Cohen *MERL*, Anthony Vetro *MERL*, Huifang Sun *MERL*

## **OS.6-BioSPS.1 Brain-body Physiological Networks Connectivity and Synchrony Analysis**

### **Linear and Nonlinear Features for Automatic Artifacts Removal from MEG Data Based on ICA**

Montri Phothisonothai *University of Tokyo*, Hiroyuki Tsubomi *University of Tokyo*, Aki Kondo *University of Tokyo*, Yoshio Minabe *Kanazawa University*, Mitsuru Kikuchi *University of Tokyo*, Kastumi Watanabe *University of Tokyo*

### **Sonification of Muscular Activity in Human Movements using the Temporal Patterns in EMG**

Masaki Matsubara *University of Tsukuba*, Hiroko Terasawa *University of Tsukuba*, Hideki Kadone *University of Tsukuba*, Kenji Suzuki *University of Tsukuba/JAT*, Shoji Makino *University of Tsukuba*

### **Higher-order PLS for Classification of ERPs with Application to BCIs**

Qibin Zhao *Brain Science Institute, RIKEN*, Liqing Zhang *Shanghai Jiao Tong University*, Cao Jianting *Saitama Institute of Technology*, Andrzej Cichocki *Brain Science Institute, RIKEN*

### **Spatial Auditory BCI Paradigm Utilizing N200 and P300 Responses**

Zhenyu Cai *University of Tsukuba*, Tomek Rutkowski *University of Tsukuba*

### **EEG Steady-State Synchrony Patterns Sonification**

Teruaki Kaniwa *University of Tsukuba*, Masaki Matsubara *University of Tsukuba*, Tomek Rutkowski *University of Tsukuba*, Hiroko Terasawa *University of Tsukuba*

## **OS.7-WCN.1 Cooperative and Coordinated Wireless Communications**

### **Ergodic Mutual Information of Amplify-and-Forward MIMO Relay Channels with LOS Components**

Chung-Kai Hsu *National Sun Yat-sen University*, Chao-Kai Wen *National Sun Yat-sen University*, Jung-Chieh Chen *National Kaohsiung Normal University*, Wan-Jen Huang *National Sun Yat-sen University*, Pangan Ting *Industrial Technology Research*

### **Relay Selection in Multiuser Two-Way Cooperative Relaying Systems**

Yi-Ru Liao *National Chiao Tung University*, Feng-Tsun Chien *National Chiao Tung University*, Min-Kuan Chang *National Chung Hsing University*

### **Game Theoretic Channel Allocation for the Delay-Sensitive Cognitive Radio Networks**

Wenson Chang *National Cheng Kung University*, Yun-Li Yang *Qisda Corporation*

### **Robust Linear Beamformer Designs for CoMP AF Relaying in Downlink Multi-Cell Networks**

Chun-I Kuo *MStar Semiconductor, Inc.*, Sau-Hsuan Wu *National Chiao Tung University*, Chun-Kai Tseng *National Chiao Tung University*

### **Zero-Forcing Design of Precoders and Decoders in Multiuser CDMA Cooperative Networks**

Li-Chung Lo *National Sun Yat-sen University*, Wan-Jen Huang *National Sun Yat-sen University*, Chun-Ting Liu *National Sun Yat-sen University*

**Distributed Beamforming with Compressed Feedback in Time-Varying Cooperative Networks**

Miao-Fen Jian *National Sun Yat-sen University*, Wan-Jen Huang *National Sun Yat-sen University*, Chao-Kai Wen *National Sun Yat-sen University*

**OS.8-SLA.2 Speech Processing (I)**

**Mandarin Vowel Synthesis Based on 2D and 3D Vocal Tract Model by Finite-Difference Time-Domain Method**

Yuguang Wang *Tianjin University*, Hongcui Wang *Tianjin University*, Jianguo Wei *Tianjin University*, Jianwu Dang *JAIST/Tianjin University*

**Speaker Adaptation Intensively Weighted on Mis-Recognized Speech Segments**

Takahiro Oku *NHK*, Yuya Fujita *NHK*, Akio Kobayashi *NHK*, Toru Imai *NHK*

**Introduction of False Detection Control Parameters in Spoken Term Detection**

Yuto Furuya *University of Yamanashi*, Satoshi Natori *University of Yamanashi*, Hiromitsu Nishizaki *University of Yamanashi*, Yoshihiro Sekiguchi *University of Yamanashi*

**Pipeline Decomposition of Speech Decoders and Their Implementation Based on Delayed Evaluation**

Takahiro Shinozaki *Chiba University*, Sadaoki Furui *Tokyo Institute of Technology*, Yasuo Horiuchi *Chiba University*, Shingo Kuroiwa *Chiba University*

**Consonant Enhancement for Articulation Disorders Based on Non-negative Matrix Factorization**

Ryo Aihara *Kobe University*, Ryoichi Takashima *Kobe University*, Tetsuya Takiguchi *Kobe University*, Yasuo Arika *Kobe University*

**PS.1-SLA.3 Speech Recognition (I)**

**Fast Spoken Term Detection Using Pre-retrieval Results of Syllable Bigrams**

Hiroyuki Saito *Iwate Prefectural University*, Yoshiaki Itoh *Iwate Prefectural University*, Kazunori Kojima *Iwate Prefectural University*, Masaaki Ishigame *Iwate Prefectural University*, Kazuyo Tanaka *Tsukuba University*, Shi-wook Lee *National Institute of Advanced Industrial Science and Technology*

**Simplifying Emotion Classification Through Emotion Distillation**

Emily Provost *University of Michigan*, Shrikanth Narayanan *University of Southern California*

**Speech Emotion Recognition System Based on a Dimensional Approach Using a Three-Layered Model**

Reda Elbarougy *Japan Advanced Institute of Science and Technology*, Masato Akagi *Japan Advanced Institute of Science and Technology*

**A Spoken Dialogue System Using Virtual Conversational Agent with Augmented Reality**

Shinji Miyake *Tohoku University*, Akinori Ito *Tohoku University*

**Data-driven Rescaled Teager Energy Cepstral Coefficients for Noise-robust Speech Recognition**

Chia-Ping Chen *National Sun Yat-sen University*, Miao-Luan Hsu *National Sun Yat-sen University*

**PS.2-SLA.4 Audio & Music Processing (I)**

**Diffusion Noise Suppression by Crystal-Shape Subtraction Array**

Akira Tanaka *Hokkaido University*, Ryo Takahashi *Hokkaido University*

**Reproduction of Varied Sound Image Localization for Real Source in Stereo Audio System**

Satoshi Okuro *Kansai University*, Yoshinobu Kajikawa *Kansai University*

**A Japanese Lyrics Writing Support System for Amateur Songwriters**

Chihiro Abe *Tohoku University*, Akinori Ito *Tohoku University*

**Comparative Study on Various Noise Reduction Methods with Decision-Directed a Priori SNR Estimator via Higher-Order Statistics**

Suzumi Kanehara *Nara Institute of Science and Technology*, Hiroshi Saruwatari *Nara Institute of Science and Technology*, Ryoichi Miyazaki *Nara Institute of Science and Technology*, Kiyohiro Shikano *Nara Institute of Science and Technology*, Kazunobu Kondo *Yamaha Corporate Research & Development Center*

**Toward Polyphonic Musical Instrument Identification using Example-based Sparse Representation**

Okamura Mari *Gifu University*, Masanori Takehara *Gifu University*, Tamura Satoshi *Gifu University*, Hayamizu Satoru *Gifu University*

**Optimization Scheme of Joint Noise Suppression and Dereverberation Based on Higher-Order Statistics**

Fine Aprilyanti *Nara Institute of Science and Technology*, Hiroshi Saruwatari *Nara Institute of Science and Technology*, Kiyohiro Shikano *Nara Institute of Science and Technology*, Tomoya Takatani *Toyota Motor Company*

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14:30 - 16:10

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**OS.9-IVM.4 Image and Video Coding (I)**

**Depth Coding using Coded Boundary Patterns**

Kai-Hsiang Yang *National Chiao Tung University*, Hsueh-Ming Hang *National Chiao Tung University*

**Color Image Coding based on the Colorization**

Takashi Ueno *Keio University*, Yoshida Taichi *Keio University*, Masaaki Ikehara *Keio University*

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**Improved JPEG 2000 System Using LS Prediction and Grouping Context Coding Scheme**

Jian-Jiun Ding *National Taiwan University*, Hsin-Hui Chen *National Taiwan University*, Guan-Chen Pan *National Taiwan University*, Po-Hung Wu *National Taiwan University*

**A New In-Loop Filter for Depth Map Coding in HEVC**

Hyunsuk Ko *University of Southern California*, C.-C. Jay Kuo *University of Southern California*

**Modification of Intra Angular Prediction in HEVC**

Shohei Matsuo *NTT Corporation*, Seishi Takamura *NTT Corporation*, Atsushi Shimizu *NTT Corporation*

**OS.10-IVM.5 3DTV and Free-viewpoint TV (I)**

**3D Video Coding with Depth Modeling Modes and View Synthesis Optimization**

Karsten Mueller *Fraunhofer HHI*, Philipp Merkle *Fraunhofer HHI*, Gerhard Tech *Fraunhofer HHI*, Thomas Wiegand *Fraunhofer HHI*

**Depth Map Up-sampling Based on Edge Layers**

Danillo Graziosi *MERL*, Dong Tian *MERL*, Anthony Vetro *MERL*

**Hybrid Plane Fitting for Depth Estimation**

Lingfeng Xu *HKUST*, Oscar C. AU *HKUST*, Wenxiu Sun *HKUST*, Yujun Li *HKUST*, Jiali Li *HKUST*

**Ray Capture Systems for FTV**

Masayuki Tanimoto *Nagoya Industrial Science Research Institute*

**OS.11-SLA.5 Multimodal Information Processing - Algorithms and Applications**

**Dimensional Emotion Driven Facial Expression Synthesis Based on the Multi-Stream DBN Model**

Hao Wu *Northwestern Polytechnical University*, Dongmei Jiang *Northwestern Polytechnical University*, Yong Zhao *Northwestern Polytechnical University*, Hichem Sahli *Vrije Universiteit Brussel*

**Modeling the Correlation between Modality Semantics and Facial Expressions**

Jia Jia *Tsinghua University*, Xiaohui Wang *Tsinghua University*, Zhiyong Wu *Tsinghua University*, Lianhong Cai *Tsinghua University*, Helen Meng *Chinese University of Hong Kong*

**Detection of Ball Hits in a Tennis Game Using Audio and Visual Information**

Qiang Huang *University of East Anglia*, Stephen Cox *University of East Anglia*, Xiangzeng Zhou *Northwestern Polytechnical University*, Lei Xie *Northwestern Polytechnical University*

**Face Sketch-to-Photo Synthesis from Simple Line Drawing**

Yang Liang *Zhejiang University*, Mingli Song *Zhejiang University*, Lei Xie *Northwestern Polytechnical University*, Jiajun Bu *Zhejiang University*, Chun Chen *Zhejiang University*

**High Quality Lips Animation with Speech and Captured Facial Action Unit as A/V Input**

Lijuan Wang *Microsoft*, Frank Soong *Microsoft*

**OS.12-SLA.6 Recent Advances in Audio and Acoustic Signal Processing (I)**

**Beamformer Design Using Measured Microphone Directivity Patterns: Robustness to Modelling Error**

Mark Thomas *Microsoft Research*, Jens Ahrens *Microsoft Research*, Ivan Tashev *Microsoft Research*

**Theoretical Analysis of Musical Noise in Nonlinear Noise Reduction Based on Higher-Order Statistics**

Yu Takahashi *Yamaha Corporation*, Ryoichi Miyazaki *Nara Institute of Science and Technology*, Hiroshi Saruwatari *Nara Institute of Science and Technology*, Kazunobu Kondo *Yamaha Corporate Research & Development Center*

**Auxiliary-function-based Independent Vector Analysis with Power of Vector-norm Type Weighting Functions**

Nobutaka Ono *National Institute of Informatics*

**New Analytical Calculation and Estimation of TDOA for Underdetermined BSS in Noisy Environments**

Takuro Maruyama *University of Tsukuba*, Shoko Araki *NTT Corporation Science Laboratories*, Tomohiro Nakatani *NTT Corporation*, Shigeki Miyabe *University of Tsukuba*, Takeshi Yamada *University of Tsukuba*, Shoji Makino *University of Tsukuba*, Atsushi Nakamura *NTT Corporation Science Laboratories*

**A New Permutation Control Method for Frequency Domain BSS**

Steven Grant *Missouri S&T*, Christopher Osterwise *Missouri S&T*

**OS.13-BioSPS.2 Signal Processing Aspects of Brain Computer/Machine Interfaces**

**Toward Multi-Command Auditory Brain Computer Interfacing Using Speech Stimuli**

Shuho Yoshimoto *University of Electro-Communications*, Yoshikazu Washizawa *University of Electro-Communications*, Toshihisa Tanaka *Tokyo University of Agriculture and Technology*, Hiroshi Higashi *Tokyo University of Agriculture and Technology*, Jun Tamura *Nara Institute of Science and Technology*

**EEG Energy Analysis Based On MEMD With ICA Pre-Processing**

Yunchao Yin *Saitama Institute of Technology*, Cao Jianting *Saitama Institute of Technology*, Toshihisa Tanaka *Tokyo University of Agriculture and Technology*

**Auditory Steady-State Response Stimuli Based BCI application - The Optimization of the Stimuli Types and Lengths**

Yoshihiro Matsumoto *University of Tsukuba*, Tomek Rutkowski *University of Tsukuba*

**On the Classification of EEG/HEG-based Attention Levels Via Time-Frequency Selective Multilayer Perceptron For BCI-based Neurofeedback System**

Supassorn Rodrak *Mahidol University*, Yodchanan Wongsawat *Mahidol University*

**Minimal-Assisted SSVEP-based Brain-Computer Interface Device**  
Yunyong Punsawad *Mahidol University*, Yodchanan Wongsawat *Mahidol University*

**The Spatial Real and Virtual Sound Stimuli Optimization for the Auditory BCI**  
Nozomu Nishikawa *University of Tsukuba*, Tomek Rutkowski *University of Tsukuba*

### **OS.14-IVM.6 Visual Signal Compression**

**Image Set Modeling by Exploiting Temporal-Spatial Correlation and Photo Album Compression**  
Ruobing Zou *HKUST*, Oscar C. AU *HKUST*, Guyue Zhou *HKUST*, Sijin Li *HKUST*, Lin Sun *HKUST*

**Largest Coding Unit Based Framework for Non-local Means Filter**  
Masaaki Matsumura *NTT Corporation*, Seishi Takamura *NTT Corporation*, Atsushi Shimizu *NTT Corporation*

**A Five-stage Pipeline Design of Binary Arithmetic Encoder in H.264/AVC**  
Rui Song *Xidian University*, Hongfei Cui *Xidian University*, Yunsong Li *Xidian University*, Song Xiao *Xidian University*

**Architecture of High-throughput Context Adaptive Variable Length Coding Decoder in AVC/H.264**  
Gwo Giun (Chris) Lee *National Cheng Kung University*, Shu-Ming Xu *National Cheng Kung University*, Chun-Fu Chen *National Cheng Kung University*, Ching-Jui Hsiao *National Cheng Kung University*

**An Inter-Frame/Inter-View Cache Architecture Design for Multi-View Video Decoders**  
Jui-Sheng Lee *National Chiao Tung University*, Sheng-Han Wang *National Chung-Cheng University*, Chih-Tai Chou *National Chung-Cheng University*, Cheng-An Chien *National Chung-Cheng University*, Hsiu-Cheng Chang *National Chung-Cheng University*, Jiun-In Guo *National Chiao Tung University*

### **OS.15-SLA.7 Speech Recognition (II)**

**Acoustic Model Training Using Committee-Based Active and Semi-Supervised Learning for Speech Recognition**  
Tsutaoka Takuya *Tokyo Institute of Technology*, Koichi Shinoda *Tokyo Institute of Technology*

**Distance Attenuation Control of Spherical Loudspeaker Array**  
Shigeki Miyabe *University of Tsukuba*, Takaya Hayashi *University of Tsukuba*, Takeshi Yamada *University of Tsukuba*, Shoji Makino *University of Tsukuba*

**Recognition of Utterances with Grammatical Mistakes based on Optimization of Language Model towards Interactive CALL Systems**  
Takuya Anzai *Tohoku University*, Akinori Ito *Tohoku University*

**Fast NMF Based Approach and Improved VQ Based Approach for Speech Recognition From Mixed Sound**  
Shoichi Nakano *Toyohashi University of Technology*, Kazumasa Yamamoto *Toyohashi University of Technology*, Seiichi Nakagawa *Toyohashi University of Technology*

**Expansion of Training Texts to Generate a Topic-Dependent Language Model for Meeting Speech Recognition**  
Kazushige Egashira *Nagasaki University*, Kazuya Kojima *Nagasaki University*, Masaru Yamashita *Nagasaki University*, Katsuya Yamauchi *Nagasaki University*, Shoichi Matsunaga *Nagasaki University*

### **OS.16-WCN.2 Wireless Communications and Networking (I)**

**Packet Loss Rate Estimation with Active and Passive Measurements**  
Atsushi Miyamoto *Nara Institute of Science and Technology*, Kazuho Watanabe *Nara Institute of Science and Technology*, Kazushi Ikeda *Nara Institute of Science and Technology*

**Investigating Wireless Sensor Network Lifetime under Static Routing with Unequal Energy Distribution**  
Apostolis Xenakis *University of Thessaly*, Ioannis Katsavounidis *University of Thessaly*, George Stamoulis *University of Thessaly*

**Efficient Algorithm with Lognormal Distributions for Overloaded MIMO Wireless Systems**  
Kazi Obaidullah *Hokkaido University*, Yoshikazu Miyanaga *Hokkaido University*

**Location Based Relay Selection Optimization in Mobile Cooperative Environment**  
Esam Obiedat *CommScope Inc.*, Chirag Warty *Stanford University*, Lei Cao *University of Mississippi*

**A Real-time Streaming Media Transmission Protocol for Multi-hop Wireless Networks**  
Jianchao Du *Xidian University*, Song Xiao *Xidian University*, Lei Quan *Xidian University*

**Optimal Bit Allocation of Limited Rate Feedback for Cooperative Jamming**  
Xinjie Yang *University of California, Irvine*, A. Lee Swindlehurst *University of California, Irvine*

### **PS.3-IVM.7 Selected Topics in Computer Vision and Multimedia**

**An Algorithm for Radar Power Line Detection with Tracking**  
Qirong Ma *University of Washington*, Darren Goshi *Honeywell Corporation*, Long Bui *Honeywell Corporation*, Ming-Ting Sun *University of Washington*

**Multiple Exposure Integration with Image Denoising**  
Ryo Matsuoka *The University of Kitakyushu*, Masahiro Okuda *The University of Kitakyushu*, Takao Jinno *The University of Kitakyushu*

**Palmpoint Verification using Gradient Maps and Support Vector Machines**  
Chun-Wei Lu *Academia Sinica*, Ivy Fan *Academia Sinica*, Chin-Chuan Han *National United University*, Jyh-Chian Chang *Chinese Culture University*, Kuo-Chin Fan *National Central University*, Hong-Yuan Liao *Academia Sinica*

**OpenQoS: An OpenFlow Controller Design for Multimedia Delivery with End-to-End Quality of Service over Software-Defined Networks**  
Hilmi Egilmez *Koc University*, S.Tahsin Dane *Koc University*, K. Tolga Bagci *Koc University*, A. Murat Tekalp *Koc University*

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**GIF-LR:GA-based Informative Feature for Lipreading**

Naoya Ukai *Gifu University*, Takumi Seko *Gifu University*, Tamura Satoshi *Gifu University*, Hayamizu Satoru *Gifu University*

## **PS.4-BioSPS.3 Biomedical Signal Processing and Systems**

**Comparative Study of Interactive Seed Generation for Growcut-Based Fast 3D MRI Segmentation**

Toshihiko Yamasaki *The University of Tokyo*, Tsuhan Chen *Cornell University*, Masakazu Yagi *Oaska University*, Toshinori Hirai *Kumamoto University*, Ryuji Murakami *Kumamoto University*

**Compressed Sensing with Super-resolution in Magnetic Resonance using Quadratic Phase Modulation**

Satoshi Ito *Utsunomiya University*, Yoshifumi Yamada *Utsunomiya University*

**Exploiting Biclustering for Missing Value Estimation in DNA Microarray Data**

Kin-On Cheng *The Hong Kong Polytechnic University*, Bonnie Law *The Hong Kong Polytechnic University*, Wan-Chi Siu *The Hong Kong Polytechnic University*

**A Breast Tumor Classification Method based on Ultrasound BI-RADS Data Mining**

Jin Man Park *Samsung Electronics*, Hyoungmin Park *Samsung Electronics*, Jong-Ha Lee *Samsung Electronics*, Yeong Kyeong Seong *Samsung Electronics*, Kyoung-Gu Woo *Samsung Electronics*, Kyuseok Shim *Seoul National University*

**An AdaBoost-Based Weighting Method for Localizing Human Brain Magnetic Activity**

Tetsuya Takiguchi *Kobe University*, Ryoichi Takashima *Kobe University*, Yasuo Arika *University of Washington*, Toshiaki Imada *University of Washington*, Lotus Lin *University of Washington*, Patricia Kuhl *University of Washington*, Masaki Kawakatsu *Tokyo Denki University*

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**16:30 - 18:10**

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## **OS.17-SLA.8 Speech Processing (II)**

**Optimizing the Parameters of Decoding Graphs Using New Log-based MCE**

Abdelaziz Abdelhamid *The University of Auckland*, Waleed Abdulla *The University of Auckland*

**Voice Activity Detection Based on Augmented Statistical Noise Suppression**

Yasunari Obuchi *Hitachi Ltd.*, Ryu Takeda *Hitachi Ltd.*, Naoyuki Kanda *Hitachi Ltd.*

**Language Modeling for Spoken Dialogue System based on Sentence Transformation and Filtering using Predicate-Argument Structures**

Koichiro Yoshino *Kyoto University*, Shinsuke Mori *Kyoto University*, Tatsuya Kawahara *Kyoto University*

**Hybrid Vector Space Model for Flexible Voice Search**

Cheongjae Lee *Kyoto University*, Tatsuya Kawahara *Kyoto University*

**An Interference-Free Representation of Group Delay for Periodic Signals**

Hideki Kawahara *Wakayama University*, Masanori Morise *Ritsumeikan University*, Ryuichi Nisimura *Wakayama University*, Toshio Irino *Wakayama University*

## **OS.18-SLA.9 Audio & Music Processing (II)**

**A Blind Bandwidth Extension Method of Audio Signals based on Volterra Series**

Xing-tao Zhang *Beijing University of Technology*, Chang-chun Bao *Beijing University of Technology*, Xin Liu *Beijing University of Technology*, Li-yan Zhang *Beijing University of Technology*

**Personalized Music Emotion Recognition via Model Adaptation**

Ju-Chiang Wang *Academia Sinica*, Yi-Hsuan Yang *Academia Sinica*, Hsin-Min Wang *Academia Sinica*, Shyh-Kang Jeng *National Taiwan University*

**HRTF Magnitude Modeling Using a Non-Regularized Least-Squares Fit of Spherical Harmonics Coefficients on Incomplete Data**

Jens Ahrens *Microsoft Research*, Mark Thomas *Microsoft Research*, Ivan Tashev *Microsoft Research*

**Subjective Similarity of Music: Data Collection for Individuality Analysis**

Shota Kawabuchi *Nagoya University*, Chiyomi Miyajima *Nagoya University*, Norihide Kitaoka *Nagoya University*, Kazuya Takeda *Nagoya University*

**Comparison of Superimposition and Sparse Models in Blind Source Separation By Multichannel Wiener Filter**

Ryutaro Sakanashi *University of Tsukuba*, Shigeki Miyabe *University of Tsukuba*, Takeshi Yamada *University of Tsukuba*, Shoji Makino *University of Tsukuba*

## **OS.19-IVM.8 Visual 3D Scene Reconstruction and its Applications**

**Violin Pedagogy for Finger and Bow Placement using Augmented Reality**

Francois de Sorbier *Keio University*, Hiroyuki Shiino *Keio University*, Hideo Saito *Keio University*

**Robust View Synthesis Under Varying Illumination Conditions Using Segment-Based Disparity Estimation**

Il-lyong Jung *Korea University*, Chang-Su Kim *Korea University*

**Memory-Efficient Belief Propagation in Stereo Matching on GPU**

Young-kyu Choi *Inha University*, Williem Inha *Inha University*, In Kyu Park *Inha University*

**Real-Time Panorama Image Synthesis By Fast Camera Pose Estimation**

Beom Su Kim *Seoul National University*, Sang Hwa Lee *Seoul National University*, Nam Ik Cho *Seoul National University*

**Combining Multi-view Stereo and Super Resolution in a Unified Framework**

Haesol Park *Seoul National University*, Kyoung Mu Lee *Seoul National University*, Sang Uk Lee *Seoul National University*

**Confidence-based Refinement of Corrupted Depth Maps**

Satoshi Ikehata *University of Tokyo*, Kiyoharu Aizawa *University of Tokyo*

**OS.20-SIPTM.1 Control, Optimization and Information Processing for Smart Grid (I)**

**Distributed State Estimation in Smart Grid with Communication Constraints**

Hang Ma *University of Maryland*, Yu-Han Yang *University of Maryland*, Yan Chen *University of Maryland*, K. J. Ray Liu *University of Maryland*

**Cyclostationary Noise Mitigation in Narrowband Powerline Communications**

Jing Lin *University of Texas at Austin*, Brian Evans *University of Texas at Austin*

**Load Disaggregation Using Harmonic Analysis and Regularized Optimization**

Jerry Chiang *ADSC*, Tianzhu Zhang *ADSC*, Binbin Chen *ADSC*, Yih-chun Hu *University of Illinois at Urbana-Champaign*

**Dynamic Incentive Strategy for Voluntary Demand Response based on TDP Scheme**

Haiyan Shu *Institute for Infocomm Research*, Rongshan Yu *Institute for Infocomm Research*, Susanto Rahardja *Institute for Infocomm Research*

**Toward Standards for Model-Based Control of Dynamic Interactions in Large Electric Power Grids**

Qixing Liu *Carnegie Mellon University*, Marija Ilic *Carnegie Mellon University*

**OS.21 -BioSPS.4 Biomedical Image Acquisition, Reconstruction, and Quantitation**

**Magnetic Resonance Techniques for Fat Quantification in Obesity**

Houchun Hu *Children's Hospital Los Angeles*

**Quantitatively Accurate Image Reconstruction for Clinical Whole-Body PET Imaging**

Evren Asma *GE Global Research*, Sangtae Ahn *GE Global Research*, Hua Qian *GE Global Research*, Girishankar Gopalakrishnan *GE Healthcare - Bangalore*, Kris Thielemans *King's College London*, Steven Ross *GE Healthcare*, Ravindra Manjeshwar *GE Global Research*, Alexander Ganin *GE Healthcare*

**Surface Fluid Registration and Multivariate Tensor-Based Morphometry in Newborns - The Effects of Prematurity on the Putamen**

Jie Shi *Arizona State University*, Yalin Wang *Arizona State University*, Rafael Ceschin *Children's Hospital of Pittsburgh of UPMC*, Xing An *Arizona State University*, Marvin Nelson *Children's Hospital Los Angeles and University of Southern California*, Ashok Panigrahy *Children's Hospital of Pittsburgh of UPMC*, Natasha Lepore *Children's Hospital Los Angeles and University of Southern California*

**High Spatio-Temporal Resolution Dynamic Contrast-Enhanced MRI using Compressed Sensing**

Kyunghyun Sung *University of California, Los Angeles*, Manoj Saranathan *Stanford University*, Bruce Daniel *Stanford University*, Brian Hargreaves *Stanford University*

**Quantitative Analysis of Myocardial Perfusion Images**

Piotr Slomka *Cedars-Sinai Medical Center*, Reza Arsanjani *Cedars-Sinai Medical Center*, Yuan Xu *Cedars-Sinai Medical Center*, Daniel Berman *Cedars-Sinai Medical Center*, Guido Germano *Cedars-Sinai Medical Center*

**Correcting Susceptibility-Induced Distortion in Diffusion-Weighted MRI using Constrained Nonrigid Registration**

Chitresh Bhushan *University of Southern California*, Anand Joshi *University of Southern California*, Justin Haldar *University of Southern California*, Richard Leahy *University of Southern California*

**OS.22-WCN.3 System Design, Architecture, Physical Layer Security in MIMO systems**

**Data Detection of Amplify-and-Forward User Cooperation in MIMO Broadcasting Systems without Channel State Information Feedback**

Shih-Jung Lu *Academia Sinica*, Ronald Chang *Academia Sinica*, Wei-Ho Chung *Academia Sinica*

**On Secure Beamforming for Wiretap Channels with Partial Channel State Information at the Transmitter**

Pin-Hsun Lin *National Taiwan University*, Shih-Chun Lin *NTUST*, Szu-Hsiang Lai *National Taiwan University*, Hsuan-Jung Su *National Taiwan University*

**Secret Key Generation over Correlated Wireless Fading Channels using Vector Quantization**

Hou-Tung Li *National Tsing Hua University*, Yao-Win Peter Hong *National Tsing Hua University*

**Two-stage Compensation for Non-ideal Effects in MIMO-OFDM Systems**

Chih-Chi Wu *National Cheng Kung University*, Ping Ma *National Cheng Kung University*, Wun-De Hung *National Cheng Kung University*, Chih-Hung Kuo *National Cheng Kung University*

**On Blind Sequential Detection of Misbehaving Relay**

Yang-Ming Yi *National Sun Yat-sen University*, Li-Chung Lo *National Sun Yat-sen University*, Wan-Jen Huang *National Sun Yat-sen University*

**OS.23-IVM.9 Perception-based Multimedia Quality Assessment and Processing**

**An Improved Full-Reference Image Quality Metric Based on Structure Compensation**

Ke Gu *Shanghai Jiao Tong University*, Guangtao Zhai *Shanghai Jiao Tong University*, Xiaokang Yang *Shanghai Jiao Tong University*, Wenjun Zhang *Shanghai Jiao Tong University*

**Video Quality Metric for Consistent Visual Quality Control in Video Coding**

Long Xu *University of Science and Technology Beijing*, King Ngai Ngan *Chinese University of Hong Kong*, Song Nan Li *Chinese University of Hong Kong*, Lin Ma *Chinese University of Hong Kong*

**Wednesday, December 5, 2012**

**A New No-reference Image Quality Assessment Model Based on DCT Coefficients Distribution and PSNR**

Zhengyou Wang *Shijiazhuang Tiedao University*, Wan Wang *Shijiazhuang Tiedao University*, Zhenxing Li *Jiangxi University of Finance & Economics*, Jin Wang *Shijiazhuang Tiedao University*, Weisi Lin *Nanyang Technological University*

**A Fusion Approach to Video Quality Assessment Based on Temporal Decomposition**

Tsung-Jung Liu *University of Southern California*, Weisi Lin *Nanyang Technological University*, C.-C. Jay Kuo *University of Southern California*

**Performance Comparison of Decision Fusion Strategies in BMMF-based Image Quality Assessment**

Lina Jin *Tampere University of Technology*, SeongHo Cho *University of Southern California*, Tsung-Jung Liu *University of Southern California*, Karen Egiazarian *Tampere University of Technology*, C.-C. Jay Kuo *University of Southern California*

**Quality-of-Experience Perception for Video Streaming Services: Preliminary Subjective and Objective Results**

Khalil ur Rehman Laghari *EMT-INRS*, Omneya Issa *Communications Research Centre Canada*, Filippo Speranza *Communications Research Centre Canada*, Tiago Falk *Institut National de la Recherche Scientifique*

**OS.24-IVM.10 Visual Media Data Representation, Retrieval and Recognition**

**A User-driven Model for Content-based Image Retrieval**

Yi Zhang *Tianjin University*, Zhipeng Mo *Tianjin University*, Wenbo Li *Tianjin University*, Tianhao Zhao *Tianjin University*

**A Poselet Based Key Frame Searching Approach in Sports Training Videos**

Wu Lifang *Beijing University of Technology*, Zhang Jingwen *Beijing University of Technology*, Yan Fenghui *Beijing University of Technology*

**A Novel Multi-instance Learning Algorithm with Application to Image Classification**

Xiaocong Xi *Shandong University*, Xinshun Xu *Shandong University*, Xiaolin Wang *Shandong University*

**Hierarchical Bag-of-Words Model for Joint Multi-View Object Representation and Classification**

Xiang Fu *University of Southern California*, Sanjay Purushotham *University of Southern California*, Daru Xu *University of Southern California*, Jian Li *University of Southern California*, C.-C. Jay Kuo *University of Southern California*

**An Analysis of Eating Activities for Automatic Food Type Recognition**

Hyun-Jun Kim *Samsung Electronics*, Mira Kim *Samsung Electronics*, Sun-Jae Lee *Samsung Electronics*, Young Sang Choi *Samsung Electronics*

**A New Hybrid PCNN for Multi-Objects Image Segmentation**

Zhenbo Li *China Agricultural University*

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**10:50 - 12:30**

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**OS.25-IVM.11 Recent Topics in Image, Video, and Multimedia Processing (I)**

**3D Shape Retrieval from a 2D Image as Query**

Masaki Aono *Toyohashi University of Technology*, Hiroki Iwabuchi *Toyohashi University of Technology*

**A Large-Scale Shape Benchmark for 3D Object Retrieval: Toyohashi Shape Benchmark**

Atsushi Tatsuma *Toyohashi University of Technology*, Hitoshi Koyanagi *Toyohashi University of Technology*, Masaki Aono *Toyohashi University of Technology*

**Quality Assessment of Finger-vein Image**

Huafeng Qin *Chongqing University*, Sheng Li *Nanyang Technological University*, Alex Chichung Kot *Nanyang Technological University*, Lan Qin *Chongqing University*

**Preserving Features in Multilevel Halftones**

Lai-Yan Wong *Hong Kong Polytechnic University*, Yuk-Hee Chan *Hong Kong Polytechnic University*

**Automatic Recognition of Frame Quality Degradation For Inspection of Surveillance Camera**

Yi-Chong Zeng *Institute for Information Industry*, Miao-Fen Chueh *Institute for Information Industry*, Chi-Hung Tsai *Institute for Information Industry*

**OS.26-SLA.10 Immersive Audio and Cloud-assisted Audio Processing**

**Theories and Signal Processing Techniques for the Implementation of Sound Ball in Space Using Loudspeaker Array**

Jung-Woo Choi *KAIST*, Yang-Hann Kim *KAIST*

**Cloud-based Audio Fingerprinting Service**

Wenyu Jiang *Institute for Infocomm Research*, Yongwei Zhu *Institute for Infocomm Research*, Xiaoming Bao *Institute for Infocomm Research*, Rongshan Yu *Institute for Infocomm Research*

**Repeating Segment Detection in Songs using Audio Fingerprint Matching**

Regunathan Radhakrishnan *Dolby Laboratories Inc.*, Wenyu Jiang *Institute for Infocomm Research*

**Streaming of Scalable Multimedia over Content Delivery Cloud**

Xiaoming Bao *Institute for Infocomm Research*, Rongshan Yu *Institute for Infocomm Research*

**Spatial Sound Reproduction Using Conventional and Parametric Loudspeakers**

Ee-Leng Joseph Tan *Nanyang Technological University*, Woon-seng Gan *NTU*, Chiu-Hao Chen *Nanyang Technological University*



Interactive 3D Audio Rendering in Flexible Playback Configurations  
Jean-Marc Jot *DTS, Inc.*

### **OS.27-SPS.2 Advances in Circuits and Systems for Multimedia Processing and Analysis (I)**

**A Low Power ASIP for Precision Configurable FFT Processing**

Yifan Bo *Fudan University*, Jun Han *Fudan University*, Yao Zou *Fudan University*, Xiaoyang Zeng *Fudan University*

**SIFT-Based Low Complexity Keypoint Extraction and Its Real-Time Hardware Implementation for Full-HD Video**

Takahiro Suzuki *Waseda University*, Takeshi Ikenaga *Waseda University*

**Halo Artifacts Reduction Method for Variational based Realtime Retinex Image Enhancement**

Hiroshi Tsutsui *Kyoto University*, Satoshi Yoshikawa *Osaka University*, Hiroyuki Okuhata *Synthesis Corporation*, Takao Onoye *Osaka University*

**Design and Analysis of a Many-Core Processor Architecture for Multimedia Applications**

Jyu-Yuan Lai *National Tsing Hua University*, Po-Yu Chen *National Tsing Hua University*, Ting-Shuo Hsu *National Tsing Hua University*, Chih-Tsun Huang *National Tsing Hua University*, Jing-Jia Liou *National Tsing Hua University*

**An Edge-based Adaptive Image Interpolation and Its VLSI Architecture**

Hongbin Sun *Xi'an Jiaotong University*, Fengwei Zhang *Xi'an Jiaotong University*, Nanning Zheng *Xi'an Jiaotong University*

### **OS.28-SLA.11 Recent Advances in Audio and Acoustic Signal Processing (II)**

**Psychoacoustic Active Noise Control System**

Tongwei Wang *NTU*, Woon-seng Gan *NTU*, Yong-Kim Chong *NTU*

**Network-Based Multi-Channel Signal Processing Using the Precision Time Protocol**

Yoshifumi Chisaki *Kumamoto University*, Dan Murakami *Kumamoto University*, Tsuyoshi Usagawa *Kumamoto University*

**Content/Context-Adaptive Feature Selection for Environmental Sound Recognition**

EnShuo Tsau *University of Southern California*, Sachin Chachada *University of Southern California*, C.-C. Jay Kuo *University of Southern California*

**Blind Depth Estimation Based on Primary-To-Ambient Energy Ratio for 3-D Acoustic Depth Rendering**

Se-Woon Jeon *Yonsei University*, Dae Hee Youn *Yonsei University*, Young-cheol Park *Yonsei University*

**Theoretical Framework for Stochastic Modeling of FxLMS-based Active Noise Control Dynamics**

Iman Tabatabaei Ardekani *University of Auckland*, Waleed H. Abdulla *University of Auckland*

### **OS.29-SIPTM.2 Recent Topics on Signal Processing in Noisy Environments**

**Low-complexity Approximate LMMSE Channel Estimation for OFDM Systems**

Shuichi Ohno *Hiroshima University*, Emmanuel Manasseh *Hiroshima University*

**Mixture Structure of Kernel Adaptive Filters for Improving the Convergence Characteristics**

Kiyoshi Nishikawa *Tokyo Metropolitan University*, Hiroya Nakazato *Tokyo Metropolitan University*

**Pink Noise Whitening Method for Pitch Synchronous LPC Analysis**

Liu Liqing *Saitama University*, Shimamura Tetsuya *Saitama University*

**Self-Interference Canceller for Full-Duplex Radio Relay Station Using Virtual Coupling Wave Paths**

Kazunori Hayashi *Kyoto University*, Yasuo Fujishima *Kyoto University*, Megumi Kaneko *Kyoto University*, Hideaki Sakai *Kyoto University*, Riichi Kudo *NTT Corporation*, Tomoki Murakami *NTT Corporation*

**An Adaptive MAP Speech Spectral Amplitude Estimator Combined With a Zero Phase Noise Suppressor**

Sayuri Kohmura *Osaka University*, Arata Kawamura *Osaka University*, Youji Iiguni *Osaka University*

### **OS.30-SIPTM.3 Control, Optimization and Information Processing for Smart Grid (II)**

**An Optimal Dynamic Pricing and Schedule Approach in V2G**

Yi Han *University of Maryland*, Yan Chen *University of Maryland*, Feng Han *University of Maryland*, K. J. Ray Liu *University of Maryland*

**Power Grid Vulnerability Measures to Cascading Overload Failures**

Zhifang Wang *Virginia Commonwealth University*, Anna Scaglione *University of California, Davis*, Robert Thomas *Cornell University*

**Quickest Detection of Unknown Power Quality Events for Smart Grids**

Xingze He *University of Southern California*, Man-On Pun *Huawei Technologies*, C.-C. Jay Kuo *University of Southern California*

**Some Problems in Demand Side Management**

Lingwen Gan *California Institute of Technology*, Libin Jiang *California Institute of Technology*, Steven Low *California Institute of Technology*, Ufuk Topcu *California Institute of Technology*, Changhong Zhao *California Institute of Technology*

**Scale Invariance and Long-Range Dependence in Smart Energy Grids**

Marco Levorato *University of Southern California*, Urbashi Mitra *University of Southern California*

### **OS.31-IVM.12 Image/Video Retrieval and Multimedia Applications**

**Social Album: Linking and Merging Online Albums based on Social Relationship**

Kai-Yin Cheng *National Taiwan University*, Tzu-Hao Kuo *National Taiwan University*, Yu-Ting Wong *National Taiwan University*, Ming-Sui Lee *National Taiwan University*, Bing-Yu Chen *National Taiwan University*

**Wednesday, December 5, 2012**

**An Efficient VLSI Architecture of Parallel Bit Plane Encoder Based on CCSDS IDC**

Yi Lu *Xidian University*, Jie Lei *Xidian University*, Yunsong Li *Xidian University*

**Video Instance Search for Embedded Marketing**

Ting-Chu Lin *Academia Sinica*, Jau-Hong Kao *Industrial Technology Research Institute*, Chin-Te Liu *Industrial Technology Research Institute*, Chia-Yin Tsai *National Taiwan University*, Yu-Chiang Frank Wang *Academia Sinica*

**Learning Sparse Dictionaries for Saliency Detection**

Karen Guo *National Tsing Hua University*, Hwann-Tzong Chen *National Tsing Hua University*

**Voting-Based Depth Map Refinement and Propagation for 2D to 3D Conversion**

Yu-Hsiang Chiu *National Taiwan University*, Ming-Sui Lee *National Taiwan University*, Wei-Kai Liao *The White Rabbit Entertainment*

**OS.32-SLA.12 Recent Topics in Speech Processing (I)**

**Hierarchical Prosodic Boundary Prediction For Uyghur TTS**

Hamdulla Askar *Xinjiang University*, Guljamal Mamateli *Xinjiang University*, Askar Rozi *Xinjiang University*, Imam Sayyare *Xinjiang University*

**A Research of Dependencies Between Frequency Components and Speaker Characteristics**

Hyon Songgun *Tianjin University*, Wang Hongcui *Tianjin University*, Jianguo Wei *Tianjin University*, Jianwu Dang *JAIST/Tianjin University*

**Development of Note-Taking Support System with Speech Interface**

Kohei Ota *University of Yamanashi*, Hiromitsu Nishizaki *University of Yamanashi*, Yoshihiro Sekiguchi *University of Yamanashi*

**An Online Evaluation System for English Pronunciation Intelligibility for Japanese English Learners**

Hiroshi Kibishi *Toyohashi University of Technology*, Seiichi Nakagawa *Toyohashi University of Technology*

**Real-Time Semi-Blind Speech Extraction with Speaker Direction Tracking on Kinect**

Yuji Onuma *Nara Institute of Science and Technology*, Noriyoshi Kamado *Nara Institute of Science and Technology*, Hiroshi Saruwatari *Nara Institute of Science and Technology*, Kiyohiro Shikano *Nara Institute of Science and Technology*

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**14:00 - 15:40**

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**OS.33-SLA.13 Fundamental Technologies in Modern Speech Processing (I)**

**Survey on Approaches to Speech Recognition in Reverberant Environments**

Takuya Yoshioka *NTT Corporation*, Armin Sehr *University of Erlangen-Nuremberg*, Marc Delcroix *NTT Corporation*, Keisuke Kinoshita *NTT Corporation*, Roland Maas *University of Erlangen-Nuremberg*, Tomohiro Nakatani *NTT Corporation*, Walter Kellermann *University of Erlangen-Nuremberg*

**Recent Developments in Large Vocabulary Continuous Speech Recognition**

George Saon *IBM T. J. Watson Research Center*, Jen-Tzung Chien *National Chiao Tung University*

**Microphone Array Processing for Distant Speech Recognition: Towards Real-World Deployment**

Kenichi Kumatani *Disney Research*, Takayuki Arakawa *NEC*, Kazumasa Yamamoto *Toyohashi University of Technology*, John McDonough *Carnegie Mellon University/Voci Technologies, Inc.*, Bhiksha Raj *Carnegie Mellon University*, Rita Singh *Carnegie Mellon University*, Ivan Tashev *Microsoft Research*

**Exploiting Speech Production Information for Automatic Speech and Speaker Modeling and Recognition -- Possibilities and New Opportunities**

Vikram Ramanarayanan *University of Southern California*, Prasanta Ghosh *IBM Research India*, Adam Lammert *University of Southern California*, Shrikanth Narayanan *University of Southern California*

**OS.34-IVM.13 Recent Topics in Image, Video, and Multimedia Processing (II)**

**Color-Tone Similarity on Digital Images**

Hisakazu Kikuchi *Niigata University*, Heikki Huttunen *Tampere University of Technology*, Junghyeun Hwang *Niigata University*, Masahiro Yukawa *Niigata University*, Shogo Muramatsu *Niigata University*, Jaeho Shin *Dongguk University*

**Efficient Model Training for HMM-based Person Identification by Gait**

Muhammad Aqmar *Tokyo Institute of Technology*, Koichi Shinoda *Tokyo Institute of Technology*, Sadaoki Furui *Tokyo Institute of Technology*

**Real-Time Both Hands Tracking Using CAMshift with Motion Mask and Probability Reduction by Motion Prediction**

Ryosuke Araki *Waseda University*, Takeshi Ikenaga *Waseda University*, Seiichi Gohshi *Kogakuin University*

**High Contrast Tone-mapping and its Application for Two-layer High Dynamic Range Coding**

Takao Jinno *Toyohashi University of Technology*, Hiroya Watanabe *University of Kitakyushu*, Masahiro Okuda *University of Kitakyushu*

**Gradient-based Global Features and Its Application to Image Retargeting**

Izumi Ito *Tokyo Institute of Technology*

**Finding Canonical Views by Measuring Features on the Viewing Plane**

Wencheng Wang *Institutue of Software, CAS*, Liming Yang *Institutue of Software, CAS*, Dongxu Wang *Institutue of Software, CAS*

### **OS.35-SIPTM.4 Recent Advances in Sparse and Nonlinear Adaptive Signal Processing**

#### **An Alternative Kernel Adaptive Filtering Algorithm for Quaternion-Valued Data**

Tokunbo Ogunfunmi *Santa Clara University*, Thomas Paul *Santa Clara University*

#### **Subspace Based Blind Sparse Channel Estimation**

Kazunori Hayashi *Kyoto University*, Hiroki Matsushima *Kyoto University*, Hideaki Sakai *Kyoto University*, Elisabeth Carvalho *Aalborg University*, Petar Popovski *Aalborg University*

#### **An Efficient Iterative Method for Basis Pursuit Adaptive Filters for Sparse Systems**

Steven Grant *Missouri S&T*, Pratik Shah *Missouri S&T*, Jacob Benesty *University of Quebec*

#### **Sparse Recovery from Convolved Output in Underwater Acoustic Relay Networks**

Sunav Choudhary *University of Southern California*, Urbashi Mitra *University of Southern California*

#### **A Zero Attracting Proportionate Normalized Least Mean Square Algorithm**

Rajib Lochan Das *Indian Institute of Technology*, Mrityunjy Chakraborty *Indian Institute of Technology*

### **OS.36-SLA.14 Recent Advances in Signal Processing/Filter Applications**

#### **A Comb Filter with Adaptive Notch Gain for Periodic Noise Reduction**

Yosuke Sugiura *Osaka University*, Arata Kawamura *Osaka University*, Youji Iiguni *Osaka University*

#### **A Directional and Shift-Invariant Transform Based on M-channel Rational-Valued Cosine-Sine Modulated Filter Banks**

Seisuke Kyochi *University of Kitakyushu*, Taizo Suzuki *Nihon University*, Yuichi Tanaka *Tokyo University of Agriculture and Technology*

#### **Robust Median Filtering Forensics Based on the Autoregressive Model of Median Filtered Residual**

Xiangui Kang *Sun Yat-Sen University*, Anjie Peng *Sun Yat-Sen University*, K. J. Ray Liu *University of Maryland*, Matthew Stamm *University of Maryland*

#### **Nonlinear Signal Processing for Compensating Nonlinear Distortion of Loudspeakers**

Kenta Iwai *Kansai University*, Yoshinobu Kajikawa *Kansai University*

#### **Classifying NMF Components Based on Vector Similarity for Speech and Music Separation**

Nengheng Zheng *Shenzhen University*, Xia Li *Shenzhen University*, Yi Cai *Shenzhen University*, Tan Lee *CUHK*

### **OS.37-SPS.3 Sparse and Feature Representation for Image/Video Restoration**

#### **Review of Image Interpolation and Super-resolution**

Wan-Chi Siu *Hong Kong Polytechnic University*, Kwok Wai Hung *Hong Kong Polytechnic University*

#### **Super Resolution with Edge-Constrained Motion Estimation**

Yue Zhuo *Peking University*, Jiaying Liu *Peking University*, Mading Li *Peking University*, Zongming Guo *Peking University*

#### **Super Resolution For Subpixel Based Downsampled Images**

Ketan Tang *HKUST*, Oscar C. Au *HKUST*, Lu Fang *USTC*, Yuanfang Guo *HKUST*, Pengfei Wan *HKUST*, Lingfeng Xu *HKUST*

#### **Image Deblurring with Low-rank Approximation Structured Sparse Representation**

Weisheng Dong *Xidian University*, Guangming Shi *Xidian University*, Xin Li *West Virginia University*

#### **Face Super-Resolution Based on Singular Value Decomposition**

Muwei Jian *Hong Kong Polytechnic University*, Kin Man Lam *Hong Kong Polytechnic University*

#### **Robust Single Image Super-resolution Based on Gradient Enhancement**

Licheng Yu *Shanghai Jiao Tong University*, Hongteng Xu *Shanghai Jiao Tong University*, Yi Xu *Shanghai Jiao Tong University*, Xiaokang Yang *Shanghai Jiao Tong University*

### **OS.38-SIPTM.5 Signal and Information Processing of Energy Signals**

#### **Networked Loads in the Distribution Grid**

Zhifang Wang *Virginia Commonwealth University*, Xiao Li *University of California, Davis*, Vishak Muthukumar *University of California, Davis*, Anna Scaglione *University of California, Davis*, Sean Peisert *Lawrence Berkeley National Laboratory/University of California, Davis*, Charles McParland *Lawrence Berkeley National Laboratory*

#### **Instantaneous Frequency Estimation and Localization for ENF Signals**

Adi Hajj-Ahmad *University of Maryland*, Ravi Garg *University of Maryland*, Min Wu *University of Maryland*

#### **Modeling Distributed PV Energy Using Stochastic Queuing Models**

Anthony Kuh *University of Hawaii*, Chuanyi Ji *Georgia Institute of Technology*, Yun Wei *Georgia Institute of Technology*

#### **Real-Time Adaptive Distributed State Estimation in Smart Grids**

Soumya Kar *Carnegie Mellon University*, Jose Moura *Carnegie Mellon University*

### **OS.39-SPS.4/BioSPS.5 Advances in Signal Processing Systems and Biomedical Signal Processing**

#### **EAG: Edge Adaptive Grid Data Hiding for Binary Image Authentication**

Hong Cao *Institute for Infocomm Research, A\*Star*, Alex Chichung Kot *Nanyang Technological University*

#### **Performance Improvement of Closed-Form Joint Diagonalizer of Non-Negative Hermitian Matrices**

Akira Tanaka *Hokkaido University*, Miho Murota *Hokkaido University*

#### **Weighted-CS for Reconstruction of Highly Under-sampled Dynamic MRI Sequences**

Dornoosh Zonoobi *NUS*, Ashraf A. Kassim *NUS*

**Thursday, December 6, 2012**

**An Anisotropic Diffusion Filter for Reducing Speckle Noise of Ultrasound Images Based on Separability**

Shen Liu *Tianjin University*, Jianguo Wei *Tianjin University*, Bo Feng *Tianjin University*, Wenhuan Lu *Tianjin University*, Bruce Denby *ESPCI ParisTech/Université Pierre et Marie Curie*, Qiang Fang *Chinese Academy of Social Sciences*, Jianwu Dang *JAIST/Tianjin University*

**Accelerating Householder Bidiagonalization with ARM NEON Technology**

Wenjun Yang *Tsinghua University*, Zhenyu Liu *Tsinghua University*

**Thursday, December 6, 2012**

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**09:30 - 10:30**

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**OS.40-WCN.4 Wireless Communications and Networking (II)**

**Filter-And-Forward Relay Design for OFDM Systems for Quality-of-Service Enhancement**

Donggun Kim *KAIST*, Junyeong Seo *KAIST*, Youngchul Sung *KAIST*

**Preamble Design for Joint estimation of Channel and I/Q imbalance in MIMO-OFDM Systems**

Emmanuel Manasseh *Hiroshima University*, Shuichi Ohno *Hiroshima University*, Masayoshi Nakamoto *Hiroshima University*

**One-to-N Wireless Power Transmission System Based on Multiple Access One-Way In-Band Communication**

Dong-Zo Kim *Samsung Electronics*, Ki young Kim *Samsung Advanced Institute of Technology*, Nam Yoon Kim *Samsung Advanced Institute of Technology*, Yun-Kwon Park *Samsung Advanced Institute of Technology*, Wang-Sang Lee *KAIST*, Jong-Won Yu *KAIST*, Sangwook Kwon *Samsung Advanced Institute of Technology*

**OS.41-SLA.15 Speech Recognition (III)**

**Dereverberation Based on Generalized Spectral Subtraction for Distant-talking Speaker Recognition**

Zhaofeng Zhang *Shizuoka University*, Longbiao Wang *Nagaoka University of Technology*, Atsuhiko Kai *Shizuoka University*

**Soft-clustering Technique for Training Data in Age- and Gender-independent Speech Recognition**

Daisuke Enami *Toyohashi University of Technology*, Faqiang Zhu *Toyohashi University of Technology*, Kazumasa Yamamoto *Toyohashi University of Technology*, Seiichi Nakagawa *Toyohashi University of Technology*

**Ensemble of SVM Trees for Multimodal Emotion Recognition**

Viktor Rozgic *Raytheon BBN Technologies*, Rohit Prasad *Raytheon BBN Technologies*, Shirin Saleem *Raytheon BBN Technologies*, Sankaranarayanan Ananthakrishnan *Raytheon BBN Technologies*, Rohit Kumar *Raytheon BBN Technologies*

**OS.42-IVM.14 Image Enhancement & Restoration**

**Edge-Membership Based Blurred Image Reconstruction Algorithm**

Wei-De Chang *National Taiwan University*, Jian-Jiun Ding *National Taiwan University*, Yu Chen *National Taiwan University*, Chir-Weei Chang *Industrial Technology Research Institute*, Chuan-Chung Chang *Industrial Technology Research Institute*

**Flickers and Black-streak Artifacts Removal on Display Monitors taken by Video Cameras**

Kotaro Nakazawa *Shinshu University*, Keiichiro Shirai *Shinshu University*, Masayuki Okamoto *Shinshu University*, Toshio Koga *Yamagata University*

**Image Restoration with Union of Directional Orthonormal DWTs**

Shogo Muramatsu *Niigata University*, Natsuki Aizawa *Niigata University*, Masahiro Yukawa *Niigata University*

**OS.43-SIPTM.6 Signal and Information Processing Theory and Methods**

**Low-Complexity Implementation of the Constrained Recursive Least-Squares Algorithm**

Reza Arablouei *University of South Australia*, Kutluyil Dogancay *University of South Australia*

**A Comparison of Two Algorithmic Recipes to Parametrize Rectangular Orthogonal Matrices**

Simone Fiori *DII - UNIVPM*, Tetsuya Kaneko *SIPLab - TUAT*, Toshihisa Tanaka *Tokyo University of Agriculture and Technology*

**Compressibility of Infinite Sequences and its Interplay with Compressed Sensing Recovery**

Jorge Silva *University of Chile*, Eduardo Pavez *University of Chile*

**OS.44-SLA.16 Behavioral Informatics: Enabling Technologies and Applications (I)**

**A Behaviorist Manifesto for the 21st Century**

Brian Baucom *University of Utah*, Esti Iturralde *University of Southern California*

**Using Measures of Vocal Entrainment to Inform Outcome-Related Behaviors in Marital Conflicts**

Chi-Chun Lee *University of Southern California*, Athanasios Katsamanis *University of Southern California*, Brian Baucom *University of Southern California*, Panayiotis Georgiou *University of Southern California*, Shrikanth Narayanan *University of Southern California*

**Automatic Detection of Psychological Distress Indicators in Online Forum Posts**

Shirin Saleem *Raytheon BBN Technologies*, Maciej Pacula *Raytheon BBN Technologies*, Rachel Chasin *Massachusetts Institute of Technology*, Rohit Kumar *Raytheon BBN Technologies*, Rohit Prasad *Raytheon BBN Technologies*, Michael Crystal *Raytheon BBN Technologies*, Brian Marx *National Center for PTSD at VA Boston Healthcare System*, Denise Sloan *National Center for PTSD at VA Boston Healthcare System*, Jennifer Vasterling *National Center for PTSD at VA Boston Healthcare System*, Theodore Speroff *Vanderbilt University*

### **OS.45-SLA.17 Recent Topics in Speech Processing (II)**

**A Study of Emotional Information Present in Articulatory Movements Estimated Using Acoustic-To-Articulatory Inversion**  
Jangwon Kim *University of Southern California*, Prasanta Ghosh *IBM Research India*, Sungbok Lee *University of Southern California*, Shrikanth Narayanan *University of Southern California*

**Robust Feature Extraction to Utterance Fluctuations Due to Articulation Disorders Based on Sparse Expression**  
Toshiya Yoshioka *Kobe University*, Ryoichi Takashima *Kobe University*, Tetsuya Takiguchi *Kobe University*, Yasuo Arika *Kobe University*

**Distant-talking Speaker Identification Using a Reverberation Model With Various Artificial Room Impulse Responses**  
Longbiao Wang *Nagaoka University of Technology*, Zhaofeng Zhang *Shizuoka University*, Atsuhiko Kai *Shizuoka University*, Yoshiki Kishi *NS Solutions Kansai Corp.*

### **OS.46-IVM.15 Intelligent Object Detection and Identification for Visual Surveillance and Security**

**Background Subtraction by Modeling Pixel and Neighborhood Information**  
Shu-Jhen Fan *Jiang National Sun Yat-sen University*, Kahlil Muchtar *Asia University*, Chih-Yang Lin *Asia University*, Li-Wei Kang *Academia Sinica*, Chia-Hung Yeh *National Sun Yat-sen University*

**A Block Based (t, n) Visual Cryptography Scheme for Unbounded n and t=2, 3**  
Sian-Jheng Lin *Academia Sinica*, Wei-Ho Chung *Academia Sinica*

**A Real-Time Rear Obstacle Detection System Based On a Fish-Eye Camera**  
Che-Tsung Lin *ITRI*, Yu-Chen Lin *ITRI*, Wei-Cheng Liu *ITRI*, Chi-Wei Lin *ITRI*

### **OS.47-IVM.16 Image Analysis and Recognition**

**Spatial Statistics for Spatial Pyramid Matching Based Image Recognition**  
Toshihiko Yamasaki *University of Tokyo*, Tsuhan Chen *Cornell University*

**Using the Visual Words based on Affine-SIFT Descriptors for Face Recognition**  
Yu-Shan Wu *Chunghwa Telecommunication Laboratories*, Heng-Sung Liu *Chunghwa Telecommunication Laboratories*, Gwo-Hwa Ju *Chunghwa Telecommunication Laboratories*, Ting Wei Lee *Chunghwa Telecommunication Laboratories*, Yen-Lin Chiu *Chunghwa Telecommunication Laboratories*

**An Open Framework for Video Content Analysis**  
Chia-Wei Liao *Institute for Information Industry*, Kai-Hsuan Chan *Institute for Information Industry*, Bin-Yi Cheng *Institute for Information Industry*, Chi-Hung Tsai *Institute for Information Industry*, Wen-Tsung Chang *Institute for Information Industry*, Yu-Ling Chuang *Institute for Information Industry*

### **PS.5-SLA.18 Speech Coding and Processing and Recognition**

**Speaking Rate Dependent Multiple Acoustic Models Using Continuous Frame Rate Normalization**  
Ban Sung Min *Pusan National University*, Kim Hyung Soon *Pusan National University*

**Emotion Classification of Infant Cries with Consideration for Local and Global Features**  
Kazuki Honda *Nagasaki University*, Kazuki Kitahara *Nagasaki University*, Shoichi Matsunaga *Nagasaki University*, Masaru Yamashita *Nagasaki University*

**On the Use of Phase Information-based Joint Factor Analysis for Speaker Verification under Channel Mismatch Condition**  
Ikuya Hirano *Shizuoka University*, Longbiao Wang *Nagaoka University of Technology*, Atsuhiko Kai *Shizuoka University*, Seiichi Nakagawa *Toyohashi University of Technology*

**Modulation Transfer Function Design for a Flexible Cross Synthesis Vocoder Based on Fo Adaptive Spectral Envelope Recovery**  
Taiki Nishi *Wakayama University*, Ryuichi Nisimura *Wakayama University*, Toshio Irino *Wakayama University*, Hideki Kawahara *Wakayama University*

**Detecting Child Speaker Based on Auditory Feature Vectors for VTL Estimation**  
Ryuichi Nisimura *Wakayama University*, Shoko Miyamori *Wakayama University*, Erika Okamoto *Wakayama University*, Hideki Kawahara *Wakayama University*, Toshio Irino *Wakayama University*

**Acoustic Model Training Using Feature Vectors Generated by Manipulating Speech Parameters of Real Speakers**  
Tetsuto Kawai *Nagoya University*, Norihide Kitaoka *Nagoya University*, Kazuya Takeda *Nagoya University*

**A Concatenative Speech Synthesis for Monosyllabic Languages With Limited Data**  
Trung-Nghia Phung *Japan Advanced Institute of Science and Technology*, Luong Chi Mai *Vietnamese Academy of Science and Technology*, Masato Akagi *Japan Advanced Institute of Science and Technology*

**Feature Reconstruction using Sparse Imputation for Noise Robust Audio-Visual Speech Recognition**  
Peng Shen *Gifu University*, Tamura Satoshi *Gifu University*, Hayamizu Satoru *Gifu University*

**Statistical Voice Conversion using GA-based Informative Feature**  
Kohei Sawada *Gifu University*, Yoji Tagami *Gifu University*, Tamura Satoshi *Gifu University*, Masanori Takehara *Gifu University*, Hayamizu Satoru *Gifu University*

**GIF-SP: GA-based Informative Feature for Noisy Speech Recognition**  
Tamura Satoshi *Gifu University*, Yoji Tagami *Gifu University*, Hayamizu Satoru *Gifu University*

**A Packet Loss Recovery of G.729 Speech Under Severe Packet Loss Condition**  
Takeshi Nagano *Tohoku University*, Akinori Ito *Tohoku University*

Thursday, December 6, 2012

**Microphone Array Processing for Distant Speech Recognition: Spherical Arrays**

John McDonough *Carnegie Mellon University/Voci Technologies, Inc.*, Kenichi Kumatani *Disney Research, Pittsburgh*, Bhiksha Raj *Carnegie Mellon University*

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10:50 - 12:30

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**OS.48-SLA.19 Fundamental Technologies in Modern Speech Processing (II)**

**Sub-word Modeling for Automatic Speech Recognition \***

Karen Livescu *Toyota Technological Institute at Chicago*, Eric Foster Lussier *Ohio State University*, Florian Metze *Carnegie Mellon University*

**Discriminative Training for ASR: Modeling, Criteria, Optimization, Implementation, and Performance \***

Georg Heigold *Google*, Hermann Ney *RWTH Aachen University*, Ralph Schlueter *RWTH Aachen University*, Simon Wiesler *RWTH Aachen University*

**Deep Neural Networks for Acoustic Modeling in Speech Recognition \***

Geoffrey Hinton *University of Toronto*, Li Deng *Microsoft Research*, Dong Yu *Microsoft Research*, George Dahl *University of Toronto*, Abdel-rahman Mohamed *University of Toronto*, Navdeep Jaitly *University of Toronto*, Vincent Vanhoucke *Google*, Patrick Nguyen *Google*, Tara Sainath *IBM T. J. Watson Research Center*, Brian Kingsbury *IBM T. J. Watson Research Center*

**Exemplar-Based Processing for Speech Recognition \***

Tara N. Sainath *IBM T. J. Watson Research Center*, Bhuvana Ramabhadran *IBM T. J. Watson Research Center*, David Nahamoo *IBM T. J. Watson Research Center*, Dimitri Kanevsky *IBM T. J. Watson Research Center*, Dirk Van Compernelle *KU Leuven*, Kris Demuyne *KU Leuven*, Jort F. Gemmeke *KU Leuven*, Jerome R. Bellegarda *Apple*, Shiva Sundaram *Deutsche Telekom Laboratories*

**OS.49-IVM.17 Recent Advances in High Fidelity Digital Imaging**

**Directional Image Decomposition Using Retargeting Pyramid**

Yuichi Tanaka *Tokyo University of Agriculture and Technology*, Keiichiro Shirai *Shinshu University*

**A Hierarchical Convex Optimization Approach for High Fidelity Solution Selection in Image Recovery**

Shunsuke Ono *Tokyo Institute of Technology*, Isao Yamada *Tokyo Institute of Technology*

**Head Pose Estimation using Motion Subspace Matching on GPU**

Nawarat Auttanugune *Chulalongkorn University*, Thanarat Chalidabhongse *Chulalongkorn University*, Supavadee Aramvith *Chulalongkorn University*

**High Dynamic Range Image Compression using Base Map Coding**

Takuya Fujiki *University of Kitakyushu*, Nicola Adami *Brescia University*, Takao Jinno *Toyohashi University Of Technology*, Masahiro Okuda *University of Kitakyushu*

**Efficient Lossless Bit Depth Scalable Coding for HDR Images**

Masahiro Iwahashi *Nagaoka University of Technology*, Hitoshi Kiya *Tokyo Metropolitan University*

**OS.50-WCN.5 Video/3D Data Transmission over Mobile Network**

**Real-Time Acquisition and Representation of 3D Environmental Data**

Se-Ho Lee *Korea University*, Seong-Gyun Jeong *Korea University*, Tae-Young Chung *Korea University*, Chang-Su Kim *Korea University*

**Reliable Scalable Video Multi-cast with Source Diversity and Inter-source Network Decoding in Lossy Networks**

Saran Tarnoi *National Institute of Informatics*, Yusheng Ji *National Institute of Informatics*, Wuttipong Kumwilaisak *King Mongkut's University of Technology Thonburi*

**Advanced Logical Superposition based Video Streaming Multicast System over Wireless Networks**

Kyuhwi Choi *POSTECH*, Hwangjun Song *POSTECH*

**Constant Frame Quality Control for H.264/AVC**

Po-Chyi Su *National Central University*, Ching-Yu Wu *National Central University*, Long-Wang Huang *National Central University*, Chia-Yang Chiou *National Central University*

**Peer-assisted Video-on-Demand in Multi-channel Switching WiFi-based Mobile Networks**

Jongwon Kim *GIST*, Hayoung Yoon *GIST*

**OS.51-WCN.6 Green Wireless Communications**

**An Improved LLR Approximation Algorithm for Low-Complexity MIMO Detection Towards Green Communications**

Ruijuan Ma *Xi'an Jiaotong University*, Pinyi Ren *Xi'an Jiaotong University*, Chao Zhang *Xi'an Jiaotong University*, Qinghe Du *Xi'an Jiaotong University*

**Green Wireless Communications: A Power Amplifier Perspective**

Jingong Jung *Institute for Infocomm Research*, Chin Keong Ho *Institute for Infocomm Research*, Sumei Sun *Institute for Infocomm Research*

**Area Spectral Efficiency of Cooperative Network With DF and AF Relaying**

Lei Zhang *University of Victoria*, Hong-Chuan Yang *University of Victoria*, Mazen Hasna *Qatar University*

**Validation of a Green Wireless Communication System with ICA Based Semi-Blind Equalization**

Teng Ma *University of Liverpool*, Xu Zhu *University of Liverpool*, Yufei Jiang *University of Liverpool*, Yi Huang *University of Liverpool*

**Energy Efficient Cooperation for Two-Hop Relay Networks**

Ernest Kurniawan *Stanford University*, Stefano Rini *Technische Universitat Munchen*, Andrea Goldsmith *Stanford University*

**OS.52-SLA.20 Behavioral Informatics: Enabling Technologies and Applications (II)**

**Analyzing the Language of Therapist Empathy in Motivational Interview based Psychotherapy**

Bo Xiao *University of Southern California*, Dogan Can *University of Southern California*, Panayiotis Georgiou *University of Southern California*, David Atkins *University of Washington*, Shrikanth Narayanan *University of Southern California*

**Using Interval Type-2 Fuzzy Logic to Analyze Turkish Emotion Words**

Ozan Cakmak *Mustafa Kemal University*, Serdar Yildirim *Mustafa Kemal University*, Abe Kazemzadeh *University of Southern California*, Shrikanth Narayanan *University of Southern California*

**Dialogue Support for Memory Impaired People**

Luca Bellodi *ASML*, Radu Jasinschi *Philips*, Gerard De Haan *Philips*, Murtaza Bulut *Philips Research*

**Composite-DBN for Recognition of Environmental Contexts**

Selina Chu *Oregon State University*, Shrikanth Narayanan *University of Southern California*, C.-C. Jay Kuo *University of Southern California*

**OS.53-IVM.18 3DTV and Free-viewpoint TV (II)**

**Global Optimization For Spatio-Temporally Consistent View Synthesis**

Hsiao-An Hsu *National Tsing Hua University*, Chen-Kuo Chiang *National Tsing Hua University*, Shang-Hong Lai *National Tsing Hua University*

**Depth Intra Skip Prediction for 3D Video Coding**

Kwan-Jung Oh *Samsung Electronics*, Jaejoon Lee *Samsung Electronics*, Du-Sik Park *Samsung Electronics*

**Depth Boundary Filtering for View Synthesis in 3D Video**

Yunseok Song *Gwangju Institute of Science and Technology*, Cheon Lee *Gwangju Institute of Science and Technology*, Woo-Seok Jang *Gwangju Institute of Science and Technology*, Yo-Sung Ho *Gwangju Institute of Science and Technology*

**Single-Image Depth Inference Based on Blur Cues**

Jingwei Wang *University of Southern California*, Hao Xu *University of Southern California*, C.-C. Jay Kuo *University of Southern California*

**OS.54-SLA.21 Recent Advances in Speaker Characterization and Recognition**

**An Investigation into Better Frequency Warping for Time-Varying Speaker Recognition**

Linlin Wang *Tsinghua University*, Xiaojun Wu *Tsinghua University*, Thomas Fang Zheng *Tsinghua National Laboratory for Information Science and Technology*, Chenhao Zhang *Tsinghua University*

**A K-Phoneme-Class based Multi-Model Method for Short Utterance Speaker Recognition**

Chenhao Zhang *Tsinghua University*, Thomas Fang Zheng *Tsinghua National Laboratory for Information Science and Technology*, Linlin Wang *Tsinghua University*, Xiaojun Wu *Tsinghua University*, Cong Yin *Taiyuan University of Technology*

**A Study on Spoofing Attack in State-Of-The-Art Speaker Verification: The Telephone Speech Case**

Zhizheng Wu *Nanyang Technological University*, Tomi Kinnunen *University of Eastern Finland*, Eng Siong Chng *Nanyang Technological University*, Haizhou Li *Nanyang Technological University/Institute for Infocomm Research*, Eliathamby Ambikairajah *University of New South Wales*

**PNCC-ivector-SRC based Speaker Verification**

Eliathamby Ambikairajah *University of New South Wales*, Jia Min Karen Kua *University of New South Wales*, Vidhyasaharan Sethu *University of New South Wales*, Haizhou Li *Nanyang Technological University/Institute for Infocomm Research*

**Speaker Verification using Lasso based Sparse Total Variability Supervector with PLDA modeling**

Ming Li *University of Southern California*, Charley Lu *3M Cogent*, Anne Wang *3M Cogent*, Shrikanth Narayanan *University of Southern California*

**PS.6-IVM.19 Selected Topics in Image Processing and Computer Vision**

**Image Inpainting by Block-Based Linear Regression with Optimal Block Selection**

Akira Tanaka *Hokkaido University*, Takahiro Ogawa *Hokkaido University*, Miki Haseyama *Hokkaido University*

**Generalized Histogram Shifting-Based Reversible Data Hiding with an Adaptive Binary-to-q-ary Converter**

Masaaki Fujiyoshi *Tokyo Metropolitan University*, Hitoshi Kiya *Tokyo Metropolitan University*

**An Enhanced Seam Carving Approach for Video Retargeting**

Tzu-Hua Chao *National Chung Cheng University*, Jin-Jang Leou *National Chung Cheng University*, Han-Hui Hsiao *National Chung Cheng University*

**Adaptive Reversible Data Hiding in Frequency Domain via Integer-to-Integer Transform**

Yoshida Taichi *Keio University*, Yusuke Okamura *Keio University*, Taizo Suzuki *Nihon University*, Masaaki Ikehara *Keio University*

**3D Editing System for Captured Real Scenes**

Inwoo Ha *Samsung Advanced Institute of Technology*, Yong Beom Lee *Samsung Advanced Institute of Technology*, D. K. James Kim *Samsung Electronics*

**A Novel Criterion for Quality Improvement of JPEG Images Based on Image Database and Re-application of JPEG**

Katsuya Kohno *Hokkaido University*, Akira Tanaka *Hokkaido University*, Hideyuki Imai *Hokkaido University*

**Thursday, December 6, 2012**

**Recovery Method based Particle Filter for Object Tracking in Complex Environment**

Yuhi Shiina *Waseda University*, Takeshi Ikenaga *Waseda University*

**Detection of Salient Object Using Pixel Blurriness**

Yi-Chong Zeng *Institute for Information Industry*, Chi-Hung Tsai *Institute for Information Industry*