**VCIP 2015 Technical Program**

(Preliminary)

**Sunday, 13 December 2015**

**09:00** **Tutorial 1 (Lecture Room 1)**

| High Efficiency Video Coding - Coding Tools and Specification: HEVC Version 2 and Beyond**12:00** *Mathias Wien, RWTH Aachen University, Germany*

**Tutorial 2 (Lecture Room 2)**

Regularities of Visual Data and Their Applications

*Shenghua Gao, Shanghai Tech University, China   
 Kui Jia, Advanced Digital Sciences Center, Singapore*

*Tianzhu Zhang, Chinese Academy of Sciences, China*

*Weisheng Dong, Xidian University, China*

**14:00 Tutorial 3 (Lecture Room 1)**

| HEVC Screen Content Coding (SCC) - Standardization and Technologies

**17:00** *Ji-Zheng Xu, Microsoft Research Asia, China*

*Wen-Hsiao Peng, National Chiao Tung University, Taiwan*

**Tutorial 4 (Lecture Room 2)**

Cloud Communications for Highly Interactive Multimedia Communications

*Anil Fernando, University of Surrey, UK*

**Monday, 14 December 2015**

**08:30** **Opening Ceremony** **(Auditorium)**

**09:00** **Keynote Speech I (Auditorium)** Design and Implementation of Stereo Matching for Depth Estimation in Computer Vision Applications*Professor Liang-Gee Chen, National Taiwan University, Taiwan*

**10:00** **Coffee/Tea Break**

**10:30** **Oral Session MO1A: Image and Video Processing I (Auditorium)**

1. Registration of Undersampled Images via Higher Resolution Spectrum Restoration

*Qiang Song1, Ruiqin Xiong1, Xinfeng Zhang2, Siwei Ma1, Wen Gao1*

*1Peking University*

*2Nanyang Technological University*

1. 2D Nonlocal Sparse Representation for Image Denoising

*Na Qi1, Yunhui Shi1, Xiaoyan Sun2, Wenpeng Ding1, Baocai Yin1*

*1Beijing University of Technology*

*2Microsoft Research*

1. Perceptually-aware Distributed Compressive Video Sensing

*Jin Xu1, Soufiene Djahel1, Yuansong Qiao2, Zhizhong Fu3*

*1University College of Dublin (UCD)*

*2Athlone Institute of Technology*

*3University of Electronic Science and Technology of China*

1. Merge Mode Based Fast Inter Prediction for HEVC

*Zhengxue Cheng, Heming Sun, Dajiang Zhou, Shinji Kimura*

*Waseda University*

1. Weighted Rate-Distortion Optimization for Screen Content Intra Coding

*Wei Xiao1, Bin Li2, Jizheng Xu2, Guangming Shi1, Feng Wu3*

*1Xidian University*

*2Microsoft*

*3University of Science and Technology of China*

**10:30 Oral Session MO1B: Systems and Techniques for Human Interaction (Lecture Room 1)**

1. Fixation Prediction through Multimodal Analysis

*Xiongkuo Min, Guangtao Zhai, Chunjia Hu, Ke Gu*

*Shanghai Jiao Tong University*

1. A Robust Facial Landmark Detection Method in Multi-views

*Xinran Liu, Fei Su*

*Beijing University of Posts and Telecommunications*

1. Fusion of Submanifold and Local Texture Features for Palmprint Authentication

*Asha Rani, Manisha Verma, Balasubramanian Raman*

*Indian institute of technology Roorkee*

1. Encoding Scale into Fisher Vector for Human Action Recognition

*Bowen Zhang, Hanli Wang*

*Tongji University*

1. Spatio-temporal Quality Pooling Adaptive to Distortion Distribution and Visual Attention

*Yichen Li, Xiaoqiang Guo, Haiying Wang*

*Beijing University of Posts and Telecommunications*

**12:00 Lunch Break**

**13:00 Oral Session MO2A: Cloud Multimedia Systems, Applications and Services (Auditorium)**

1. 3View Deep Canonical Correlation Analysis for Cross-modal Retrieval

*Jie Shao, Zhicheng Zhao, Fei Su, Ting Yue*

*Beijing University of Posts and Telecommunications*

1. Improving Tag Matrix Completion for Image Annotation and Retrieval

*Zhen Qin, Chunguang Li, Honggang Zhang, Jun Guo*

*Beijing University of Posts and Telecommunications*

1. QCCE: Quality Constrained Co-saliency Estimation for Common Object Detection

*Koteswar Jerripothula, Jianfei Cai, Junsong Yuan  
 Nanyang Technological University*

1. Hierarchical Video Summarization with Loitering Indication

*Ruipeng Lu, Hua Yang, Ji Zhu, Shuang Wu, Jia Wang, Dave Bull  
 Shanghai Jiao Tong University*

1. Salient Object Detection using HOS Based L0 Smoothing and Shape-Aware Region Merging   
    *Hyunjun Eun, Jonghee Kim, Changick Kim*

*Korea Advanced Institute of Science and Technology*

**13:00 Special Session MO2B: Human-Centric Visual Computing (Lecture Room 1)**

*Organizers: Weihong Deng, Beijing University of Posts and Telecommunications, China  
 Xiuzhuang Zhou, Capital Normal University, China*

1. DeepEmo: Real-world Facial Expression Analysis via Deep Learning

*Weihong Deng, Jiani Hu, Shuo Zhang, Jun Guo*

*Beijing University of Posts and Telecommunications*

1. Active Appearance Model Search Using Partial Least Squares Regression

*Yongxin Ge1, Min Chen1, Martin Jagersand2, Dan Yang1*

*1Chongqing University*

*2University of Alberta*

1. Neighborhood Repulsed Correlation Metric Learning for Kinship Verification

*Haibin Yan1, Xiuzhuang Zhou2, Yongxin Ge3*

*1Beijing University of Posts and Telecommunications*

*2Capital Normal University*

*3Chongqing University*

1. Face Recognition Based on Random Feature

*Shasha Li, Weihong Deng*

*Beijing University of Posts and Telecommunications*

1. Improving Golf Swing Skills Using Intelligent Glasses

*Hua-Tsung Chen, Tzu-Wei Huang, Chien-Li Chou, Hou-Chun Tsai, Suh-Yin Lee*

*National Chiao Tung University*

**14:30 Coffee/Tea Break**

**14:30 Poster/Demo Session MPD1 (Education Wing Atrium)**

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**16:00 Posters**

1. A Novel Depth Motion Vector Coding Exploiting Spatial and Inter-component Clustering Tendency

*Shampa Shahriyar1, Manzur Murshed2, Mortuza Ali2, Manoranjan Paul3*

*1Monash University*

*2Federation University Australia*

*3Charles Sturt University*

1. Residual-consensus Driven Linear Matching

*Hao Wang*

*Shanghai Jiao Tong University*

1. An Adaptive Search Range Method for HEVC with the K-Nearest Neighbor Algorithm

*Yuchen Li, Yitong Liu, Hongwen Yang, Dacheng Yang*

*Beijing University of Posts and Telecommunications*

1. Detail-Preserving Tone Mapping for Low Dynamic Range Displays with Adaptive Gamma Correction

*Cheolkon Jung, Xiaoke Wang*

*Xidian University*

1. Perceptual Block Merging for Quadtree-Based Partitioning in HEVC Using Disorderly Concealment Effect

*Cheolkon Jung, Yao Chen, Qiaozhou Lin*

*Xidian University*

1. Image Denoising via Sparse Approximation Using Eigenvectors of Graph Laplacian

*Yibin Tang1, Ying Chen2, Ning Xu3, Aimin Jiang3, Yuan Gao3*

*1College of Internet of Things*

*2Southeast University*

*3Hohai University*

1. Weighted Transformable Spatial Pyramid and Scalable Query for Object Retrieval

*Ziou Zheng, Wenmin Wang, Ronggang Wang*

*Peking University*

1. Centroid Adapted Frequency Selective Extrapolation for Reconstruction of Lost Image Areas

*Wolfgang Schnurrer, Markus Jonscher, Jürgen Seiler, Thomas Richter, Michel Bätz, Andre Kaup*

*Friedrich-Alexander-Universität Erlangen-Nürnberg*

1. Power-Constrained Backlight Scaling Using Brightness Compensated Contrast-Tone Mapping Operation

*Cheolkon Jung, Lu Wang*

*Xidian University*

1. Rate Control for Screen Content Coding Based on Picture Classification

*Yaoyao Guo1, Bin Li2, Songlin Sun1, Jizheng Xu2*

*1Beijing University of Posts and Telecommunications*

*2Microsoft*

1. A Novel SSIM Index for Image Quality Assessment using a New Luminance Adaptation Effect Model in Pixel Intensity Domain

*Sung-Ho Bae, Munchurl Kim*

*Korea Advanced Institute of Science and Technology*

1. Enhanced Inter Prediction with Localized Weighted Prediction in HEVC

*Na Zhang1, Yiran Lu1, Xiaopeng Fan1, Ruiqin Xiong2, Debin Zhao1, Wen Gao2*

*1Harbin Institute of Technology;*

*2Peking University*

1. Parallel Intra Coding for HEVC on CPU plus GPU Platform

*Juncheng Ma1, Falei LUO2, Shanshe Wang1, Nan Zhang3, Siwei Ma1*

*1Peking University*

*2Institute of Computing Technology*

*3School of Biomedical Engineering, Capital Medical University*

1. Temporal Trimap Propagation using Motion-Assisted Shape Blending

*Jubin Johnson, Deepu Rajan, Hisham Cholakkal  
 Nanyang Technological University*

1. 3D Facial Clone based on Depth Patches

*Jerome Manceau, Catherine Soladié, Renaud Séguier*

*CentraleSupelec*

1. Fast Super-Resolution Algorithm using ELBP Classifier

*Dong-yoon Choi, Byung Cheol Song*

*Inha University*

1. An Efficient All Zero Block Detection Algorithm Based on Frequency Characteristics of DCT in HEVC

*Henglu Wei, WEI ZHOU, Xin Zhou, Zhemin Duan*

*Northwestern Polytechnical University*

1. Early SKIP Mode Decision Based on Bayesian Model for HEVC

*Qiang Hu, Zhiru Shi, Xiaoyun Zhang, Zhiyong Gao*

*Shanghai Jiao Tong University;*

1. Time and Energy Modeling of an INTRA-ONLY HEVC Encoder

*Rafael Rodriguez-Sanchez1, Maria Teresa Alonso2, Jose Luis Martinez2, Rafael Mayo1, Enrique S.   
 Quintana-Orti1*

*1Universitat Jaume I*

*2Universidad de Castilla-La Mancha*

1. Hybrid Angular Intra/Template Matching Prediction for HEVC Intra Coding

*Tao Zhang1, Haoming Chen2, Ming-Ting Sun2, Debin Zhao1, Wen Gao3*

*1Harbin Institute of Technology*

*2University of Washington*

*3Peking University*

1. Image Semantic Quality Assessment for Compression of Car-Plate Images

*Dandan Wang, Dong Liu, Fangdong Chen*

*University of Science and Technology of China*

1. Noise-aided Dynamic Range Compression using Selective Processing in a Statistics-dependent Stochastic Resonance Model

*Rajlaxmi Chouhan, Prabir Biswas*

*IIT Kharagpur*

1. Reducing HEVC Encoding Complexity Using Two-Stage Motion Estimation

*Gabriel Cebrián Márquez1, Chi Ching Chi2, Jose Luis Martinez1, Pedro Ángel Cuenca Castillo1, Mauricio   
 Álvarez Mesa2, Sergio Sanz Rodríguez2, EBen Juurlink2*

*1High-Performance Networks and Architectures (RAAP), Univ. of Castilla-La Mancha*

*2Embedded Systems Architecture (AES). Technische Universität Berlin*

1. Reference Picture Selection Using Checkerboard Pattern for Resilient Video Coding

*Joao Carreira1, Pedro Assuncao2, Sergio Faria2, Erhan Ekmekcioglu1, Ahmet Kondoz1, Hyun Lim3*

*1Loughborough University in London*

*2Instituto de Telecomunicações/Instituto Politecnico de Leiria*

*3Institute for Digital Technologies, Loughborough University*

1. No-Reference Video Quality Assessment by HEVC Codec Analysis

*Xin Huang, Jacob Søgaard, Søren Forchhhammer*

*Danmarks Tekniske Universitet*

1. Fast Rate Distortion Optimized Quantization for HEVC

*Yongfei Zhang, Rui Tian, Jiangang Liu, Ning Wang*

*Beihang University*

1. Part-based Deep Network for Pedestrian Detection in Surveillance Videos

*Qi Chen, Wenhui Jiang, Yanyun Zhao, Zhicheng Zhao*

*Beijing University of Posts and Telecommunications*

**Demos**

1. Automatic Multiview Synthesis – Prototype Demo

*Michael Schaffner12, Frank Gürkaynak1, Hubert Kaeslin1, Luca Benini1, Aljosa Smolic2*

*1Eidgenössische Technische Hochschule Zürich*

*2Disney Research Zurich*

1. Kvazaar HEVC Still Image Coding on Raspberry Pi 2 for Low-Cost Remote Surveillance

*Marko Viitanen, Ari Koivula, Jarno Vanne, Timo Hämäläinen*

*Tampere University of Tech*

1. Glasses-free Light Field 3D Display

*Shizheng Wang, Xiangyu Zhang, Qijia Cheng, Rajendran Kaviya, Phil Surman, Junsong Yuan, and  
 Xiao Wei Sun*

*Nanyang Technological University*

1. Head Tracked Multiview 3D Display

*Phil Surman, Shizheng Wang, Xiangyu Zhang, Lei Zhang, Xiao Wei Sun*

*Nanyang Technological University*

1. Omnidirectional-view Three-dimensional Displays Using Multiple Mini-projectors

*Weitao Song1, Qiudong Zhu1, Dongdong Weng1, Yue Liu1, Yongtian Wang2*

*1Beijing Institute of Technology*

*2University of Connecticut*

1. A Real-time Head Tracker for Autostereoscopic Display

*Guo Song, Phil Surman, Zhenfeng Zhuang, Xiao Wei Sun*

*Nanyang Technological University*

1. Viewable Floating Displays using Simple Secondary Optical Elements

*Zhenfeng Zhuang, Hongjuan Wang, Phil Surman, Xiao Wei Sun*

*Nanyang Technological University*

**16:00 Oral Session MO3A: Visual Communications I (Auditorium)**

1. A Markov Decision based Rate Adaption Approach for Dynamic HTTP Streaming

*Chao Zhou, Chia-Wen Lin*

*Huawei*

1. Reconstruction of Videos Taken by a Non-Regular Sampling Sensor

*Markus Jonscher, Jürgen Seiler, Michel Bätz, Thomas Richter, Wolfgang Schnurrer, Andre Kaup*

*Friedrich-Alexander-Universität Erlangen-Nürnberg*

1. Perceptual Video Quality Assessment for Adaptive Streaming Encoding

*Estêvão Monteiro1, Ricardo Scholz2, Carlos Ferraz2, Tsang Ren2, Roberto Barros2*

*1Universidade Federal de Pernambuco*

*2Centro de Informática*

1. Delay-Constrained Rate Control For Real-Time Video Streaming Over Wireless Networks

*Yufeng Geng1, Xinggong Zhang1, Tong Niu1,* *Chao Zhou2，Zongming Guo1*

*1Peking University*

*2Huawei*

1. Classification-Aware Distortion Metric for HEVC Intra Coding

*Massimo Minervini, Sotirios Tsaftaris*

*IMT Institute for Advanced Studies Lucca*

**16:00 Special Session MO3B: Image Sparse Representation and Its Applications (Lecture Room 2)**

*Organizers: Jiaying Liu, Peking University, China  
 Xinfeng Zhang, Nanyang Technological University, Singapore   
 Xianming Liu, Harbin Institute of Technology*

1. Sparsity-based Joint Gaze Correction and Face Beautification for Conferencing Video

*Xianming Liu1, Gene Cheung1, Deming Zhai1, Debin Zhao2  
 1National Institute of Informatics*

*2Harbin Institute of Technology*

1. A Dual Structured-Sparsity Model for Compressive-Sensed Video Reconstruction

*Chen Zhao, Jian Zhang, Siwei Ma, Ruiqin Xiong, Wen Gao*

*Peking University*

1. Image Super-Resolution via Group Structured Sparse Representation

*Wenhan Yang, Jiaying Liu, Saboya Yang, Zongming Guo*

*Peking University*

1. Single Image Super-resolution via 2D Nonlocal Sparse Representation

*Na Qi1, Yunhui Shi1, Xiaoyan Sun2, Wenpeng Ding1, Baocai Yin1*

*1Beijing University of Technology*

*2Microsoft Research*

1. Moiré Pattern Removal from Texture Images via Low-rank and Sparse Matrix Decomposition

*Fanglei Liu, Jingyu Yang, Huanjing Yue*

*Tianjin University*

**18:30 Welcome Reception**

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**20:30**

**Tuesday, 15 December 2014**

**09:00 Keynote Speech 2 (Auditorium)** Jumping between Text, Images and Video*Dr Yong Rui, Microsoft Research Asia, China*

**10:00 Coffee/Tea Break**

**10:30 Oral Session TO1A: Image and Video Coding (Auditorium)**

1. Deblocking Strength Prediction based CTU-level SAO Category Determination in HEVC Encoder

*Gaoxing Chen1, Zhenyu Pei1, Zhenyu Liu2, Takeshi Ikenaga1*

*1Waseda University*

*2Tsinghua University*

1. Efficient Background Picture Coding for Videos Obtained from Static Cameras

*Fangdong Chen, Li Li, Dong Liu, Houqiang Li, Zhuoyi Lv, Haitao Yang*

*University of Science and Technology of China*

1. An Optimized Probability Estimation Model for Binary Arithmetic Coding

*Jing Cui1, Shanshe Wang2, Nan Zhang3, Siwei Ma2*

*1Seoul National University*

*2Peking University*

*3Capital Medical University*

1. Virtual View Distortion Estimation for Depth Map Coding

*Chao Yang, Ping An, Deyang Liu,* *Liquan Shen*

*Shanghai University*

1. Rearrangement Pixel Granularity Template Matching for Lossy Screen Content Picture Intra Coding

*Zheng Wang, Pin Tao, Lixin Feng*

*Tsinghua University*

**10:30 Oral Session TO1B: Embedded Systems and Visual Information Processing (Lecture Room 1)**

1. A High-Throughput Deblocking Filter VLSI Architecture for HEVC

*Wei Zhou, Jinzhi Zhang, Xin Zhou, Tongqing Liu*

*Northwestern Polytechnical University*

1. Enhancing Low-light Color Images Using An RGB-NIR Single Sensor

*Hiroki Yamashita, Daisuke Sugimura, Takayuki Hamamoto*

*Tokyo University of Science*

1. Cross-Modal Correlation Learning with Deep Convolutional Architecture

*Yan Hua1, Hu Tian2, Anni Cai2, Ping Shi1*

*1Communication University of China*

*2Beijing University of Posts and Telecommunications*

1. Supervised Dictionary Learning for Blind Image Quality Assessment  
    *Feng Shao*

*Ningbo University*

1. Subjective Rate-Distortion Optimization in HEVC with Perceptual Model of Multiple Faces

*Yufan Liu1, Haoji Hu2, Mai Xu1*

*1Beihang University*

*2Zhejiang University*

**12:00 Lunch Break**

**13:00 Oral Session TO2A: Visual Communications II (Auditorium)**

1. Q-Learning Based Control Algorithm for HTTP Adaptive Streaming   
    *Virginia Martín, Julián Cabrera, Narciso García*

*Universidad Politécnica de Madrid, Grupo de Tratamiento de Imàgenes*

1. Progressive Pseudo-Analog Transmission for Mobile Video Live Streaming

*Cuiling Lan1, Dongliang He2, Chong Luo1, Feng Wu2, Wenjun Zeng1*

*1Microsoft Research*

*2University of Science and Technology of China (USTC)*

1. Compressive Sensing based Image Transmission with Side Information at the Decoder

*Xiaodan Song1, Xiulian Peng2, Jizheng Xu2, Guangming Shi1, Feng Wu3*

*1Xidian University*

*2Microsoft*

*3University of Science and Technology of China*

1. On Display-Camera Synchronization for Visible Light Communication

*Kaixuan Liu1, Xiaolin Wu1, Xiao Shu2*

*1Shanghai Jiao Tong University*

*2McMaster University*

1. Efficient SAO Coding Algorithm for x265 Encoder

*Shibo Yin, Xiaoyun Zhang, Zhiyong Gao*

*Shanghai Jiao Tong University*

**13:00 Special Session TO2B: Emerging Techniques for Glasses-Free 3D Displays (Lecture Room 1)**

*Organizers: Philip Surman, Shizheng Wang, Junsong Yuan, Yuanjin Zheng, and Xiao Wei Sun  
 Nanyang Technological University, Singapore*

Invited Talk: Recent Progress in Glasses-Free 3D Displays at Beijing Institute of Technology

*Yongtian Wang*

*Beijing Institute of Technology*

1. Automatic Multiview Synthesis – Towards a Mobile System on a Chip

*Michael Schaffner1, Frank K. Gurkaynak1, Hubert Kaeslin1, Luca Benini1, Aljoscha Smolic2*

*1ETH Zurich*

*2Disney Research Zurich*

1. Glasses-free 3D Display with Glasses-assisted Quality: Key Innovations for Smart Directional Backlight Autostereoscopy

*Hang Fan, Yangui Zhou, Haowen Liang, Jiahui Wang, Peter Krebs, Daikun Lin, Kunyang Li, Jianbang Su, Xiaolu Wang, and Jianying Zhou*

*Sun Yat-Sen University*

1. Region Adaptive Workload Prediction for Parallel View Synthesis

*Zhanqi Liu, Xin Jin, Qionghai Dai*

*Tsinghua University*

1. Multi-phase Joint Reconstruction Framework for Multi-view Video Compression using Block-based Compressive Sensing

*Mansoor Ebrahim*

*Sunway University*

1. Two-layer Optimized Light Field Display Using Depth Initialization

*Shizheng Wang, Zhenfeng Zhuang, Phil Surman, Junsong Yuan, Yuanjin Zheng, Xiao Wei Sun*

*Nanyang Technological University*

**14:30 Coffee/Tea Break**

**15:00 Panel Session**

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**16:00**

**17:00 Free & Easy @ Gardens by the Bay**

**18:30 Conference Banquet @ Gardens by the Bay**

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**21:30**

**Wednesday, 16 December 2015**

**09:00 Keynote Speech 3 (Auditorium)** Content Identification*Professor Pierre Moulin, University of Illinois at Urbana-Champaign, USA*

**10:00 Coffee/Tea Break**

**10:30 Oral Session WO1A: 3D Videos and Video Coding I (Auditorium)**

1. A Novel Light Field Super-resolution Framework Based on Hybrid Imaging System

*Judong Wu, Haoqian Wang, Xingzheng Wang, Yongbing Zhang*

*Tsinghua University*

1. Quad-tree based Inter-view Motion Prediction

*Ji Ma1, Na Zhang1, Xiaopeng Fan1, Ruiqin Xiong2, Debin Zhao1*

*1Harbin Institute of Technology*

*2Peking University*

1. Modeling of Packet-Loss-Induced Distortion in 3-D Synthesized Views

*Pan Gao, Wei Xiang*

*University of Southern QLD*

1. An Adaptive Hierarchical QP Setting for Screen Content Coding

*Jiahao Li1, Bin Li2, Jizheng Xu2, Ruiqin Xiong1*

*1Peking University*

*2Microsoft*

1. Automatic Foreground Segmentation Using Light Field Images

*Xianyu Chen, Feng Dai, Yike Ma, Yongdong Zhang*

*Institute of Computing Tech.*

**10:30 Oral Session WO1B: Multimedia Content Analysis (Lecture Room 1)**

1. Discriminatively-learned Global Image Representation Using CNN as a Local Feature Extractor for Image Retrieval

*Wei-Lin Ku, Hung-Chun Chou, Wen-Hsiao Peng*

*National Chiao Tung University*

1. Designing A Composite Dictionary Adaptively From Joint Examples

*Zhangyang Wang, Yingzheng Yang, Jianchao Yang, and Thomas Huang*

*University of Illinois at Urbana-Champaign*

1. Improving VLAD with Regional PCA Whitening

*Mingmin Zhen,* *Ronggang Wang,* *Wenmin Wang*

*Peking University*

1. Invariant Image Recognition under Projective Deformations: An Image Normalization Approach

*Xue Wei1, Son Lam Phung1, Abdesselam Bouzerdoum1, Amine Bermak2*

*1University of Wollongong*

*2Hong Kong University of Science and Technology*

1. Image Tag Completion and Refinement by Subspace Clustering and Matrix Completion

*Yuqing Hou, Zhouchen Lin*

*Peking University*

**12:00 Lunch Break**

**13:00 Oral Session WO2A: 3D Videos and Video Coding II (Auditorium)**

1. Image-Guided Depth Propagation Using Superpixel Matching and Adaptive Autoregressive Model

*Jiji Cai, Cheolkon Jung*

*Xidian University*

1. Accurate Image Specular Highlight Removal Based on Light Field Imaging

*Chenxue Xu, Xingzheng Wang, Haoqian Wang, Yongbing Zhang*

*Tsinghua University*

1. Super-Resolution for Mixed-Resolution Multiview Images Using a Relative Frequency Response Estimation Method  
    *Thomas Richter, Annelie Habermann, Andre Kaup*

*Friedrich-Alexander-Universität Erlangen-Nürnberg*

1. Fast Depth Estimation using Spatio-temporal Prediction for Stereo-based Pedestrian Detection

*Amin Zarshenas, Maral Mesmakhosroshahi, Joohee Kim*

*Illinois Institute of Technology*

1. Structure-aware Priority Belief Propagation for Depth Estimation

*Kuanyu Ju, Botao Wang, Hongkai Xiong*

*Shanghai Jiao Tong University*

**13:00 Special Session WO2B: Perceptual Visual Information Processing and Its Applications (Lecture Room 1)**

*Organizers: Yuming Fang, Hantao Liu, Wen-Jiin Tsai and Nevrez İmamoğlu*

1. Hybrid Image Retargeting

*Wen-Jiin Tsai, Chun-Fu Chen*

*National Chiao-Tung University*

1. Quality Assessment for Out-of-Focus Blurred Images

*Yutao Liu1, Guangtao Zhai3, Xianming LIU2, Debin Zhao1*

*1Harbin Institute of Technology*

*2NII*

*3Shanghai Jiao Tong University*

1. Incremental SfM Based Lossless Compression of JPEG Coded Photo Album

*Hao Wu1, Xiaoyan Sun2, Jingyu Yang1, Feng Wu3*

*1Tianjin University*

*2Microsoft Research*

*3University of Science and Technology of China (USTC)*

1. Visual Attention on Human Face

*Xiongkuo Min, Guangtao Zhai, Ke Gu*

*Shanghai Jiao Tong University*

1. Local Feature Aggregation for Blind Image Quality Assessment

*Jingtao Xu, Qiaohong Li, Peng Ye, Haiqing Du, Yong Liu*

*Beijing University of Posts and Telecommunications*

**14:30 Coffee/Tea Break**

**14:30 Poster/Demo Session WPD1 (Education Wing Atrium)**

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**16:00 Posters**

1. An Efficient Probabilistic Occupancy Map-Based People Localization Approach

*Yen-Shuo Lin, Hua-Tsung Chen, Jen-Hui Chuang*

*National Chiao Tung University*

1. MI3: Multi-Intensity Infrared Illumination Video Database

*Chia-Hsin Chan, Hua-Tsung Chen, Wen-Chih Teng, Chin-Wei Liu, Jen-Hui Chuang*

*National Chiao Tung University*

1. Gradient Magnitude Similarity for Tone-Mapped Image Quality Assessment

*Yanping Lu1, Qin Tu1, Maozheng Zhao1, Ran Gao1, Aidong Men1, Dongfei Wang2*

*1Beijing University of Posts and Telecommunications*

*2Academy of Broadcasting Science, SAPPRFT*

1. A Fast Super-Resolution Method Based on Sparsity Properties

*Yuanchao Bai, Huizhu Jia, Xiaodong Xie, Rui Chen, Ming Jiang, Wen Gao*

*Peking University*

1. Joint Image Compression and Encryption Based on Alternating Transforms with Quality Control

*Peiya Li, Kwok-Tung Lo*

*The Hong Kong Polytechnic University*

1. Adaptive Motion Vector Resolution Prediction in Block-Based Video Coding

*Zhao Wang1, Juncheng Ma1, Falei LUO2, Siwei Ma1*

*1Peking University*

*2Institute of Computing Technology*

1. An Adaptive Inter CU Depth Decision Algorithm for HEVC

*Jie Liu, Huizhu Jia, Guoqing Xiang, Xiaofeng Huang, BinBin Cai, Chuang Zhu, Xiaodong Xie*

*Peking University*

1. Confidence Indicators Based Pose Estimation for High-Quality 3D Reconstruction Using Depth Image

*Ranga Ramanujam Srinivasan, Zhengyu Xia, Joohee Kim, Young Park*

*Illinois Institute of Technology*

1. Region-of-Interest Based Coding Scheme for Synthesized Video

*Wenbo Zhao1, Jingjing Fu2, Yan Lu2, Shipeng Li2, Debin Zhao1*

*1Harbin Institute of Technology*

*2Microsoft Research*

1. Reducing Search Space for Fast Pedestrian Detection

*Maral Mesmakhosroshahi, Joohee Kim*

*Illinois Institute of Technology*

1. Graph Based Spatiotemporal Saliency Detection Incorporating Low and High Level Features

*Ran Gao1, Qin Tu1, Cuiwei Li1, MaoZheng Zhao1, Guangtao Fu2, Bo Yang1*

*1Beijing University of Posts and Telecommunications*

*2Academy of Broadcasting Science, SAPPRFT*

1. Visual Saliency Detection Based On Mutual Information In Compressed Domain

*Ran Gao1, Qin Tu1, Jun Xu1, Yanping Lu1, Wei Xie2, Aidong Men1*

*1Beijing University of Posts and Telecommunications*

*2Academy of Broadcasting Science, SAPPRFT*

1. Fast Uyghur Text Detection in Videos Based on Learning of Baseline Feature

*Chang Liu, Yi Fan Song, Zhicheng Zhao, Fei Su*

*Beijing University of Posts and Telecommunications*

1. Video Denoising Algorithm via Multi-scale Joint Luma–Chroma Bilateral Filter

*Yuanyuan Gao, Hai-Miao Hu, Jiawei Wu*

*Beihang University*

1. On Comparison of Intra Line Copy and Intra String Copy for HEVC Screen Content Coding

*Ru-Ling Liao, Chun-Chi Chen, Wen-Hsiao Peng*

*National Chiao Tung University*

1. Rate-Distortion Based Sparse Coding for Image Set Compression

*Xinfeng Zhang1, Lin Weisi1, Siwei Ma2, Shiqi Wang2, Wen Gao2*

*1Nanyang Technological University (NTU)*

*2Peking University*

1. Joint Image Dehazing and Contrast Enhancement using the HSV Color Space

*Yi Wan, Qiqiang Chen*

*Lanzhou University*

1. Fast Parameter Estimation Algorithm for Sample Adaptive Offset in HEVC Encoder

*Sayed El Gendy, Ahmed Shalaby, Mohammed S. Sayed*

*Egypt-Japan University of Science and Technology (EJUST)*

1. HEVC to VP9 Transcoder

*Enrique de la Torre1, Rafael Rodriguez-Sanchez2, Jose Luis Martinez1*

*1Universidad de Castilla-La Mancha*

*2Universitat Jaume I*

1. Decorrelation-Stretch based Cloud Detection for Total Sky Images

*Muming Zhao1, Chongyang Zhang1, Wenjun Zhang1, Wei Li2, Jian Zhang3*

*1Shanghai Jiao Tong University*

*2Technology Center of Shanghai Electric Power T&D Group, Shanghai;*

*3University of Technology, Sydney*

1. A HVS-Guided Approach for Real-time Image Interpolation

*Rui Chen, Huizhu Jia, Xiaodong Xie, Wen Gao*

*Peking University*

1. Reflection Removal for Stele Images via Sparse Signal Decomposition

*Jun Wang, Jingyu Yang*

*Tianjin University*

1. SimDSR: Simultaneous Detection and Segmentation for Repetitive Patterns

*Hao Wang*

*Shanghai Jiao Tong University*

1. Spatial Complexity Based Optimal Initial Quantization Parameter Determination

*Xin Liu, Xiaoqiang Guo, Haiying Wang, Jianyi Shi*

*Beijing University of Posts and Telecommunications*

1. Registration-Reliability based Strategy to Enhance Multi-Frame Super-Resolution Algorithms

*Qiang Song, Ruiqin Xiong, Xiaopeng Fan, Siwei Ma, Wen Gao*

*Peking University*

1. Enhancing Nighttime Surveillance Video via Gradient Fusion

*Wenbo Li1, Xiaoyan Sun2, Feng Wu1*

*1University of Science and Technology of China (USTC)*

*2Microsoft Research*

**Demos**

1. Kvazaar HEVC Still Image Coding on Raspberry Pi 2 for Low-Cost Remote Surveillance

*Marko Viitanen, Ari Koivula, Jarno Vanne, Timo Hämäläinen*

*Tampere University of Tech*

1. Glasses-free Light Field 3D Display

*Shizheng Wang, Xiangyu Zhang, Qijia Cheng, Rajendran Kaviya, Phil Surman, Junsong Yuan, and   
 Xiao Wei Sun*

*Nanyang Technological University*

1. Head Tracked Multiview 3D Display

*Phil Surman, Shizheng Wang, Xiangyu Zhang, Lei Zhang, Xiao Wei Sun*

*Nanyang Technological University*

1. A Real-time Head Tracker for Autostereoscopic Display

*Guo Song, Phil Surman, Zhenfeng Zhuang, Xiao Wei Sun*

*Nanyang Technological University*

1. Viewable Floating Displays using Simple Secondary Optical Elements

*Zhenfeng Zhuang, Hongjuan Wang, Phil Surman, Xiao Wei Sun*

*Nanyang Technological University*

**16:00 Oral Session WO3A: Image and Video Processing II (Auditorium)**

1. Optimized Truncation Model for Adaptive Compressive Sensing Acquisition of Images

*Xiangwei Li, Xuguang Lan, Meng Yang, Jianru Xue, Nanning Zheng*

*Xi'an Jiao Tong University*

1. Adaptive Local Nonparametric Regression for Fast Single Image Super-Resolution

*Yulun Zhang1, Yongbing Zhang1, Jian Zhang2, Haoqian Wang1, Xingzheng Wang1，Qionghai Dai1*

*1Tsinghua University*

*2Peking University*

1. A Novel Image Quality Assessment based on an Adaptive Feature for Image Characteristics and Distortion Types

*Sung-Ho Bae, Munchurl Kim*

*Korea Advanced Institute of Science and Technology*

1. Ant Colony Optimization Inspired Saliency Detection Using Compressed Video Information

*Cuiwei Li1, Qin Tu1, Jun Xu1, Ran Gao1, Qiang Wang2, Yongyu Chang1*

*1Beijing University of Posts and Telecommunications*

*2Academy of Broadcasting Science, SAPPRFT*

1. Vegetation Coverage Detection from Very High Resolution Satellite Imagery

*Jiayuan Fan, Tao Chen, Shijian Lu*

*Institute for Infocomm Research, A\*STAR, Singapore*

**16:00 Special Session WO3B: Video Analysis and Understanding (Lecture Room 1)**

*Organizers: Yongxin Ge, Chongqing University  
 Xin Feng, Chong University of Technology*

1. Image Set Querying Based Localization

*Lei Deng, Siyuan Huang, Yueqi Duan, Baohua Chen, Jie Zhou*

*Tsinghua University*

1. On Video Source Format of Screen Content Compression

*Xin Feng1, Feng Yang1, Hao Zhang2, Ningning Shi3, Zhan Ma3*

*1Chongqing University of Technology*

*2Central South University*

*3Nanjing University*

1. An Effective Algorithm for Motion Estimation of Human Faces

*Min Xu, Yuanyuan Shang, Kai Jin*

*Capital Normal University*

1. An Effective View and Time-invariant Action Recognition Method Based on Depth Videos

*Zhi Liu1, Xin Feng1, Yingli Tian2*

*1Chongqing University of Technology*

*2City University of New York*

1. Efficient Image Retrieval Based Mobile Indoor Localization

*Ruoyun He1, Yitong Wang2, Qingyi Tao1, Jianfei Cai1, Ling-yu Duan2*

*1Nanyang Technological University*

*2Peking University*

**17:30 End of Program**