

# TECHNICAL PROGRAM

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Monday, 7 Nov., 10:00-11:40

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## **O-01 High-Efficiency Video Coding (I): Inter and Intra Predictions**

Time Monday, 7 Nov., 10:00-11:40  
Location G302, Green Building 3F  
Chairs Siwei Ma, Peking University, China  
Shipeng Li, Microsoft Research Asia, China

### **O-01.1 Region Based Motion Vector Prediction Using Data Hiding and Decoder side Reasoning**

*Hongtao Wang<sup>1</sup>, Meng Liu<sup>1</sup>, Qian Li<sup>1</sup>, Haitao Yang<sup>2</sup>,  
Houqiang Li<sup>1</sup>*

<sup>1</sup>*University of Science and Technology of China, China*

<sup>2</sup>*Huawei Technologies Co., China*

### **O-01.2 Advanced Spatial and Temporal Direct Mode for B Picture Coding**

*Yue Wang<sup>1</sup>, Li Zhang<sup>2</sup>, Siwei Ma<sup>2</sup>, Wen Gao<sup>2</sup>*

<sup>1</sup>*Graduate University of the Chinese Academy of Sciences, China*

<sup>2</sup>*Peking University, China*

### **O-01.3 Exploiting Inter-frame Correlations In Compound Video Coding**

*Xiulian Peng<sup>1</sup>, Jizheng Xu<sup>2</sup>, Feng Wu<sup>2</sup>*

<sup>1</sup>*University of Science and Technology of China, China*

<sup>2</sup>*Microsoft Research Asia, China*

### **O-01.4 Prediction of DCT Coefficients Considering Motion Compensation Error Distributions**

*Julia Schmidt<sup>1</sup>, Bernd Edler<sup>2</sup>, Joern Ostermann<sup>1</sup>*

<sup>1</sup>*Gottfried Wilhelm Leibniz Universitaet Hannover, Germany*

<sup>2</sup>*International Audio Laboratories Erlangen, Germany*

### **O-01.5 Rate Distortion Optimized Transform for Intra Block Coding for HEVC**

*Feng Zou<sup>1</sup>, Oscar C. Au<sup>1</sup>, Chao Pang<sup>1</sup>, Jingjing Dai<sup>1</sup>*

<sup>1</sup>*The Hong Kong University of Science and Technology, Hong Kong*

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**O-06 Emerging Algorithms for Image and Video Processing**

Time Monday, 7 Nov., 10:00-11:40  
Location G301, Green Building 3F  
Chairs Ching-Yung Lin, IBM Research, United States  
Yap-Peng Tan, Nanyang Technological University, Singapore

**O-06.1 Extension of Non-Local Means (NLM) Algorithm with Gaussian Filtering for Highly Noisy Images**

*Sachin Chachada<sup>1</sup>, Byung Tae Oh<sup>1</sup>, Namgook Cho<sup>1</sup>, San Phong<sup>2</sup>, Daniel Manchala<sup>2</sup>, C.-C. Jay Kuo<sup>1</sup>*

<sup>1</sup>*University of Southern California, United States*

<sup>2</sup>*Xerox Corporation, United States*

**O-06.2 Wide-Angle Distortion Correction by Hough Transform and Gradient Estimation**

*Tung-Ying Lee<sup>1</sup>, Tzu-Shan Chang<sup>1</sup>, Shang-Hong Lai<sup>1</sup>, Kai-Che Liu<sup>2</sup>, Hurng-Sheng Wu<sup>2</sup>*

<sup>1</sup>*National Tsing Hua University, Taiwan*

<sup>2</sup>*Chang Bing Show Chwan Memorial Hospital, Taiwan*

**O-06.3 Video Deblurring Algorithm Using an Adjacent Unblurred Frame**

*Shin Cheol Jeong<sup>1</sup>, Tae Hwan Lee<sup>1</sup>, Byung Cheol Song<sup>1</sup>, Yungu Lee<sup>2</sup>, Yanglim Cho<sup>2</sup>*

<sup>1</sup>*Inha University, Republic of Korea*

<sup>2</sup>*Samsung Electronics Co., Republic of Korea*

**O-06.4 An effective night video enhancement algorithm**

*Yunbo Rao<sup>1</sup>, Zhongho Chen<sup>2</sup>, Ming-ting Sun<sup>2</sup>, Yu-Feng Hsu<sup>3</sup>, Zhengyou Zhang<sup>4</sup>*

<sup>1</sup>*Electronic Science and Technology of China, China*

<sup>2</sup>*University of Washington, United States*

<sup>3</sup>*Industrial Technology Research Institute, Taiwan*

<sup>4</sup>*Microsoft Corp, United States*

**O-06.5 Mode-Dependent Intra Frame Interpolation for H.264/AVC Compressed Video**

*Xinwei Gao<sup>1</sup>, Xiaopeng Fan<sup>1</sup>, Debin Zhao<sup>1</sup>*

<sup>1</sup>*Harbin Institute of Technology, China*

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**S-01 3D Video Processing and Communication  
(Special Session)**

Time Monday, 7 Nov., 10:00-11:40  
Location G201, Green Building 2F  
Chairs Xiangyang Ji, Tsinghua University, China

**S-01.1 Fast Intra Mode Selection for Stereo Video Coding  
Using Epipolar Constraint**

*Guolei Yang<sup>1</sup>, Luhong Liang<sup>2</sup>, Wen Gao<sup>1</sup>*

*<sup>1</sup>Peking University, China*

*<sup>2</sup>Institute of Computing Technology, Chinese Academy  
of Sciences, China*

**S-01.2 Considering Binocular Spatial Sensitivity in  
Stereoscopic Image Quality Assessment**

*Xu WANG<sup>1</sup>, Sam KWONG<sup>1</sup>, Yun Zhang<sup>2</sup>*

*<sup>1</sup>City University of Hong Kong, Hong Kong*

*<sup>2</sup>Shenzhen Institutes of Advanced Technology, China*

**S-01.3 Joint Just Noticeable Difference Model Based on  
Depth Perception for Stereoscopic Images**

*Xiaoming Li<sup>1</sup>, Yue Wang<sup>2</sup>, Debin Zhao<sup>1</sup>, Tingting Jiang<sup>3</sup>,  
Nan Zhang<sup>4</sup>*

*<sup>1</sup>Harbin Institute of Technology, China*

*<sup>2</sup>Graduate University of the Chinese Academy of  
Sciences, China*

*<sup>3</sup>Peking University, China*

*<sup>4</sup>Capital Medical University, China*

**S-01.4 Stereoscopic Video Coding in AVS**

*Xiangyang Ji<sup>1</sup>, Yongbing Zhang<sup>1</sup>, Lu Yu<sup>2</sup>, Gwo Giun  
Lee<sup>3</sup>*

*<sup>1</sup>Tsinghua University, China*

*<sup>2</sup>Zhejiang University, China*

*<sup>3</sup>National Cheng Kung University, Taiwan*

**S-01.5 Visual system using ray-based image sensors and  
electronic holography display toward ultra-realistic  
communication**

*Kenji Yamamoto<sup>1</sup>*

*<sup>1</sup>National Institute of Information and Communications  
Technology, Japan*

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**P-02 Computer Vision Techniques for Human Machine Interactions**

Time Monday, 7 Nov., 10:00-11:40  
Location Aisle, Green Building 2F  
Chairs Jenn-Jier James Lien, National Cheng Kung University, Taiwan  
Sheau-Fang Lei, National Cheng Kung University, Taiwan

**P-02.1 Screen-Strategy Analysis in Broadcast Basketball Video using Player Tracking**

*Tsung-Sheng Fu<sup>1</sup>, Hua-Tsung Chen<sup>1</sup>, Chien-Li Chou<sup>1</sup>, Wen-Jiin Tsai<sup>1</sup>, Suh-Yin Lee<sup>1</sup>*

*<sup>1</sup>National Chiao Tung University, Taiwan*

**P-02.2 3D Ball Trajectory Reconstruction From Single-camera Sports Video For Free Viewpoint Virtual Replay**

*Hua-Tsung Chen<sup>1</sup>, Chien-Li Chou<sup>1</sup>, Wen-Jiin Tsai<sup>1</sup>, Suh-Yin Lee<sup>1</sup>*

*<sup>1</sup>National Chiao Tung University, Taiwan*

**P-02.3 Human and Car Identification using Motion Vector in H.264 Compressed Video**

*Wei Chen<sup>1</sup>, Quan-Xi Yang<sup>1</sup>, Ke-Wei Lin<sup>1</sup>, Chung-Lin Huan<sup>1</sup>*

*<sup>1</sup>National Tsing-Hua University, Taiwan*

**P-02.4 Weighted sparse coding residue minimization for visual tracking**

*Junchi Yan<sup>1</sup>, Minglei Tong<sup>2</sup>*

*<sup>1</sup>IBM Research China, China*

*<sup>2</sup>Shanghai University of Electric Power Shanghai, China*

**P-02.5 ROBUST 3D OBJECT POSE ESTIMATION FROM A SINGLE 2D IMAGE**

*Chia-Ming Cheng<sup>1</sup>, Hsiao-Wei Chen<sup>1</sup>, Tung-Ying Lee<sup>1</sup>, Shang-Hong Lai<sup>1</sup>, Ya-Hui Tsai<sup>2</sup>*

*<sup>1</sup>National Tsing Hua University, Taiwan*

*<sup>2</sup>Industrial Technology Research Institute, Taiwan*

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**O-04 3D Video (I): Depth and Texture Coding**

Time Monday, 7 Nov., 13:00-15:00  
Location G302, Green Building 3F  
Chairs Satoshi Goto, Waseda University, Japan  
Jin Li, Microsoft Corporation, United States

**O-04.1 Contour-based Segmentation and Coding for Depth Map Compression**

*Fabian Jäger*<sup>1</sup>  
<sup>1</sup>*RWTH Aachen University, Germany*

**O-04.2 Fast Depth Video Coding Method using Adaptive Edge Classification**

*Da-Hyun Yoon*<sup>1</sup>, *Yo-Sung Ho*<sup>1</sup>  
<sup>1</sup>*Gwangju Institute of Science and Technology, Republic of Korea*

**O-04.3 A Fast Encoder of Frame-compatible Format based on Content Similarity for 3-D Delivery**

*Zhuoying Zeng*<sup>1</sup>, *Xin Jin*<sup>1</sup>, *Satoshi Goto*<sup>1</sup>  
<sup>1</sup>*Waseda University, Japan*

**O-04.4 Reduced-Complexity Search for Video Coding Geometry Partitions Using Texture and Depth Data**

*Qifei Wang*<sup>1</sup>, *Jin Li*<sup>2</sup>, *Gary J. Sullivan*<sup>2</sup>, *Ming-Ting Sun*<sup>3</sup>  
<sup>1</sup>*Tsinghua University, China*  
<sup>2</sup>*Microsoft Corporation, United States*  
<sup>3</sup>*University of Washington, United States*

**O-04.5 Priority Pyramid Based Bit Allocation for Multiview Video Coding**

*Long Xu*<sup>1</sup>, *Sam Kwong*<sup>1</sup>, *Teisong Zhao*<sup>1</sup>, *Yu Zhou*<sup>2</sup>  
<sup>1</sup>*City University of Hong Kong, Hong Kong*  
<sup>2</sup>*Shanghai Jiao Tong University, China*

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**O-09 Large-scale multimedia content processing and analysis**

Time Monday, 7 Nov., 13:00-15:00  
Location G301, Green Building 3F  
Chairs Tsuhan Chen, Cornell University, United States  
Yen-Kuang Chen, Intel Corporation, United States

**O-09.1 A Pivot-based Filtering Algorithm for Enhancing Query Performance of LSH**

*Lei Zhang<sup>1</sup>, Xiao-guang Gu<sup>1</sup>, Yongdong Zhang<sup>1</sup>, Dong-ming Zhang<sup>1</sup>, Jin-tao Li<sup>1</sup>*  
*<sup>1</sup>Chinese Academy of Sciences, China*

**O-09.2 Reconfigurable Peer-to-Peer Network Image**

*Chun-Rong Su<sup>1</sup>, Jiann-Jone Chen<sup>1</sup>, Jun-Lin Liu<sup>2</sup>, De-Hui Shiue<sup>2</sup>*  
*<sup>1</sup>National Taiwan University of Science and Technology, Taiwan*  
*<sup>2</sup>Industrial Technology Research Institute, Taiwan*

**O-09.3 Inferring Users' Image-Search Goals with Pseudo-images**

*Zheng Lu<sup>1</sup>, Xiaokang Yang<sup>1</sup>, Weiyao Lin<sup>1</sup>, Xiaolin Chen<sup>1</sup>, Hongyuan Zha<sup>2</sup>*  
*<sup>1</sup>Shanghai Jiao Tong University, China*  
*<sup>2</sup>Georgia Institute of Technology, United States*

**O-09.4 Image Indexing Using 3D Model For Image Retrieval**

*Soo-Chang Pei<sup>1</sup>, Hsin-Hua Liu<sup>1</sup>, Jun-Horng Chen<sup>2</sup>*  
*<sup>1</sup>National Taiwan University, Taiwan*  
*<sup>2</sup>Oriental Institute of Technology, Taiwan*

**O-09.5 An Improved Automatic Commercial Detection System**

*Shih-Hsuan Yang<sup>1</sup>, Cyong-Wun Fan<sup>1</sup>, Yu-Cheng Chen<sup>1</sup>*  
*<sup>1</sup>National Taipei University of Technology, Taiwan*

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**O-14 Embedded Systems and Architecture Implementations**

Time Monday, 7 Nov., 13:00-15:00  
Location G201, Green Building 2F  
Chairs Shao-Yi Chien, National Taiwan University, Taiwan  
Peter H. N. de With, Eindhoven University of Technology, Netherlands

**O-14.1 Real-time Two-Stage SPECK (TSSP) Design and Implementation for Scalable Video Coding on Embedded Systems**

*Marijn J. H. Loomans<sup>1</sup>, Cornelis J. Koeleman<sup>1</sup>, Peter H. N. de With<sup>2</sup>*

<sup>1</sup>*VDG Security, Netherlands*

<sup>2</sup>*Eindhoven University of Technology, Netherlands*

**O-14.2 A Novel Parallel Encoding Framework for Scalable Video Coding**

*Kai Yao<sup>1</sup>, Jun Sun<sup>1</sup>, Jiaying Liu<sup>1</sup>, Zongming Guo<sup>1</sup>, Longshe Huo<sup>2</sup>*

<sup>1</sup>*Peking University, China*

<sup>2</sup>*China Unicom Research Institute, China*

**O-14.3 A Double-Filter Design of Deblocking Filter for H.264/AVC Macroblock Adaptive Frame Field Coding**

*Chi-Chang Kuo<sup>1</sup>*

<sup>1</sup>*Industrial Technology Research Institute, Taiwan*

**O-14.4 A 94fps View Synthesis Engine for HD1080p Video**

*Fu-Jen Chang<sup>1</sup>, Yu-Cheng Tseng<sup>1</sup>, Tian-Sheuan Chang<sup>1</sup>*

<sup>1</sup>*National Chiao-Tung University, Taiwan*

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**P-01 Video Coding Algorithm, Architecture & System**

Time Monday, 7 Nov., 13:00-15:00  
Location Aisle, Green Building 2F  
Chairs Pei-Jun Lee, National Chi Nan University, Taiwan  
Chih-Wei Liu, National Chiao Tung University, Taiwan

**P-01.1 Adaptive Integer-precision Lagrange Multiplier Selection for High Performance AVS Video Coding**

*Haibing Yin<sup>1</sup>, Bingqian Zhou<sup>1</sup>, Chuang Zhu<sup>2</sup>, Huizhu Jia<sup>2</sup>*  
<sup>1</sup>*China Jiliang University, China*  
<sup>2</sup>*Peking University, China*

**P-01.2 Divider-Free Architecture for Fast Sub-pixel Motion Prediction in H.264/AVC**

*Wei-Yu Chiang<sup>1</sup>, Chih-Hung Kuo<sup>1</sup>*  
<sup>1</sup>*National Cheng Kung University, Taiwan*

**P-01.3 Low Power Parallel Surveillance Video Encoding System Based on Joint Power-Speed Scheduling**

*Xin Jin<sup>1</sup>, Satoshi Goto<sup>1</sup>*  
<sup>1</sup>*Waseda University, Japan*

**P-01.4 Efficient Dead-Zone Plus Uniform Threshold Scalar Quantization of Generalized Gaussian Random Variables**

*Yizhou Duan<sup>1</sup>, Jun Sun<sup>1</sup>, Jiaying Liu<sup>1</sup>, Zongming Guo<sup>1</sup>*  
<sup>1</sup>*Peking University, China*

**P-01.5 Bit-depth Scalable Video Coding Using Error Residual Correction**

*Shyam Sundar R<sup>1</sup>, Pandu Rangan C<sup>1</sup>*  
<sup>1</sup>*Indian Institute of Technology, India*



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**O-15 Error-Resilient Visual Communications**

Time Monday, 7 Nov., 15:20-17:00  
Location G302, Green Building 3F  
Chairs Yueh-Min Huang, National Cheng Kung University,  
Taiwan  
Nadeem Ahmad Khan, Lahore University of  
Management Sciences, Pakistan

**O-15.1 A Novel Video Coding Scheme for Lossy Networks  
with Scalable Bit-stream**

*Adnan Ahmad<sup>1</sup>, Huma Noor<sup>1</sup>, Nadeem Khan<sup>1</sup>*  
*<sup>1</sup>Lahore University of Management Sciences, Pakistan*

**O-15.2 Real-Time Forward Error Correction for Video  
Transmission**

*Jimin Xiao<sup>1</sup>, Tammam Tillo<sup>1</sup>, Chunyu Lin<sup>2</sup>, Yao Zhao<sup>2</sup>*  
*<sup>1</sup>Xian Jiaotong Liverpool University, China*  
*<sup>2</sup>Beijing Jiaotong University, China*

**O-15.3 Unequal channel error protection of multiple  
description codes for wireless media streaming**

*Tanay Dey<sup>1</sup>, Abdul Bais<sup>1</sup>, Nima Sarshar<sup>1</sup>*  
*<sup>1</sup>University of Regina, Canada*

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**S-04 Advanced Techniques for Distributed Video Processing and Communications (I) (Special Session)**

Time Monday, 7 Nov., 15:20-17:00  
Location G301, Green Building 3F  
Chairs Weiyao Lin, Shanghai Jiao Tong University, China

**S-04.1 CROSS-VIEW POST-FILTERING FOR FIDELITY ENHANCEMENT ON ASYMMETRIC CODING OF 3D VIDEO**

*Yin Zhao<sup>1</sup>, Lu Yu<sup>1</sup>, Zhenzhong Chen<sup>2</sup>*

*<sup>1</sup>Zhejiang University, China*

*<sup>2</sup>Nanyang Technological University, Singapore*

**S-04.2 Distributed Video Coding: a Promising Solution for Distributed Wireless Video Sensors or Not?**

*Chieh-Chuan Chiu<sup>1</sup>, Shao-Yi Chien<sup>1</sup>, Chia-han Lee<sup>2</sup>, V. Srinivasa Somayazulu<sup>3</sup>, Yen-Kuang Chen<sup>3</sup>*

*<sup>1</sup>National Taiwan University, Taiwan*

*<sup>2</sup>Academia Sinica, Taiwan*

*<sup>3</sup>Intel-NTU Connected Context Computer Center, Taiwan*

**S-04.3 Progressive Adaptive Correlation Estimation(PACE) for WZVC**

*Xiaopeng Fan<sup>1</sup>, Chang Zhao<sup>1</sup>, Oscar C. Au<sup>2</sup>*

*<sup>1</sup>Harbin Institute of Technology, China*

*<sup>2</sup>Hong Kong University of Science and Technology, Hong Kong*

**S-04.4 Improved Spatial Aided Low Delay Wyner-Ziv video Coding by Wavelet Shrinkage**

*Bo Wu<sup>1</sup>, Nan Zhang<sup>1</sup>, Siwei Ma<sup>2</sup>, Wen Gao<sup>2</sup>*

*<sup>1</sup>Capital Medical University, China*

*<sup>2</sup>Peking University, China*

**S-04.5 CONDITIONAL RANDOM FIELD BASED SIDE-INFORMATION FUSION FOR DISTRIBUTED MULTI-VIEW VIDEO CODING**

*Yongsheng Zhang<sup>1</sup>, Hongkai Xiong<sup>1</sup>, Hao Wang<sup>1</sup>, Chang Wen Chen<sup>2</sup>*

*<sup>1</sup>Shanghai Jiao Tong University, China*

*<sup>2</sup>State University of New York at Buffalo, United States*

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**S-06 MPEG 3D Graphics (Special Session)**

Time Monday, 7 Nov., 15:20-17:00  
Location G201, Green Building 2F  
Chairs Euee S. Jang, Hanyang University, Republic of Korea

**S-06.1 MPEG Reconfigurable Graphics Coding Framework: Overview and Design of 3D Mesh Coding**

*Sinwook Lee<sup>1</sup>, Taehee Lim<sup>1</sup>, Euee S. Jang<sup>1</sup>, Ji Hyung Lee<sup>2</sup>, Seungwook Lee<sup>2</sup>*

<sup>1</sup>*Hanyang University, Republic of Korea*

<sup>2</sup>*Electronics and Telecommunications Research Institute Daejeon, Republic of Korea*

**S-06.2 Multi-Resolution 3D Mesh Coding in MPEG**

*Khaled Mammou<sup>1</sup>, Christophe Dehais<sup>1</sup>, Faten Chaieb<sup>2</sup>, Ghorbel Faouz<sup>2</sup>*

<sup>1</sup>*FittingBox, France*

<sup>2</sup>*University of Manouba/ENSI, France*

**S-06.3 Multi-Resolution Texture Coding for Multi-Resolution 3D Meshes**

*David Fuentes Sánchez<sup>1</sup>, Rafael Pagés Scasso<sup>1</sup>, Francisco Morán Burgos<sup>1</sup>*

<sup>1</sup>*Universidad Politécnica de Madrid, Spain*

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**P-07 Compressive Sensing and Protection for Visual Signals**

Time Monday, 7 Nov., 15:20-17:00  
Location Aisle, Green Building 2F  
Chairs Masahiro Iwahashi, Nagaoka University of Technology, Japan  
Daniel P. K. Lun, Hong Kong Polytechnic University, Hong Kong

**P-07.1 Lossless Integer Color Transform for Four Color Components**

*Masahiro IWASHI<sup>1</sup>, Masanori OGAWA<sup>1</sup>, Hitoshi KIYA<sup>2</sup>*

<sup>1</sup>*Nagaoka University of Technology, Japan*

<sup>2</sup>*Tokyo Metropolitan University, Japan*

**P-07.2 Compressive Sensing Image Recovery Based on equalization quantization noise model**

*Zhen Zhang<sup>1</sup>, Yunhui Shi<sup>1</sup>, Baocai Yin<sup>1</sup>*

<sup>1</sup>*Beijing University of Technology, China*

**P-07.3 Multiple-image Compressed Encryption and Decryption by Compressive Holography**

*Hong Di<sup>1</sup>, Kangfeng Zheng<sup>1</sup>, Xin Zhang<sup>2</sup>*

<sup>1</sup>*Beijing University of Posts and Telecommunications, China*

<sup>2</sup>*Chinese Academy of Sciences, China*

**P-07.4 An Adaptive H.264 Video Protection Scheme for Video Conferencing**

*Fangchao Wang<sup>1</sup>, Wenjun Wu<sup>1</sup>, Yihua Lou<sup>1</sup>, Aixuan Yang<sup>1</sup>*

<sup>1</sup>*Beihang University, China*

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**O-02 High-Efficiency Video Coding (II):  
Encoder Optimization**

Time Tuesday, 8 Nov., 10:00-11:40  
Location G302, Green Building 3F  
Chairs Tihao Chiang, Ambarella, United States/Taiwan  
Matthias Narroschke, Panasonic R&D Center Germany,  
Germany

**O-02.1 Parallelized deblocking filter for hybrid video coding**

*Matthias Narroschke<sup>1</sup>*

<sup>1</sup>*Panasonic R&D Center Germany GmbH, Germany*

**O-02.2 Content-Adaptive Encoder Optimization of the H.264/AVC  
Deblocking Filter for Visual Quality Improvement**

*Konstantin Hanke<sup>1</sup>, Peter Hosten<sup>1</sup>, Fabian Jäger<sup>1</sup>*

<sup>1</sup>*RWTH Aachen University, Germany*

**O-02.3 One-Pass Encoding Algorithm for Adaptive Loop  
Filter in High-Efficiency Video Coding**

*Chia-Yang Tsai<sup>1</sup>, Ching-Yeh Chen<sup>1</sup>, Chih-Ming Fu<sup>1</sup>,  
Yu-Wen Huang<sup>1</sup>, Shawmin Lei<sup>1</sup>*

<sup>1</sup>*MediaTek Inc., Taiwan*

**O-02.4 Fast Mode Decision Algorithm for Intra Prediction in  
HEVC**

*Liang Zhao<sup>1</sup>, Li Zhang<sup>1</sup>, Siwei Ma<sup>2</sup>, Debin Zhao<sup>2</sup>*

<sup>1</sup>*Harbin Institute of Technology, China*

<sup>2</sup>*Peking University, China*

**O-02.5 Fast Mode Decision Algorithm for Residual  
Quadtree Coding in HEVC**

*Su-Wei Teng<sup>1</sup>, Hsueh-Ming Hang<sup>1</sup>, Yi-Fu Chen<sup>2</sup>*

<sup>1</sup>*National Chiao-Tung University, Taiwan*

<sup>2</sup>*Chunghwa Telecom Co, Taiwan*

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**O-08 Compressive Sensing in Image and Video Processing**

Time Tuesday, 8 Nov., 10:00-11:40  
Location G301, Green Building 3F  
Chairs Shih-Hsuan Yang, National Taipei University of  
Technology, Taiwan  
Wen-Hsiao Peng, National Chiao Tung University,  
Taiwan

**O-08.1 Image Reconstruction from Random Samples with Parametric and Nonparametric Modeling**

*Guangtao Zhai<sup>1</sup>, Xiaokang Yang<sup>1</sup>*  
<sup>1</sup>*Shanghai Jiao Tong University, China*

**O-08.2 High-Quality Image Restoration from Partial Random Samples in Spatial Domain**

*Jian Zhang<sup>1</sup>, Ruiqin Xiong<sup>2</sup>, Siwei Ma<sup>2</sup>, Debin Zhao<sup>1</sup>*  
<sup>1</sup>*Harbin Institute of Technology, China*  
<sup>2</sup>*Peking University, China*

**O-08.3 An Unequally Protected Distributed Compressed Video Sensing Algorithm**

*Bin Li<sup>1</sup>, Xuqi Zhu<sup>1</sup>, Yu Liu<sup>1</sup>, Lin Zhang<sup>1</sup>*  
<sup>1</sup>*Beijing University of Posts and Telecommunications, China*

**O-08.4 Compressive Sensing based Video Scrambling for Privacy Protection**

*Lingling Tong<sup>1</sup>, Feng Dda<sup>1</sup>, Yongdong Zhang<sup>1</sup>, Jintao Li<sup>1</sup>, Dongming Zhang<sup>1</sup>*  
<sup>1</sup>*Chinese Academy of Sciences, China*

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**S-02 Advanced 3DTV/FTV (Special Session)**

Time Tuesday, 8 Nov., 10:00-11:40  
Location G201, Green Building 2F  
Chairs Masayuki Tanimoto, Nagoya University, Japan

**S-02.1 Challenges in 3D Video Standardization**

*Karsten Müller<sup>1</sup>, Philipp Merkle<sup>1</sup>*

*<sup>1</sup>Fraunhofer Institute for Telecommunications – Heinrich Hertz Institute, Germany*

**S-02.2 Three-Dimensional Television System Based on Integral Photography**

*Tomoyuki Mishina<sup>1</sup>*

*<sup>1</sup>Japan Broadcasting Corporation (NHK), Japan*

**S-02.3 Vision Field Capture for Advanced 3DTV Applications**

*Xun Cao<sup>1</sup>, Yebin Liu<sup>1</sup>, Xiangyang J<sup>1</sup>, Qionghai Dai<sup>1</sup>*

*<sup>1</sup>Tsinghua University, China*

**S-02.4 FTV and All-Around 3DTV**

*Masayuki Tanimoto<sup>1</sup>*

*<sup>1</sup>Nagoya University, Japan*

**S-02.5 Depth-Enhanced Compression for 3D Video**

*Jacek Konieczny<sup>1</sup>, Marek Domański<sup>1</sup>*

*<sup>1</sup>Poznań University of Technology, Poland*

**P-03 Advanced Image and Video Processing Algorithms**

Time Tuesday, 8 Nov., 10:00-11:40  
Location Aisle, Green Building 2F  
Chairs Shyh-Hau Wang, National Cheng Kung University, Taiwan  
Shu-Mei Guo, National Cheng Kung University, Taiwan

**P-03.1 Two-Stage Method for Salt-and-Pepper Noise Removal Using Statistical Jump Regression Analysis**

Liang Zhang<sup>1</sup>, Jian-Zhou Zhang<sup>2</sup>  
<sup>1</sup>Chinese Academy of Sciences, China  
<sup>2</sup>Sichuan University, China

**P-03.2 A LOW COMPLEXITY DUAL MODE EDGE DETECTOR**

Lih-Jen Kau<sup>1</sup>, Chih-Shen Chen<sup>1</sup>  
<sup>1</sup>National Taipei University of Technology, Taiwan

**P-03.3 Zero Spectrum Removal Using Joint Bilateral Filter for Fourier Transform Profilometry**

Tai-Chiu Hsung<sup>1</sup>, Daniel Pak-Kong Lun<sup>1</sup>, William W. L. Ng<sup>1</sup>  
<sup>1</sup>The Hong Kong Polytechnic University, Hong Kong

**P-03.4 Robust Orthogonal Particle Swarm Optimization for Estimating the Fundamental Matrix**

Kai Hsuan Chan<sup>1</sup>, Cheng-Yuan Tang<sup>2</sup>, Yi-Leh Wu<sup>3</sup>, Maw Kae Hor<sup>1</sup>  
<sup>1</sup>National Chengchi University, Taiwan  
<sup>2</sup>Huafan University, Taiwan  
<sup>3</sup>National Taiwan University, Taiwan

**P-03.5 A New Global-based Video Enhancement Algorithm by Fusing Features of Multiple Region-of-Interests**

Ning Xu<sup>1</sup>, Weiyao Lin<sup>1</sup>, Yu Zhou<sup>1</sup>, Yuanzhe Chen<sup>1</sup>, Zhenzhong Chen<sup>2</sup>, Hongxiang Li<sup>3</sup>  
<sup>1</sup>Shanghai Jiao Tong University, China  
<sup>2</sup>Nanyang Technological University, Singapore  
<sup>3</sup>North Dakota State University, United States

**P-03.6 Motion Compensated Frame Interpolation using Skipped Frame Information**

Yu-Jie Huang<sup>1</sup>, Yin-Yi Lin<sup>1</sup>  
<sup>1</sup>National Central University, Taiwan



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Tuesday, 8 Nov., 13:00-15:00

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**O-10 Representation and Analysis of Visual Signals**

Time Tuesday, 8 Nov., 13:00-15:00  
Location G302, Green Building 3F  
Chairs Hsu-Feng Hsiao, National Chiao Tung University, Taiwan  
Andrey S. Krylov, Lomonosov Moscow State University, Russian

**O-10.1 A Time, Space and Color-Based Classification of Different Weather Conditions**

*Xudong Zhao<sup>1</sup>, Peng Liu<sup>1</sup>, Jiafeng Liu<sup>1</sup>, Xianglong Tang<sup>1</sup>*

*<sup>1</sup>Harbin Institute of Technology, China*

**O-10.2 Illumination-Robust Face Recognition via Sparse Representation**

*Koji Inoue<sup>1</sup>, Yoshimitsu Kuroki<sup>1</sup>*

*<sup>1</sup>Kurume National College of Technology, Japan*

**O-10.3 FACE RECOGNITION USING AN ENHANCED AGE SIMULATION METHOD**

*Tian Xia<sup>1</sup>, Jiwen Lu<sup>1</sup>, Yap-Peng Tan<sup>1</sup>*

*<sup>1</sup>Nanyang Technological University, Singapore*

**O-10.4 Gauss-Laguerre Keypoints Descriptors for Color Images**

*Andrey S. Krylov<sup>1</sup>, Dmitry V. Sorokin<sup>1</sup>*

*<sup>1</sup>Lomonosov Moscow State University, Russian Federation*

**O-10.5 Contextual Saliency**

*Jialue Fan<sup>1</sup>, Ying Wu<sup>1</sup>*

*<sup>1</sup>Northwestern University, United States*

**O-10.6 Psychophysical Assessment of Perceived Interest in Natural Images: The ROI-D Database**

*Ulrich Engelke<sup>1</sup>, Hans-Jurgen Zepernick<sup>1</sup>*

*<sup>1</sup>Blekinge Institute of Technology, Sweden*

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Tuesday, 8 Nov., 13:00-15:00

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**P-04 Advanced Techniques and Applications for 3D Video**

Time Tuesday, 8 Nov., 13:00-15:00  
Location Aisle, Green Building 2F  
Chairs Din-Yuen Chan, National Chiayi University, Taiwan  
Guangming Shi, Xidian University, China

**P-04.1 New Stereo Video Coding In Redundant Wavelet Domain**

*Ahmed Suliman<sup>1</sup>, Robert Li<sup>1</sup>*

*<sup>1</sup>North Carolina A & T State University, United States*

**P-04.2 Decoder Picture Buffer Reduction based Effective Reference Frame Selection algorithm for Multiview Video Coding**

*Pei-Jun Lee<sup>1</sup>, Kuei-Ting Kuo<sup>1</sup>, Jin-Shun Huang<sup>1</sup>*

*<sup>1</sup>National Chi Nan University, Taiwan*

**P-04.3 Two-view to N-view Conversion without Depth**

*Augustine Tsai<sup>1</sup>, Meng-Hsuan Chia<sup>1</sup>, Wen-Kai Liu<sup>1</sup>*

*<sup>1</sup>Institute for Information Industry, Taiwan*

**P-04.4 Real-time free-viewpoint DIBR on GPUs for large base-line multi-view 3DTV videos**

*Luat Do<sup>1</sup>, German Bravo<sup>2</sup>, Svitlana Zinger<sup>1</sup>, Peter H. N. de With<sup>1</sup>*

*<sup>1</sup>Eindhoven University of Technology, Netherlands*

*<sup>2</sup>ViNotion B.V., Netherlands*

**P-04.5 MULTIVIEW ENCODER PARALLELIZED FAST SEARCH REALIZATION ON NVIDIA CUDA**

*Chih-Te Lu<sup>1</sup>, Hsueh-Ming Hang<sup>2</sup>*

*<sup>1</sup>National Taipei University of Technology, Taiwan*

*<sup>2</sup>National Chiao-Tung University, Taiwan*

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Tuesday, 8 Nov., 13:00-15:00

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**D-01 Demonstration Session**

Time Tuesday, 8 Nov., 13:00-15:00  
Location G301, Green Building 3F  
Chairs Shao-Yi Chien, National Taiwan University, Taiwan

**D-01.1 Recent Progress on Perceptual Video Coding**

*Po-Yen Su<sup>1</sup>, Yi-Hsin Huang<sup>1</sup>, Tao-Sheng Ou<sup>1</sup>, Homer H. Chen<sup>1</sup>*

*<sup>1</sup>National Taiwan University, Taiwan*

**D-01.2 FPGA Design for Image Processing Using a GUI of a Web-Based VHDL Code Generator**

*Thomas Schumann<sup>1</sup>, Anita Ratna Dewi Susanti<sup>1</sup>*

*<sup>1</sup>Hochschule Darmstadt-University of Applied Sciences, Germany*

**D-01.3 Hardware Encoder and Decoder for 3-D Stereo Video Streaming Applications**

*Wen-Hao Chung<sup>1</sup>, Yuan-Teng Chang<sup>1</sup>, Ce-Min Fang<sup>1</sup>, Erh-Chung Ke<sup>1</sup>, Yu-Min Wu<sup>1</sup>, Chi-Chang Kuo<sup>1</sup>*

*<sup>1</sup>Industrial Technology Research Institute, Taiwan*

**D-01.4 Perceptual Multi-Cues 2D-to-3D Conversion System**

*Chung-Te Li<sup>1</sup>, Yen-Chieh Lai<sup>1</sup>, Chien Wu<sup>1</sup>, Liang-Gee Chen<sup>1</sup>*

*<sup>1</sup>National Taiwan University, Taiwan*

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Wednesday, 9 Nov., 10:00-11:40

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**O-03 High-Efficiency Video Coding (III): Entropy Coding and Scalable Extension**

Time Wednesday, 9 Nov., 10:00-11:40  
Location G302, Green Building 3F  
Chairs Yin-Yi Lin, National Central University, Taiwan  
Din-Yuen Chan, National Chiayi University, Taiwan

**O-03.1 A Parallel Context Model for Level Information in CABAC**

*Min Gao<sup>1</sup>, Xiaopeng Fan<sup>1</sup>, Qiang Wang<sup>1</sup>, Debin Zhao<sup>1</sup>, Wen Gao<sup>2</sup>*

<sup>1</sup>*Harbin Institute of Technology, China*

<sup>2</sup>*Peking University, China*

**O-03.2 A novel high efficiency fixed length coding for video compression based on symbol probability estimation**

*Kazuo Sugimoto<sup>1</sup>, Ryoji Hattori<sup>1</sup>, Shun-ichi Sekiguchi<sup>1</sup>*

<sup>1</sup>*Mitsubishi Electric Corporation, Japan*

**O-03.3 Parsing Robustness in High Efficiency Video Coding - Analysis and Improvement**

*Bin Li<sup>1</sup>, Jizheng Xu<sup>2</sup>, Houqiang Li<sup>1</sup>*

<sup>1</sup>*University of Science and Technology of China, China*

<sup>2</sup>*Microsoft Research Asia, China*

**O-03.4 Adaptive Raster Scan for Slice/Frame Coding**

*Xin Jin<sup>1</sup>, Satoshi Goto<sup>1</sup>*

<sup>1</sup>*Waseda University, Japan*

**O-07 Computer Vision for Detection, Tracking and Surveillance**

Time Wednesday, 9 Nov., 10:00-11:40  
Location G301, Green Building 3F  
Chairs Shawmin Lei, MediaTek Inc., Taiwan  
Gwo Giun Lee, National Cheng Kung University, Taiwan

**O-07.1 Dynamic Video Object Detection with Single PTU Camera**

*Yun Ye<sup>1</sup>, Song Ci<sup>1</sup>, Yanwei Liu<sup>2</sup>, Hui Tang<sup>2</sup>*  
<sup>1</sup>*University of Nebraska-Lincoln, United States*  
<sup>2</sup>*Chinese Academy of Sciences, China*

**O-07.2 Video Object Tracking using Graph Cuts and Location-Dependent Appearance Models**

*Peter Hosten<sup>1</sup>, Yu Yao<sup>1</sup>*  
<sup>1</sup>*RWTH Aachen University, Germany*

**O-07.3 Real-time Hand Tracking on Depth Images**

*Chia-Ping Chen<sup>1</sup>, Yu-Ting Chen<sup>1</sup>, Ping-Han Lee<sup>1</sup>, Yu-Pao Tsai<sup>1</sup>, Shawmin Lei<sup>1</sup>*  
<sup>1</sup>*MediaTek Inc., Taiwan*

**O-07.4 Estimating Initial Pose by Utilizing Symmetric Property for Real-Time Intelligent Transportation System**

*Hui-Zhen Gu<sup>1</sup>, Suh-Yin Lee<sup>1</sup>*  
<sup>1</sup>*National Chiao-Tung University, Taiwan*

**O-07.5 Real-Time Multi-Camera Air Surveillance System Using a Simultaneous Estimation, Filtering and Rejection Tracking Algorithm**

*Chung-Hsien Huang<sup>1</sup>, Cheng-Chuan Chou<sup>1</sup>, Yu-Feng Hsu<sup>1</sup>, Shih MingYu<sup>1</sup>*  
<sup>1</sup>*Industrial Technology Research Institute, Taiwan*

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Wednesday, 9 Nov., 10:00-11:40

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**S-03 Advanced Techniques for Content-Based Image/Video Resizing (Special Session)**

Time Wednesday, 9 Nov., 10:00-11:40  
Location G201, Green Building 2F  
Chairs Chia-Hung Yeh, National Sun Yat-Sen University, Taiwan

**S-03.1 Fast Deconvolution-Based Image Super-Resolution Using Gradient Prior**

*Chun-Yu Lin<sup>1</sup>, Chih-Chung Hsu<sup>1</sup>, Chia-Wen Lin<sup>1</sup>, Li-Wei Kang<sup>2</sup>*

<sup>1</sup>*National Tsing Hua University, Taiwan*

<sup>2</sup>*Academia Sinica, Taiwan*

**S-03.2 IMAGE RETARGETING BASED ON THE SENSITIVITY-TUNED VISUAL SIGNIFICANCE MAP**

*Yuming Fang<sup>1</sup>, Zhenzhong Chen<sup>1</sup>, Weisi Lin<sup>1</sup>, Chia-Wen Lin<sup>1</sup>, Chia-Ming Tsai<sup>1</sup>*

<sup>1</sup>*National Tsing Hua University, Taiwan*

**S-03.3 Learning of Context-Aware Single Image Super-Resolution**

*Min-Chun Yang<sup>1</sup>, Ting-Yao Hu<sup>1</sup>, Chang-Heng Wang<sup>1</sup>, Yu-Chiang Frank Wang<sup>2</sup>*

<sup>1</sup>*National Taiwan University, Taiwan*

<sup>2</sup>*Academia Sinica, Taiwan*

**S-03.4 Motion-Tolerance Contextual Visual Saliency Preserving for Video Retargeting**

*Duan-Yu Chen<sup>1</sup>, Yi-Shou Luo<sup>1</sup>, Bo-Chiang Shie<sup>1</sup>*

<sup>1</sup>*Yuan Ze University, Taiwan*

**S-03.5 A Low-Complexity Upsampling Technique for H.264**

*Wei-Chi Chen<sup>1</sup>, Ming Sui Lee<sup>1</sup>*

<sup>1</sup>*National Taiwan University, Taiwan*

**P-06 Video Transcoding/Adaptation and Robust Streaming**

Time Wednesday, 9 Nov., 10:00-11:40  
Location Aisle, Green Building 2F  
Chairs Yu-Ning Dong, Nanjing University of Posts and Telecommunications, China  
Mei-Juan Chen, National Dong-Hwa University, Taiwan

**P-06.1 Region-of-Interest Segmentation Based on Bayesian Theorem for H.264 Video Transcoding**

*Shu-Fen Huang<sup>1</sup>, Mei-Juan Chen<sup>1</sup>, Mian-Shiuan Li<sup>1</sup>*  
*<sup>1</sup>National Dong-Hwa University, Taiwan*

**P-06.2 Low-Complexity Intra Prediction Algorithm for Video Down-sizing Transcoder**

*Zhuo Yi Lu<sup>1</sup>, Ke Bin Jia<sup>1</sup>, Wan Chi Siu<sup>2</sup>*  
*<sup>1</sup>Beijing University of Technology, China*  
*<sup>2</sup>Hong Kong Polytechnic University, Hong Kong*

**P-06.3 Resource aware real-time stream adaptation of MPEG-4 video in constrained bandwidth networks**

*Anand Kotra<sup>1</sup>, Gerhard Fohler<sup>2</sup>*  
*<sup>1</sup>Private*  
*<sup>2</sup>Technische Universität Kaiserslautern, Germany*

**P-06.4 Interleaving-Based Error Concealment for Scalable Video Coding System**

*Bin Zhao<sup>1</sup>*  
*<sup>1</sup>Purdue University, United States*

**P-06.5 Data Hiding Based Error Recovery for H.264 Video Streaming over Wireless Networks**

*CHEN Hai-bo<sup>1</sup>, DONG Yu-ning<sup>1</sup>, SHI Haixian<sup>2</sup>*  
*<sup>1</sup>Nanjing University of Posts and Telecom, China*  
*<sup>2</sup>Nanjing Agricultural University, China*

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Wednesday, 9 Nov., 13:00-15:00

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**O-05 3D Video (II): Depth/Disparity Estimation and Signal Acquisition**

Time Wednesday, 9 Nov., 13:00-15:00  
Location G302, Green Building 3F  
Chairs Lifeng Sun, Tsinghua University, China  
Ismael Daribo, Hiroshima City University, Japan

**O-05.1 Accurate Depth Map Estimation from Video via MRF Optimization**

*Sheng-Po Tseng<sup>1</sup>, Shang-Hong Lai<sup>1</sup>*  
*<sup>1</sup>National Tsing Hua University, Taiwan*

**O-05.2 Fast Disparity Estimation for Multi-view Plus Depth Video Coding**

*Brian Walter Micallef<sup>1</sup>, Carl James Debono<sup>1</sup>, Reuben A Farrugia<sup>1</sup>*  
*<sup>1</sup>University of Malta, Malta*

**O-05.3 Fast iterative search for motion and disparity estimation in stereoscopic video coding**

*Zhi-Pin Deng<sup>1</sup>, Ke-Bin Jia<sup>1</sup>, Yui-Lam Chan<sup>2</sup>, Chang-Hong Fu<sup>2</sup>, Wan-Chi Siu<sup>2</sup>*  
*<sup>1</sup>The Beijing University of Technology, China*  
*<sup>2</sup>Hong Kong Polytechnic University, China*

**O-05.4 Virtual Support Window for Adaptive-Weight Stereo Matching**

*Weidong Hu<sup>1</sup>, Kang Zhang<sup>1</sup>, Lifeng Sun<sup>1</sup>, Jiyang L<sup>1</sup>, Yijing Li<sup>1</sup>, Shiqiang Yang<sup>1</sup>*  
*<sup>1</sup>Tsinghua University, China*

**O-05.5 Point Cloud Compression for Grid-Pattern-based 3D Scanning System**

*I. Daribo<sup>1</sup>, R. Furukawa<sup>1</sup>, R. Sagawa<sup>2</sup>, H. Kawasaki<sup>3</sup>, S. Hiura<sup>1</sup>, N. Asada<sup>1</sup>*  
*<sup>1</sup>Hiroshima City University, Japan*  
*<sup>2</sup>National Institute of Advanced Industrial Science and Technology, Japan*  
*<sup>3</sup>Kagoshima University, United States, Japan*



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Wednesday, 9 Nov., 13:00-15:00

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**O-11 Futuristic Human-Machine Interface**

Time Wednesday, 9 Nov., 13:00-15:00  
Location G301, Green Building 3F  
Chairs Wei-Yang Lin, National Chung Cheng University,  
Taiwan  
Byung Cheol Song, Inha University, Republic of Korea

**O-11.1 Crowd Instability Analysis Using Velocity-Field Based Social Force Model**

*Jing Zhao<sup>1</sup>, Yi Xu<sup>1</sup>, Xiaokang Yang<sup>1</sup>, Qing Yan<sup>1</sup>*  
*<sup>1</sup>Shanghai Jiao Tong University, China*

**O-11.2 Recognizing Human Actions Using Curvature Estimation and NWFE-Based Histogram Vectors**

*Fu-Song Hsu<sup>1</sup>, Cheng-Hsien Lin<sup>1</sup>, Wei-Yang Lin<sup>1</sup>*  
*<sup>1</sup>National Chung Cheng University, Taiwan*

**O-11.3 Adaptive Background Estimation of Outdoor Illumination Variations for Foreground Detection**

*Xudong Zhao<sup>1</sup>, Peng Liu<sup>1</sup>, Jiafeng Liu<sup>1</sup>, Xianglong Tang<sup>1</sup>*  
*<sup>1</sup>Harbin Institute of Technology, China*

**O-11.4 Interactive Object Segmentation Using Iterative Adjustable Graph Cut**

*Ran Shi<sup>1</sup>, Zhi Liu<sup>1</sup>, Yin Zhu Xue<sup>1</sup>, Xiang Zhang<sup>2</sup>*  
*<sup>1</sup>Shanghai University, China*  
*<sup>2</sup>Shanghai Jiao Tong University, China*

**O-11.5 Spatio-Temporal De-interlacing Based on Maximum Likelihood Estimation**

*Ho-Taek Lee<sup>1</sup>, Tae Hwan Lee<sup>1</sup>, Byung Cheol Song<sup>1</sup>*  
*<sup>1</sup>Inha University, Republic of Korea*

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Wednesday, 9 Nov., 13:00-15:00

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**O-13 Image Analysis for Medical Applications**

Time Wednesday, 9 Nov., 13:00-15:00  
Location G201, Green Building 2F  
Chairs Jian-Jiun Ding, National Taiwan University, Taiwan  
Xiaokang Yang, Shanghai Jiao Tong University, China

**O-13.1 Muscle Injury Determination by Image Segmentation**

*Jian-Jiun Ding<sup>1</sup>, Yu-Hsiang Wang<sup>1</sup>, Lee-Lin Hu<sup>1</sup>,  
Wei-Lun Chao<sup>1</sup>, Yio-Wha Shau<sup>1</sup>*  
*<sup>1</sup>National Taiwan University, Taiwan*

**O-13.2 An Improved Automatic Initial Snaxel Selection with Corner Tracing for Object Contour Extraction in Medical Image**

*Roy Chaoming Hsu<sup>1</sup>, Din-Yuen Chan<sup>1</sup>, Wei Chieh Lai<sup>1</sup>,  
Tzu Li Chiu<sup>1</sup>, Cheng Tin Liu<sup>1</sup>*  
*<sup>1</sup>National Chiayi University, Taiwan*

**O-13.3 Graph-cut based Antialiasing for Doppler Ultrasound Color Flow Medical Imaging**

*Artem M. Yatchenko<sup>1</sup>, Andrey S. Krylov<sup>1</sup>, Andrey V.  
Gavrilov<sup>1</sup>, Ivan V. Arkhipov<sup>2</sup>*  
*<sup>1</sup>Lomonosov Moscow State University, Russian  
Federation*  
*<sup>2</sup>B.V. Petrovsky National Research Centre of Surgery,  
Russian Federation*

**O-13.4 Quantitative Assessment of 2D versus 3D Visualisation Modalities**

*Sarah Ting<sup>1</sup>, Tele Tan<sup>1</sup>, Geoff West<sup>1</sup>, Andrew Squelch<sup>2</sup>,  
Jonathan Foster<sup>3</sup>*  
*<sup>1</sup>Curtin University, Australia*  
*<sup>2</sup>Western Australian School of Mines, Australia*  
*<sup>3</sup>Curtin University, Australia*

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Wednesday, 9 Nov., 13:00-15:00

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**P-05 Video/Image Quality Assessment**

Time Wednesday, 9 Nov., 13:00-15:00  
Location Aisle, Green Building 2F  
Chairs Sheau-Fang Lei, National Cheng Kung University,  
Taiwan  
Chih-Hung Kuo, National Cheng Kung University,  
Taiwan

**P-05.1 Content-based Image Quality Assessment of Natural Scene  
Image Distorted by Quantization**

*Tao Luo<sup>1</sup>, Chao Wang<sup>1</sup>, Xuanqin Mou<sup>1</sup>*  
*<sup>1</sup>Xian Jiaotong University, China*

**P-05.2 Systematic Evaluation of Super-resolution Using Classification**

*Vinay P. Namboodiri<sup>1</sup>, Vincent De Smet<sup>1</sup>, Luc Van Gool<sup>1</sup>*  
*<sup>1</sup>K.U.Leuven, Belgium*

**P-05.3 Subjective Quality Analyses of Stereoscopic Images in 3DTV  
System**

*Junming Zhou<sup>1</sup>, Gangyi Jiang<sup>1</sup>, Xiangying Mao<sup>1</sup>, Mei  
Yu<sup>2</sup>, Feng Shao<sup>2</sup>, Zongju Peng<sup>2</sup>, Yun Zhang<sup>2</sup>*  
*<sup>1</sup>Ningbo University, China*  
*<sup>2</sup>Chinese Academy of Sciences, China*

**P-05.4 The Quality Evaluation of Image Recovery Attack for Visible  
Watermarking Algorithms**

*Min-Jen Tsai<sup>1</sup>, Jung Liu<sup>1</sup>*  
*<sup>1</sup>National Chiao Tung University, Taiwan*

**P-05.5 Subjective Evaluation of Transmission Errors in IPTV and  
3DTV**

*Jesús Gutiérrez<sup>1</sup>, Pablo Pérez<sup>2</sup>, Fernando Jaureguizar<sup>1</sup>,  
Julián Cabrera<sup>1</sup>, Narciso García<sup>1</sup>*  
*<sup>1</sup>Universidad Politécnica de Madrid, Spain*  
*<sup>2</sup>Alcatel-Lucent, Spain*

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Wednesday, 9 Nov., 15:20-17:00

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**O-12 Advanced Image Coding and Processing**

Time Wednesday, 9 Nov., 15:20-17:00  
Location G302, Green Building 3F  
Chairs Chia-Wen Lin, National Tsing Hua University, Taiwan  
Yu-Chiang Frank Wang, Academia Sinica, Taiwan

**O-12.1 A New Image Coding Scheme with Hierarchical Representation and Adaptive Interpolation**

*Xinfeng Zhang<sup>1</sup>, Ruiqin Xiong<sup>2</sup>, Siwei Ma<sup>2</sup>, Wen Gao<sup>2</sup>*  
*<sup>1</sup>Institute of Computing Technology, China*  
*<sup>2</sup>Peking University, China*

**O-12.2 Context-Based Adaptive Zigzag Scanning for Image Coding**

*Jian-Jiun Ding<sup>1</sup>, Wei-Yi Wei<sup>1</sup>, Hsin-Hui Chen<sup>1</sup>*  
*<sup>1</sup>National Taiwan University, Taiwan*

**O-12.3 Separation of Superimposed Images with Unknown Motions Using Sparsity Priors**

*Qing Yan<sup>1</sup>, Xiaokang Yang<sup>1</sup>, Yi Xu<sup>1</sup>*  
*<sup>1</sup>Shanghai Jiao Tong University, China*

**O-12.4 Image Matting Based on Mutual information**

*Xiaozhou Zhou<sup>1</sup>, Pierre Boulanger<sup>1</sup>*  
*<sup>1</sup>University of Alberta, Canada*

**O-12.5 Zero-Error Watermarking JPEG Images by Shuffling Huffman Tree Nodes**

*Yongdong Wu<sup>1</sup>, Robert H. Deng<sup>2</sup>*  
*<sup>1</sup>Institute for Infocomm Research, Singapore*  
*<sup>2</sup>Singapore Management University, Singapore*

**O-16 Video Streaming and Networking Systems**

Time Wednesday, 9 Nov., 15:20-17:00  
Location G301, Green Building 3F  
Chairs Zhibin James Lei, Applied Science and Technology Research Institute (ASTRI), Hong Kong  
Pei-Jun Lee, National Chi Nan University, Taiwan

**O-16.1 Perceptual Quality Assessment on B-D Tradeoff of P2P Assisted Layered Video Streaming**

*Jingjing Wang<sup>1</sup>, Tom Z. J. Fu<sup>1</sup>, Dah Ming Chiu<sup>1</sup>, Zhibin Lei<sup>2</sup>*

<sup>1</sup>*The Chinese University of Hong Kong, Hong Kong*

<sup>2</sup>*Applied Science and Technology Research Institute, Hong Kong*

**O-16.2 Towards Quality-Oriented Scheduling for Live Swarm-Based P2P Streaming**

*Chun-Yuan Chang<sup>1</sup>, Cheng-Fu Chou<sup>1</sup>, Ming-Hung Chen<sup>1</sup>*

<sup>1</sup>*National Taiwan University, Taiwan*

**O-16.3 Distributed Markov Decision Process in Cooperative Peer Recovery for WWAN Multiview Video Multicast**

*Zhi Liu<sup>1</sup>, Gene Cheung<sup>1</sup>, Yusheng Ji<sup>1</sup>*

<sup>1</sup>*National Institute of Informatics, Japan*

**O-16.4 MixCast Modulation for Layered Video Multicast over WLANs**

*Hao Cui<sup>1</sup>, Chong Luo<sup>2</sup>, Chang Wen Chen<sup>3</sup>, Feng Wu<sup>2</sup>*

<sup>1</sup>*University of Science and Technology of China, China*

<sup>2</sup>*Microsoft Research Asia, China*

<sup>3</sup>*State University of New York at Buffalo, United States*

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Wednesday, 9 Nov., 15:20-17:00

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**S-05 Advanced Techniques for Distributed Video Processing and Communications (II) (Special Session)**

Time Wednesday, 9 Nov., 15:20-17:00  
Location G201, Green Building 2F  
Chairs Weiyao Lin, Shanghai Jiao Tong University, China

**S-05.1 A New Package-Group-Transmission-based Algorithm for Human Activity Recognition in Videos**

*Yuanzhe Chen<sup>1</sup>, Weiyao Lin<sup>1</sup>, Hongxiang Li<sup>2</sup>, Hangzai Luo<sup>3</sup>, Yisi Tao<sup>1</sup>, Donghua Liu<sup>4</sup>*

<sup>1</sup>*Shanghai Jiao Tong University, China*

<sup>2</sup>*North Dakota State University, United States*

<sup>3</sup>*East China Normal University, China*

<sup>4</sup>*National University of Defense Technology, China*

**S-05.2 Wyner-Ziv video coding using progressive encoding and decoding**

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**S-05.3 Observation Quality Guaranteed Layout of Camera Networks via Sparse Representation**

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**S-05.4 Multiple Description Video Coding Against Both Erasure and Bit Errors by Compressive Sensing**

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**S-05.5 Improved Rate-Adaptive Codes for Distributed Video Coding**

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