

2012 Visual Communications and Image Processing

(VCIP 2012)

**San Diego, California, USA
27 – 30 November 2012**



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ISBN: 978-1-4673-4405-0**

Tutorials

Tutorial 1

When: 9:00- 12:00, Tuesday, November 27, 2012

Where: Crystal II

Topic: [Video Processing Techniques for 3D Television](#) """"3

Lecturer: Yo-Sung Ho (*GIST, South Korea*)

Tutorial 2

When: 9:00- 12:00, Tuesday, November 27, 2012

Where: Topaz

Topic: [Integrated Camera and Sensor Networks: Algorithms, Design and Applications](#) """"36

Lecturer: Zhihai He (*Univ. of Missouri, USA*)

Tutorial 3

When: 14:00- 17:00, Tuesday, November 27, 2012

Where: Crystal II

Topic: [Image Database Visualization and Browsing](#) """"38

Lecturer: Gerald Schaefer (*Loughborough University, UK*)

Tutorial 4

When: 14:00- 17:00, Tuesday, November 27, 2012

Where: Topaz

Topic: [Perpetual Video Camera for Internet-of-Things](#) """"43

Lecturers: Yen-Kuang Chen (*Intel, USA*),
Shao-Yi Chien (*National Taiwan Univ., Taiwan*)

Oral Sessions

Wednesday, November 28, 2012

Time: 10:50-12:10

Location: Crystal I

Oral Session WO1: Biomedical Imaging and Surveillance

Chair: Andre Kaup, University of Erlangen-Nuremberg, Germany

224 [Edge Modeling Prediction for Computed Tomography Images](#)

Andreas Weinlich (Universität Erlangen-Nürnberg), Peter Amon (Siemens AG), Andreas Hutter (Siemens AG), André Kaup*

141 [Analysis of Displacement Compensation Methods for Wavelet Lifting of Medical 3-D Thorax CT Volume Data](#)

Wolfgang Schnurrer (LMS, FAU Erlangen-Nürnberg) Jürgen Seiler (LMS, FAU Erlangen-Nürnberg), André Kaup*

188 [Enhanced Moving Object Detection Using Tracking System for Video Surveillance Purposes](#)

Axel Beaugendre (Waseda University), Jiu Xu, Chenyuan Zhang, Satoshi Goto*

263 [A Wireless Video Surveillance System with an Active Camera](#)

Yun Ye (University of Nebraska-Lincoln), Song Ci, Yanwei Liu (Institute of Acoustics, Chinese), Dalei Wu, Haohong Wang, Aggelos Katsaggelos (Northwestern University)*

Wednesday, November 28, 2012

Time: 10:50-12:10

Location: Topaz

Oral Session WO2: Depth Analysis and Coding

Chair: Yo-Sung Ho, GIST, Korea

9 [Adaptive Depth Edge Sharpening for 3D Video Depth Coding](#)

Rong Zhang, Ying Chen (Qualcomm Inc.), Marta Karczewicz*

185 [Action Retrieval Based on Generalized Dynamic Depth Data Matching](#)

Lujun Chen (Harbin Institute of Technology), hongxun Yao, xiaoshuai SUN*

130 [Intra Coding for Depth Maps Using Adaptive Boundary Location](#)

Lulu Chen, Miska Hannuksela (Nokia), Houqiang Li (USTC)*

88 [New Distortion Model for Depth Coding in 3DVC](#)

Tao Zhang (Harbin Institute of Technology), Xiaopeng Fan (Harbin Institute of Technology), Debin Zhao, Wen Gao*

Wednesday, November 28, 2012

Time: 15:40-17:00

Location: Crystal I

Oral Session WO3: High Efficiency Video Coding (I)

Chair: Nam Ling, Santa Clara University, USA

121 [Gradient-based Fast Decision for Intra Prediction](#) '96
[in HEVC](#)

Yongfei Zhang, Zhe Li (Beihang University), Bo Li*

172 [Adaptive Rate Control for High Efficiency Video](#) '12: 2
[Coding](#)

Junjun Si (Peking University), Siwei Ma (Peking University), Xinfeng Zhang (Institute of Computing Technology, Chinese Academy of Sciences), Wen Gao*

142 [Uniform Probability Model for Deriving Intra](#) '12: 8
[Prediction Angular Table in High Efficiency Video](#)
[Coding](#)

Guichun Li (Santa Clara University), Lingzhi Liu (HiSilicon Technologies Co. Ltd.), Nam Ling (Santa Clara University), Jianhua Zheng (HiSilicon Technologies Co. Ltd.), Philipp Zhang (HiSilicon Technologies Co. Ltd.)*

245 [Intra Prediction Based on Statistical Modeling of](#) '12: 3
[Images](#)

Fatih Kamisli (Middle East Technical University)*

Thursday, November 29, 2012

Time: 9:50-11:10

Location: Crystal I

Oral Session HO1: Perceptual Quality Assessment

Chair: Enrico Magli, Politecnico di Torino, Italy

104 [SEQM: Edge Quality Assessment Based on](#) '12: 9
[Structural Pixel Matching](#)

Won-Dong Jang (Korea University), Chang-Su Kim (Korea University)*

21 [QoE Analysis for Scalable Video Adaptation](#) '12: 325

Maodong Li (NTU), Zhenzhong Chen (MediaTek USA Inc.), Yap-Peng Tan (Nanyang Technological University)*

286 [Assessing Photo Quality with Geo-context and Crowdsourced Photos](#)

Wenyuan Yin (SUNY at Buffalo), Tao Mei (Microsoft Research Asia), Chang Wen Chen (SUNY at Buffalo)*

Thursday, November 29, 2012

Time: 9:50-11:10

Location: Topaz

Oral Session HO2: Video/Image Analysis

Chair: Gokce Dane, Qualcomm, USA

41 [Image Registration by Using a Descriptor for Repetitive Patterns](#)

Seong Jong Ha (Seoul National University), Nam Ik Cho (Seoul National University)*

25 [A Canonical Correlation Analysis Based Motion Model for Probabilistic Visual Tracking](#)

Tom Heyman (Ghent University), Vincent Spruyt (Ghent University), Sebastian Grünwedel (Ghent University), Alessandro Ledda (Artesis University College), Wilfried Philips (Ghent University)*

37 [A Patch-based Framework for Detecting Abnormal Activities with a PTZ Camera](#)

Yisi Tao (Shanghai Jiao Tong University), Yuanzhe Chen (Shanghai Jiao Tong University), Weiyao Lin (Shanghai Jiao Tong University), Xintong Han (Shanghai Jiao Tong University), Hongxiang Li (University of Louisville), Zheng Lu (Shanghai Jiao Tong University)*

148 [Generalized MMSD Feature Extraction Using QR Decomposition](#) """"355

*Zheng Ning** (Zhengzhou university), *Qi Lin*, *Lei Gao* (Zhengzhou University), *Ling Guan* (Ryerson University)

Thursday, November 29, 2012

Time: 11:20-12:40

Location: Crystal I

Oral Session HO3: Model-Based Video/Image Coding

Chair: Gene Cheung, NII, Japan

62 [Affine Skip and Direct Modes for Efficient Video Coding](#) """"35:

Han Huang (Beijing Jiaotong University), *John Woods* (Rensselaer Polytechnic Institute), *Yao Zhao** (Beijing Jiaotong University), *Huihui Bai* (Beijing Jiaotong University)

149 [Compound Image Compression by Multi-Stage Prediction](#) """"366

Weijia Zhu, *Wenpeng Ding** (BJUT), *Ruiqin Xiong* (Peking University), *Yunhui Shi*, *Baocai Yin*

226 [Low-Complexity and High-Efficiency Background Modeling for Surveillance Video Coding](#) """"372

*Xianguo Zhang** (Peking University), *Yonghong Tian* (Peking University), *Tiejun Huang*, *Wen Gao*,

275 [Discriminative Structured Set Prediction Modeling with Max-Margin Markov Network for Optimal Lossless Image Coding](#) """"378

Wenrui Dai (Shanghai Jiao Tong University), *Hongkai Xiong** (Shanghai Jiao Tong University)

Thursday, November 29, 2012

Time: 15:40-17:00

Location: Crystal I

**Oral Session HO4: Video/Image Coding and
Transmission Oral Session**

Chair: Ronggang Wang, Peking University, China

29 [Sparse Representation of Texture Patches for
Low Bit-rate Image Compression](#)

Mai Xu (Tsinghua University)*

255 [Distortion-Optimal Receiver Grouping for MD-
FEC coded Video Streaming](#)

Hang Zhang (RPI), Koushik Kar (RPI), John Woods
(Rensselaer Polytechnic Institute), Adarsh Krishnan*

87 [A Fast Multiview Video Transcoder for Bitrate
Reduction](#)

Bing Wang (Harbin Institute of Technology),
Xiaopeng Fan (Harbin Institute of Technology),
Shaohui Liu, Debin Zhao, Yan Liu (Harbin Institute of
Technology), Wen Gao*

110 [QoE-aware Resource Allocation for Scalable
Video Transmission over Multiuser MIMO-OFDM
Systems](#)

Maodong Li (NTU), Zhenzhong Chen (MediaTek USA
Inc.), Yap-Peng Tan (Nanyang Technological
University)*

Thursday, November 29, 2012

Time: 15:40-17:00

Location: Topaz

**Oral Session HO5: Video/Image Restoration and
Enhancement**

Chair: Siwei Ma, Peking University, China

268 [Recursive Bilateral Filter for Encoder-integrated Video Denoising](#)

Dong-Qing Zhang (FutureWei Technologies), Bo Wang, Zixiang Xiong, Heather Yu*

139 [High-Quality Image Interpolation via Local Autoregressive and Nonlocal 3-D Sparse Regularization](#)

Xinwei Gao (Harbin Institute of Technology), Jian Zhang, ruiqin Xiong, Siwei Ma (Peking University), Debin Zhao*

40 [Wavelet Domain Image Super-Resolution from Digital Cinema to Ultrahigh Definition Television by Dividing Noise Component](#)

Yasutaka Matsuo (Waseda university and NHK), Shinya Iwasaki (Waseda university), Yuta Yamamura (Waseda university), Jiro Katto (Waseda university)*

127 [Multiview Super-Resolution Using High-Frequency Synthesis in Case of Temporally Subsampled Depth Information](#)

Thomas Richter (University Erlangen-Nuremberg), Andrè Kaup*

Friday, November 30, 2012

Time: 9:50-11:10

Location: Crystal I

Oral Session FO1: High Efficiency Video Coding (II)

Chair: Seishi Takamura, NTT, Japan

186 [Parallel AMVP Candidate List Construction for HEVC](#)

Qin Yu (Peking University), Liang Zhao (Harbin Institute of Technology), Siwei Ma*

170 [A comprehensive comparison of fractional-pel interpolation filters in HEVC and H.264/AVC](#) ""959
Hao Lv (Peking University), Ronggang Wang*

143 [Multiple Sign Bits Hiding for High Efficiency Video Coding](#) ""437
Jing Wang (Research In Motion Limited), Xiang Yu, Dake He (Research In Motion Ltd.), Felix Henry, Gordon Clare*

82 [Theoretical Analysis on Interframe Predictive Coding with Subpixel Displacement Accuracy - An Exhaustive Approach](#) ""67:
Keita Takahashi (Univ. Electro-Communications), Masahide Kaneko*

Friday, November 30, 2012

Time: 11:20-12:40

Location: Crystal I

Oral Session FO2: Multimedia Applications

Chair: Sunil Kumar, San Diego State University

200 [Lightweight Searchable Screen Video Recording](#) ""443
Mattias Marder (IBM Research - Haifa, Israel), Amir Geva (IBM Research - Haifa, Israel), Yaoping Ruan (IBM T.J. Watson Research Center)*

47 [Inferring User Image-Search Goals by Mining Query Logs with Semi-Supervised Spectral Clustering](#) ""478
Zheng Lu (Shanghai Jiao Tong University), Xiaokang Yang (Shanghai Jiao Tong University), Weiyao Lin (Shanghai Jiao Tong University), Xiaolin Chen*

(Shanghai Jiao Tong University), Hongyuan Zha
(Georgia Institute of Technology)

158 [Shape-Oriented Segmentation with Graph](#) ""449
[Matching Corroboration for Silhouette Tracking](#)
Qingxiang Zhu (Shanghai Jiao Tong University),
Hongkai Xiong* (Shanghai Jiao Tong University),
Xiaoqian Jiang (University of California, San Diego)

262 [Improving Spatio-Temporal Feature Extraction](#) ""455
[Techniques and Their Applications in Action](#)
[Classification](#)
Maral Mesmahosroshahi* (Illinois Institute of
Technology), Joohee Kim (Illinois Institute of
Technology)

Friday, November 30, 2012

Time: 15:40-17:00

Location: Crystal I

Oral Session FO3: 3D Video Analysis and Coding

Chair: Enrico Magli, Politecnico di Torino, Italy

152 [Fast Disparity Estimation for 3DTV Applications](#) ""45;
Tian-Sheuan Chang* (National Chiao-Tung
University), Yu-Cheng Tseng (National Chiao Tung
University)

147 [Integrating Stereoscopic Image Transcoding with](#) ""466
[Retargeting For Mobile Streaming](#)
Yanwei Liu* (Institute of Acoustics, Chines), Song Ci,
Jinxia Liu, Yun Ye, Ying Qi

210 [Automatic 3-D Depth Recovery from A Single](#) ""472
[Urban-Scene Image](#)

Chen-Yu Tseng (National Chiao Tung University),
Sheng-Jyh Wang (National Chiao Tung University)*

171 [Zero-Synthesis View Difference Aware View
Synthesis Optimization for HEVC Based 3D Video
Compression](#) ""484

Siwei Ma (Peking University), Shiqi Wang (Institute
of Digital Media), Wen Gao*

Friday, November 30, 2012

Time: 15:40-17:00

Location: Topaz

**Oral Session FO4: Techniques for Mobile
Applications**

Chair: Yuriy Reznik, InterDigital, USA

68 [Modeling Power Consumption for Video
Decoding on Mobile Platform and Its Application to
Power-Rate Constrained Streaming](#) ""48:

*Xin Li (Samsung Telecommunications America), Zhan
Ma* (Samsung), Felix Fernandes (Samsung
Telecommunications America)*

99 [Low Bit-rate Video Coding via Mode-dependent
Adaptive Regression for Wireless Visual
Communications](#) ""496

Xianming Liu (HIT), Xiaolin Wu, Xinwei Gao (Harbin
Institute of Technology), Debin Zhao, Wen Gao*

38 [iMAPS: A Smart Phone Based Real-Time
Framework for Prediction of Affect in Natural Dyadic
Conversation](#) ""4: 2

AKMMAHBUBUR RAHMAN (The University of
Memphis), Md Iftekhar Tanveer (The University of
Memphis), A S M Iftekhar Anam (The University of*

*Memphis), Mohammed Yeasin (The University of
Memphis)*

120 [Optimizing JPEG Quantization Table for Low Bit Rate Mobile Visual Search](#)

Ling-Yu Duan, Xiangkai Liu (The Institute of Digital
Media, School of EE&CS, Peking University, Beijing),
Jie Chen (The Institute of Digital Media, School of
EE&CS, Peking University, Beijing), Tiejun Huang,
Wen Gao*

Poster Sessions

Wednesday, November 28, 2012

Time: 14:00-15:20

Location: Emerald

Poster Session WP: Video/Image Analysis and Applications

Chair: Ling Guan, Ryerson University, Canada; Gerald Schaefer, Loughborough University, UK

19 [Edge-based method of sharp region extraction from low depth of field images](#)

Natalia Neverova (Laboratoire Hubert Curien),
Hubert Konik (Laboratoire Hubert Curien)*

28 [Histogram-based stereo matching under varying illumination conditions](#)

Il-Lyong Jung (Korea University), Jae-Young Sim (Ulsan National Institute of Science and Technology), Chang-Su Kim (Korea University)*

39 [A new context-sensitive grammars learning algorithm and its application in trajectory classification](#)

Jing Huang (University of illinois,Chicago), dan Schonfeld (University of illinois,Chicago), Vikram Krishnamurthy*

46 [A Color Differentiated Fuzzy C-Means \(CDFCM\) Based Image Segmentation Algorithm](#)

Min-Jen Tsai (National Chiao Tung University),
Hsuan-Shao Chang*

49 [A novel particle filtering framework for 2D-](#)

[TO-3D conversion from a monoscopic 2D image sequence](#)

*Jing Huang** (University of Illinois, Chicago), dan
Schonfeld (University of Illinois, Chicago)

71 [An adaptive covariance-based edge diffusion image enlargement method](#) """"542

*Tao Fan** (Shanghai University), *Haiwu Zhao* (Shanghai University), *Guozhong Wang* (Shanghai University), *Jianwen Chen* (University of California Los Angeles), *John Villasenor* (University of California Los Angeles)

97 [Automatic Sports Video Genre Categorization for Broadcast Videos](#) """"548

*Jiwei Zhang** (BUPT), *Yuan Dong* (BUPT)

113 [Parallel Implementations of a Disparity Estimation Algorithm based on a Proximal Splitting Method](#) """"553

*Raffaele Gaetano** (Institut Mines-Telecom), *Giovanni Chierchia*, *Béatrice Pesquet-Popescu*,

116 [3D Depth Map Generation for Embedded Stereo Applications](#) """"559

*Jui-Sheng Lee** (Department of Electronics Engineering, National Chiao Tung University, Taiwan), *Guo-An Jian* (National Chung Cheng University, Taiwan), *Cheng-An Chien* (CCU, Taiwan), *PENG-SHENG CHEN* (Department of CSIE, TAIWAN), *Jiun-In Guo* (Department of Electronics Engineering, National Chiao Tung University, Taiwan)

124 [Adaptive Search Range Algorithm Based on Cauchy Distribution](#) """"565

*Wei Dai** (HKUST), *Oscar Au* (Hong Kong University of Science and Technology), *Sijin Li* (HKUST), *LIN SUN* (HKUST), *Ruobin Zou* (HKUST)

153 [Optimization of variational methods via motion-based weight selection and keypoint matching](#)

*Botao Wang** (Shanghai Jiao Tong University), *Qingxiang Zhu*, *Hongkai Xiong* (Shanghai Jiao Tong University)

159 [3D Tubular Structure Extraction Using Kernel-Based Superellipsoid Model with Gaussian Process Regression](#)

Qingxiang Zhu (Shanghai Jiao Tong University), *Dayu Zheng* (Shanghai Jiao Tong University), *Hongkai Xiong** (Shanghai Jiao Tong University)

181 [Depth Sensing with Focus and Exposure Adaptation](#)

*Zhiwei Xiong** (Microsoft Research Asia), *Yueyi Zhang*, *Pengyu Cong*, *Feng Wu* (Microsoft Research Asia)

183 [A comparative analysis of local binary pattern texture classification](#)

Niraj Doshi (Loughborough University), *Gerald Schaefer** (Loughborough University)

203 [Modeling Background](#)

250 [Geometry Based Lip Reading System Using Multi Dimension Dynamic Time Warping](#)
Mohd Zamri Ibrahim (Loughborough University),
David Mulvaney (Loughborough University)*

259 [A Viewpoint-independent Hand Gesture Recognition System](#)
*Shen Wu (Harbin Institute of Technology), Feng
Jiang*, Debin Zhao, Shaohui Liu, Wen Gao,*

260 [Segmentation-based View Synthesis for three-dimensional video](#)
Maziar Loghman (Illinois Inst. of Technology),
Joohee Kim (Illinois Institute of Technology)*

Thursday, November 29, 2012

Time: 14:00-15:20

Location: Emerald

**Poster Session HP: Video/Image Enhancement,
Quality Assessment and Transmission**

Chair: Xin Wang, Huawei, USA

44 [An Adaptive Visual Quality Optimization Method for Internet Video Applications](#)
Jianwen Chen (University of California Los Angeles),
Feng Xu (Tsinghua University), Hao Zhu (Huazhong
University of Science & Technology), yijun Mo
(Huazhong University of Science & Technology)*

50 [Region-based Perceptual Quality Regulable Bit Allocation and Rate Control for Video Coding Applications](#)
Guan-Lin Wu (National Taiwan University), Yu-Jie
Fu, Shao-Yi Chien (National Taiwan University)*

- 52 [Bit-Depth Expansion Using Minimum Risk Based Classification](#) ""628
Gaurav Mittal (LNMIIT, Jaipur), Sunil Jaiswal (LNMIIT, Jaipur), Vinit Jakhetiya (HKUST)*
- 56 [Combination of SSIM and JND with Content-transition Classification for Image Quality Assessment](#) ""633
Ming-Chung Hsu (NTU), Guan-Lin Wu (National Taiwan University), Shao-Yi Chien (National Taiwan University)*
- 119 [Stereoscopic Video Quality Assessment Model Based on Spatial-Temporal Structural Information](#) ""639
Jingjing Han (Peking University), Tingting Jiang, Siwei Ma (Peking University)*
- 136 [Multi-View Video Streaming over Wireless Networks with RD-Optimized Scheduling of Network Coded Packets](#) ""645
Irina Nemoianu (TELECOM ParisTech), Claudio Greco (TELECOM ParisTech), Marco Cagnazzo (TELECOM ParisTech), Béatrice Pesquet-Popescu*
- 145 [Fast and Reliable Noise Estimation Algorithm Based on Statistical Hypothesis Tests](#) ""64;
Ping Jiang (Sichuan University), Jian-Zhou Zhang (Sichuan University)*
- 146 [Optimization of Resource Reconfiguration for Cloud-based Multimedia Applications](#) ""656
Xiaoming Nan (Ryerson University), Yifeng He (Ryerson University), Ling Guan (Ryerson University)*
- 164 [Optimized Short-length Rateless Codes for Erasure Protection of Scalable Video Streaming](#) ""662

*John Zao** (National Chiao Tung University), *Martin Hornansky* (National Chiao Tung University, Hsinchu, Taiwan), *Pei-lun Diao* (National Chiao Tung University, Hsinchu, Taiwan), *Chung-Hsuan Wang* (National Chiao Tung University)

168 [Optimized Nested Protection for Video Region of Interest with Raptor Codes](#)

*Zhengyi Luo** (Shanghai Jiao Tong University), *Li Song* (Shanghai Jiao Tong University), *Shibao Zheng*, *Nam Ling* (Santa Clara University)

193 [Spatio-Temporal SSIM Index for Video Quality Assessment](#)

*Yue Wang** (Graduate University of Chinese), *Tingting Jiang*, *Siwei Ma* (Peking University)

216 [A Novel No-Reference Image Quality Assessment Metric Based on Statistical Independence](#)

Ying Chu (Xi'an Jiaotong University), *Xuanqin Mou** (Xi'an Jiaotong University), *Wei Hong* (Xi'an Jiaotong University), *Zhen Ji* (Shenzhen University)

219 [Optimized Tone Mapping with Perceptually Uniform Luminance Values for Backward-Compatible High Dynamic Range Video Compression](#)

*Alper Koz** (Telecom ParisTech), *Frederic Dufaux* (Telecom ParisTech)

222 [Analysis of video Codec Buffer and Delay under Time-varying Channel](#)

*Zhifeng Chen** (InterDigital), *Yuriy Reznik* (InterDigital)

232 [Content-Adaptive Inverse Tone Mapping](#)

Pin-Hung Kuo (National Taiwan University), Jason Tang (National Taiwan University), Shao-Yi Chien (National Taiwan University)*

240 [Adaptive Protection Scheme for MVC-encoded Stereoscopic Video Streaming in IP-based Networks](#) :

César Díaz (Grupo de Tratamiento de Imágenes - Universidad Politécnica de Madrid), Julián Cabrera (Grupo de Tratamiento de Imágenes - Universidad Politécnica de Madrid), Fernando Jaureguizar (Grupo de Tratamiento de Imágenes - Universidad Politécnica de Madrid), Narciso García (Grupo de Tratamiento de Imágenes - Universidad Politécnica de Madrid)*

272 [Perceptual Quality Metric Guided Blocking Artifact Reduction](#) ; 6

Dong-Qing Zhang (FutureWei Technologies), Heather Yu*

288 [Adaptive Rate Control for WYNER-ZIV Video Coding](#) ; :

Ghazaleh Esmaili (UCSD)*

295 [Local Adaptive Rational Interpolation Filter and Its Application for Deinterlacing](#) ; 726

Xiangdong Chen (Hanyang University), Gwanggil Jeon (Department of Embedded Systems Engineering, University of Incheon), Jechang Jeong (Hanyang University)*

Friday, November 30, 2012

Time: 14:00-15:20

Location: Emerald

Poster Session FP: Video/Image Coding

Chair: Khaled El-Maleh, Qualcomm, USA

10 [Improvement of Normality and Orthogonality in HEVC Transform Bases](#) """"72;

Yasuko Sugito (NHK), Atsuro Ichigaya (NHK),
Shinichi Sakaida (NHK)*

14 [Intra Mode Coding In HEVC Standard](#) """"737

Ximin Zhang (MediaTek USA Inc), Shan Liu
(MediaTek USA Inc), Shawmin Lei (MediaTek USA
Inc)*

16 [Rectangular Partitioning For Intra Prediction in HEVC](#) """"743

Shan Liu (MediaTek USA Inc), Ximin Zhang
(MediaTek USA Inc), Shawmin Lei (MediaTek USA
Inc)*

54 [Adaptive Use of Systematic Bits in Distributed Video Coding with Multiple Puncturing Matrices](#) """"749

Mohamed HAJ TAIEB (Laval University), Jean-Yves
Chouinard (Laval University), Demin WANG
(Communications Research Centre Canada)*

78 [Efficient Depth Video Coding Based on View Synthesis Distortion Estimation](#) """"755

*Tae-Young Chung (Korea University), Won-Dong Jang
(Korea University), Chang-Su Kim* (Korea University)*

79 [Implementation of HEVC Decoder on x86 Processors with SIMD Optimization](#) """"759

Leju Yan (Peking University), Yizhou Duan (Peking
University), Jun Sun (Peking University), Zongming
Guo (Peking University)*

131 [A Novel In-Loop Filter Based on CLDT](#) ""765
[Masking Effect Model for HEVC](#)

Luo Binji (BUPT), Aidong Men (School of Telecommunication Engineering Beijing University of Posts and Telecomm), Bo Yang (School of Telecommunication Engineering Beijing University of Posts and Telecomm), Wei Zhao (BUPT), Ye Feng (BUPT)*

133 [A Hierarchical Mode Decision Scheme for Fast](#) ""76;
[Implementation of Spatially Scalable Video Coding](#)

Xin Lu (University of Warwick), Graham Martin (University of Warwick)*

135 [Simplified AMVP for High Efficiency Video](#) ""777
[Coding](#)

Liang Zhao (Harbin Institute of Technology), Xun Liang (Mediatek(Beijing) Inc.), Shawmin Lei (MediaTek USA Inc), Siwei Ma (Peking University), Debin Zhao (Harbin Institute of Technology)*

150 [A Study on Efficient Compression of Multi-](#) ""77;
[Focus Images for Dense Light-Field Reconstruction](#)

Takashi SAKAMOTO (Tokyo University of Science), Kazuya KODAMA (National Institute of Informatics), Takayuki HAMAMOTO (Tokyo University of Science)*

177 [A Novel Method to Code Object Flags for](#) ""787
[Scalable Browsing of Surveillance Video](#)

Shizheng Wang (Institute of Automation, CAS)*

189 [Mode Adaptive Reference Frame Denoising for](#) ""792
[High Fidelity Compression in HEVC](#)

Eugen Wige (University Erlangen-Nuremberg), Gilbert Yammine (Uni. of Erlangen-Nuremberg), André Kaup*

- 196 [A Low-Complexity Screen Compression Scheme](#) ^{''''798}
*Zhaotai Pan** (Univ. of Sci. & Tech. of China), *Huifeng Shen* (Microsoft Research Asia), *Yan Lu* (Microsoft Research Asia), *Nenghai Yu* (University of Science and Technology of China), *shipeng Li*
- 199 [An efficient surveillance coding method based on a timely and bit-saving background updating model](#) ^{''''7: 4}
*Wei Chen** (Peking University), *Xianguo Zhang* (Peking University), *Yonghong Tian* (Peking University), *Dandan Song* (Beijing Institute of Technology), *Tiejun Huang*
- 209 [Layered Compression for High Dynamic Range Depth](#) ^{''''7: :}
*Dan Miao** (USTC), *Jingjing Fu* (MSRA), *Yan Lu* (Microsoft Research Asia), *Shipeng Li*, *Chang Wen Chen* (SUNY at Buffalo)
- 218 [An Efficient Foreground-Based Surveillance Video Coding Scheme in Low Bit-Rate Compression](#) ^{''''7; 6}
*Shanghang Zhang** (Peking University), *Kaijin Wei* (Peking University), *Zhu Jia*, *Dong Xie*, *Wen Gao*
- 221 [Human Attention Region-of-Interest in I-frame for Video Coding](#) ^{''''822}
*Sylvia N'guessan** (Santa Clara University), *Nam Ling* (Santa Clara University)
- 237 [Error Resilient Video Coding for Systems with Delayed Feedback](#) ^{''''827}
*Rahul Vanam** (InterDigital), *Zhifeng Chen* (InterDigital), *Yuriy Reznik* (InterDigital)

256 [A Novel Content-Adaptive Image Compression System](#) ""833

Hai Wei (UtopiaCompression Corporation)*

258 [A Lossless Color Image Compression Method Based on a New Reversible Color Transform](#) ""839

Seyun Kim (SNU), Nam Ik Cho (Seoul National University)*

269 [Residual Coding of Depth Map with K-Means Clustering](#) ""843

Cheon Lee (GIST), Sang-Beom Lee (Gwangju Institute of Science and Technology (GIST)), Ho-Cheon Wey (Samsung), Jaejoon Lee (Samsung), Yo-Sung Ho (Gwangju Institute of Science and Technology)*

279 [Optimal Intra Coding of HEVC by Structured Set Prediction Mode with Discriminative Learning](#) ""847

Wenrui Dai (Shanghai Jiao Tong University), Hongkai Xiong (Shanghai Jiao Tong University)*

283 [The Hierarchical Signal Dependent Transform: Creating Orthonormal Basis That Match Local Signal Characteristics](#) ""853

Vanessa Testoni (UCSD), Dinei Florêncio (Microsoft), Max Costa (Unicamp)*

289 [Object-Based Coding for Kinect Depth and Color Videos](#) ""859

Cuiling Lan (Xidian University), Ji-Zheng Xu (Microsoft Research Asia), Feng Wu (Microsoft Research Asia)*

Special Sessions

Wednesday, November 28, 2012

Time: 15:40-17:00

Location: Topaz

Special Session WS1: Network and Content Aware Adaptive Visual Communications for Future Internet

Chair: Marco Grangetto, University of Torino, Italy

129 [WaveCast: Wavelet based Wireless Video Broadcast using Lossy Transmission](#)

Xiaopeng Fan (Harbin Institute of Technology),
ruiqin Xiong, Feng Wu (Microsoft Research Asia),
Debin Zhao*

12 [An adaptive hybrid CDN/P2P solution for content delivery networks](#)

Francesco Bronzino (Turin University), Rossano Gaeta (Università di Torino), Marco Grangetto (University of Torino), Giovanni Pau (UCLA)*

20 [Optimization of Generalized LT Codes for Progressive Image Transfer](#)

Suayb Arslan (UCSD), Pamela Cosman (UCSD),
Laurence Milstein (UCSD)*

23 [Content-adaptive H.264 Rate Control for Live Screencasting](#)

Yi Lin, SJTU, Weikai Xie, Lei Jin, Ruimin Shen*

Thursday, November 29, 2012

Time: 11:20-12:40

Location: Topaz

**Special Session HS1: Dynamic Adaptive Streaming
over HTTP**

Chair: Yuriy Reznik, InterDigital, USA

3 [Dash in Mobile Networks and Services](#) ""889
Thomas Stockhammer (Nomor Research), Michael
Luby (Qualcomm Incorporated)*

234 [A Proxy Effect Analysis and Fair Adaptation
Algorithm for Multiple Competing Dynamic Adaptive
Streaming over HTTP Clients](#) ""895
Christopher Mueller (University Klagenfurt), Stefan
Lederer (Alpen Adria Universität), Christian Timmerer
(Alpen-Adria-Universität)*

123 [A Control-Theoretic Approach to Rate
Adaptation for Dynamic HTTP Streaming](#) ""89;
Chao Zhou (Peking University), Xinggong Zhang,
Zongming Guo (Peking University)*

108 [Gaze-Driven Video Streaming with Saliency-
Based Dual-Stream Switching](#) ""8: 7
Yunlong Feng (The Gra. Univ. for Ad. Studies), Gene
Cheung (National Institute of Informatics), Wai-tian
Tan, Yusheng Ji*

Friday, November 30, 2012

Time: 9:50-11:10

Location: Topaz

**Special Session FS1: Compressive Sensing and
Sparse Representation for Multimedia (I)**

Chair: Li-Wei Kang, Academia Sinica, Taiwan

238 [Robust Wheelchair Pedestrian Detection Using
Sparse Representation](#) ""8; 3

Duan-Yu Chen (Yuan Ze University), Bo-Ruei Huang*

204 [New Bounds on Image Denoising: Viewpoint of Sparse Representation and Non-Local Averaging](#)

*Jianzhou Feng** (Shanghai jiaotong university), *Li Song* (Shanghai Jiao Tong University), *Xiaoming Huo*, *Xiaokang Yang* (Shanghai Jiao Tong University), *Wenjun Zhang* (Shanghai Jiao Tong University)

211 [A Fast Multiscale Framework for Data in High-dimensions: Measure Estimation, Anomaly Detection, and Compressive Measurements](#)

*Guangliang Chen** (Duke Univeristy), *Mark Iwen*, *Mauro Maggioni*, *Sang Chin*

271 [Classification Based on Sparse Representation and Euclidian Distance](#)

Ali Julazadeh (Ryerson University), *Mahdi Marsousi* (Ryerson University), *Javad Alirezaie** (Ryerson University)

Friday, November 30, 2012

Time: 11:20-12:40

Location: Topaz

Special Session FS2: Compressive Sensing and Sparse Representation for Multimedia (II)

Chair: Chia-Hung Yeh, National Sun Yat-Sen University, Taiwan

173 [Deblocking Filter for Artifact Reduction in Distributed Compressive Video Sensing](#)

Khanh Dinh (Sungkyunkwan University), *Hiukjae Shim* (Sungkyunkwan University), *Byeungwoo Jeon** (Sungkyunkwan University)

98 [Context-Aware Single Image Super-Resolution](#)''''939
[Using Locality-Constrained Group Sparse](#)

[Representation](#)

Chih-Yun Tsai (National Taiwan University), De-An Huang (National Taiwan University), Ming-Chun Yang (National Taiwan University), Li-Wei Kang (Academia Sinica), Yu-Chiang Wang (Academia Sinica)*

53 [Efficient Image/Video Deblocking via Sparse](#)''''945
[Representation](#)

Yi-Wen Chiou (National Sun Yat-Sen University), Chia-Hung Yeh (National Sun Yat-Sen University), Li-Wei Kang (Academia Sinica), Chia-Wen Lin (National Tsing Hua University), Shu-Jhen Fan-Jiang (National Sun Yat-Sen University)*

Demo Sessions

Wednesday, November 28, 2012

Time: 14:00-17:00

Location: Emerald

Demo Session WDS

**Chair: Ling Guan, Ryerson University,
Canada; Gerald Schaefer, Loughborough
University, UK**

297 [An Optimized Real-Time Multi-Thread HEVC Decoder](#)

Yizhou Duan (Beijing University)

299 [Vision Guided Compression on low-bit rate channels](#)

Sek Chai (SRI)

304 [Intuitive Mobile Image Browsing on a Hexagonal Lattice](#)

Gerald Schaefer (Loughborough University)

Thursday, November 29, 2012

Time: 14:00-17:00

Location: Emerald

Demo Session HDS

Chair: Xin Wang, Huawei, USA

298 [DASH\(HEVC\)/LTE: QOE-Based Dynamic Adaptive Streaming of HEVC Content Over Wireless Networks](#)

Xin Wang (Huawei)

300 [An Open Source MPEG DASH Evaluation Suite](#) ""955
Stefan Lederer (Alpen-Adria Universität Klagenfurt)

301 [Demonstration of a multimedia player supporting the MPEG-DASH protocol](#) ""956
Chrystian Roy (Visualon)

302 [User-Adaptive Mobile Video Streaming](#) ""957
Yuriy Reznik (InterDigital)

303 [An HTML5 Player for a GStreamer-based MPEG DASH Client](#) ""958
Emanuele Quaccio (STMicroelectronics)