

IS&T International Symposium on Electronic Imaging Science and Technology 2016

Visual Information Processing and
Communication VII

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Editors:

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Visual Information Processing and Communication VII

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Wednesday, February 17, 2016

DPMI/IPAS/VIPC: Blur Removal and Synthesis Joint Session

Session Chair: Radka Tezaur, Nikon Research Corp. of America (USA)

10:50 am – 12:10 pm

Golden Gate 6/7

This session is jointly sponsored by: Digital Photography and Mobile Imaging XII, Image Processing: Algorithms and Systems XIV, and Visual Information Processing and Communication VII.

10:50

DPMI-030

Multi-image sparse motion-invariant photography, Bart Kofoed^{1,2}, Peter de With¹, and Eric Janssen²; ¹Eindhoven University of Technology and ²Prodrive Technologies (Netherlands)

11:10

DPMI-031

Virtual DSLR: High quality dynamic depth-of-field synthesis on mobile platforms, Yang Yang¹, Haiting Lin¹, Zhan Yu², Sylvain Paris², and Jingyi Yu¹; ¹University of Delaware and ²Adobe (USA)

11:50

VIPC-033

Motion deblurring for depth-varying scenes, Ruiwen Zhen and Robert Stevenson, University of Notre Dame (USA)

12:10 – 2:00 pm Lunch Break

El 2016 Wednesday Plenary and Symposium Awards

Session Chair: Choon-Woo Kim (Inha University)

2:00 – 3:00 PM

Continental Ballroom 5

Intel® RealSense Technology: Adding human-like sensing and interactions to computing devices, Achin Bhowmik, Intel Corporation (USA)

3:00 – 3:30 pm Coffee Break

Image Enhancement and Analysis

Session Chair: Robert Stevenson, University of Notre Dame (USA)

3:30 – 4:50 pm

Golden Gate 2

3:30

VIPC-227

Sony ARW2 compression: Artifacts and credible repair, Henry Dietz, University of Kentucky (USA)

3:50

VIPC-228

Guided filter demosaicking for Fourier spectral filter array, Jie Jia, Chuan Ni, Andrew Sarangan, and Keigo Hirakawa, University of Dayton (USA)

4:10

VIPC-229

Haze removal of single remote sensing image by combining dark channel prior with superpixel, Yanlin Tian, Chao Xiao, Xiu Chen, Daiqing Yang, and Zhenzhong Chen, Wuhan University (China)

4:30

VIPC-230

Towards region-of-attention analysis in eye tracking protocols, Yingbin Wang, Xiu Chen, and Zhenzhong Chen, Wuhan University (China)

Visual Information Processing and Communication VII

Image Databases

Session Chair: Robert Stevenson, University of Notre Dame (USA)

4:50 – 5:30 pm

Golden Gate 2

4:50

VIPC-231

Using deep convolutional neural networks for image retrieval, Chien-Hao Kuo¹, Yang-Ho Chou², and Pao-Chi Chang¹; ¹Department of Communication Engineering, National Central University and ²Convergence Services Laboratory, Chungwha Telecommunication Laboratories (Taiwan)

5:10

VIPC-232

Visual attention model and relevant feedback based image retrieval, Zhijiang Li^{1,2}, Jiaxian Long¹, and Chuan Dong³; ¹Wuhan University (China), ²University of Leeds (United Kingdom), and ³Hubei Mobile Communication Company Limited (China)

EI 2016 Symposium Interactive Papers Session**5:30 – 7:00 PM**

Continental Ballroom 6

Thursday, February 18, 2016**Error Resilient Video Coding**

Session Chairs: Onur Guleryuz, LG Electronics MobileComm U.S.A., Inc. (USA) and Amir Said, Qualcomm Technologies Inc. (USA)

9:30 – 10:10 am

Golden Gate 2

9:30

VIPC-233

A doubly error resilient coder of image sequences, William A. Pearlman and Yang Hu, PrimaComp, Inc. (USA)

9:50

VIPC-234

VPx Error Resilient Video Coding Using Duplicated Prediction Information, Neeraj Gadgil and Edward Delp, Purdue University (USA)

10:10 – 10:50 am Coffee Break

Video Coding

Session Chairs: Onur Guleryuz, LG Electronics MobileComm U.S.A., Inc. (USA) and Amir Said, Qualcomm Technologies Inc. (USA)

10:50 am – 12:30 pm

Golden Gate 2

10:50

VIPC-235

A subjective study for the design of multi-resolution ABR video streams with the VP9 Codec, Chao Chen, Sasi Inguva, Andrew Rankin, and Anil Kokaram, YouTube, Google Inc. (USA)

11:10

VIPC-236

Machine learning-based early termination in prediction block decomposition for VP9, Xintong Han¹, Yunqing Wang², Yaowu Xu², and James Bannoski²; ¹University of Maryland, College Park and ²Google Inc. (USA)

11:30

VIPC-237

Optimizing transcoder quality targets using a neural network with an embedded bitrate model, Michele Covell¹, Martin Arjovsky², Yao-Chung Lin¹, and Anil Kokaram¹; ¹Google, Inc (USA) and ²University of Buenos Aires (Argentina)

11:50

VIPC-238

A sample adaptive offset early termination method for HEVC parallel encoding, Younhee Kim, Jinwuk Seok, Myeong-Seok Gi, Huiyong Kim, and Jin Soo Choi, Electronics and Telecommunication Research Institute (South Korea)

12:10

VIPC-239

Pixel decimation of RD-cost functions in the HEVC encoder, Ahmed Hamza¹, Abdelrahman Abdelazim², and Djamel Ait-Boudaoud¹; ¹University of Portsmouth (United Kingdom) and ²American University of the Middle East (Kuwait)

12:30 – 150 pm Lunch Break

Feature Detection

Session Chair: Robert Stevenson, University of Notre Dame (USA)

1:50 – 3:30 pm

Golden Gate 2

1:50

VIPC-240

Block equivalence algorithm for labeling 2D and 3D images on GPU, Sergey Zavalishin¹, Ilia Safonov², Yury Bekhtin³, and Ilya Kurilin⁴; ¹Ryazan State Radio Electronics University (RSREU), ²National Research Nuclear University MEPhI, ³Moscow State Technical University of Radio Engineering, Electronics and Automatics, and ⁴Samsung R&D Institute Russia (Russian Federation)

2:10

VIPC-241

Incorporating gradient magnitude in computation of Edge Oriented Histogram descriptor, Liangpeng Xu, Yong Li, Chunxiao Fan, Hongbin Jin and Xiang Shi, Beijing University of Posts and Telecommunications (China)

2:30

VIPC-242

Fingerprint liveness detection using ensemble of local image quality assessments, Wonjun Kim, Sungjoo Suh, Youngsung Kim, and Changkyu Choi, Samsung Advanced Institute of Technology (South Korea)

2:50

VIPC-243

Optimizing color information processing inside an SVM network, Jérôme Pasquet^{1,2}, Gérard Subsol², Mustapha Derras¹, and Marc Chaumont^{2,3}; ¹Berger Levraut, ²Université de Montpellier/CNRS, and ³Université de Nîmes (France)

3:10

VIPC-244

Register multimodal images of large scene depth variation with global information, Hongbin Jin¹, Yong Li¹, and Robert Stevenson²; ¹Beijing University of Posts and Teles. (China) and ²University of Notre Dame (USA)

3:30 – 3:50 pm Coffee Break