

# **2010 17th IEEE International Conference on Image Processing (ICIP 2010)**

**Hong Kong  
26 - 29 September 2010**

**Volume 1  
Pages 1 - 804**



**IEEE Catalog Number: CFP10CIP-PRT  
ISBN: 978-1-4244-7992-4**

# TABLE OF CONTENTS

## MA-L1: IMAGE PROCESSING FOR STEREO DIGITAL CINEMA PRODUCTION

### MA-L1.1: CONSISTENT OPTICAL FLOW FOR STEREO VIDEO.....1

*Anita Sellent, Christian Linz, Marcus Magnor, Technische Universität Braunschweig, Germany*

### MA-L1.2: NEW VIEW SYNTHESIS FOR STEREO CINEMA BY HYBRID DISPARITY .....5 REMAPPING

*Frédéric Devernay, Sylvain Duchêne, INRIA, France*

### MA-L1.3: STEREOSCOPIC CONTENT PRODUCTION OF COMPLEX DYNAMIC .....9 SCENES USING A WIDE-BASELINE MONOSCOPIC CAMERA SET-UP

*Jean-Yves Guillemaut, Muhammad Sarim, Adrian Hilton, University of Surrey, United Kingdom*

### MA-L1.4: PATCH-BASED RECONSTRUCTION AND RENDERING OF HUMAN HEADS.....13

*David C. Schneider, Anna Hilsmann, Peter Eisert, Fraunhofer HHI, Germany*

### MA-L1.5: ISSUES IN ADAPTING RESEARCH ALGORITHMS TO STEREOSCOPIC .....17 VISUAL EFFECTS

*Peter Hillman, J.P. Lewis, Sebastian Sylwan, Erik Winquist, Weta Digital Ltd, New Zealand*

### MA-L1.6: MATTING WITH A DEPTH MAP .....21

*Francois Pitie, Anil Kokaram, Trinity College Dublin, Ireland*

### MA-L1.7: 3D VIDEO PERFORMANCE SEGMENTATION.....25

*Tony Tung, Takashi Matsuyama, Kyoto University, Japan*

### MA-L1.8: MULTI-VIEW OBJECT AND HUMAN BODY PART DETECTION UTILIZING .....29 3D SCENE INFORMATION

*Georgios Sifris, Nikolaos Nikolaidis, Ioannis Pitas, Centre for Research & Technology Hellas and Aristotle University of Thessaloniki, Greece*

## MA-L3: STATISTICAL-MODEL BASED METHODS I

### MA-L3.1: BAYESIAN REGULARIZATION OF DIFFUSION TENSOR IMAGES USING .....65 HIERARCHICAL MCMC AND LOOPY BELIEF PROPAGATION

*Siming Wei, Zhejiang University, China; Jing Hua, Wayne State University, United States; Jiajun Bu, Chun Chen, Zhejiang University, China; Yizhou Yu, University of Illinois at Urbana-Champaign, United States*

### MA-L3.2: CONTRAST IN SPECKLED IMAGERY WITH STOCHASTIC DISTANCES .....69

*Alejandro Frery, Universidade Federal de Alagoas, Brazil; Abraão Nascimento, Renato Cintra, Universidade Federal de Pernambuco, Brazil*

### MA-L3.3: EXEMPLAR-BASED EM-LIKE IMAGE DENOISING VIA MANIFOLD .....73 RECONSTRUCTION

*Xin Li, West Virginia University, United States*

### MA-L3.4: TOTAL SUBSET VARIATION PRIOR.....77

*Sanjeev Kumar, Truong Q. Nguyen, University of California, San Diego, United States*

<b>MA-L3.5: TRACKING IN STREAMED VIDEO BY UPDATING GLOBALLY OPTIMAL MATCHINGS</b> .....	<b>81</b>
<i>João F. Henriques, Rui Caseiro, Jorge Batista, University of Coimbra, Portugal</i>	
<b>MA-L3.6: LEARNING OF STRUCTURING ELEMENTS FOR MORPHOLOGICAL IMAGE MODEL WITH A SPARSITY PRIOR</b> .....	<b>85</b>
<i>Makoto Nakashizuka, Shinji Takenaka, Youji Iiguni, Osaka University, Japan</i>	
<b>MA-L3.7: COMPRESSIVE BLIND SOURCE SEPARATION</b> .....	<b>89</b>
<i>Yiyue Wu, Yuejie Chi, Robert Calderbank, Princeton University, United States</i>	
<b>MA-L3.8: INTER-FRAME CONTEXTUAL MODELLING FOR VISUAL SPEECH RECOGNITION</b> .....	<b>93</b>
<i>Adrian Pass, Ji Ming, Philip Hanna, Jianguo Zhang, Darryl Stewart, Queens University Belfast, United Kingdom</i>	
 <b>MA-L4: MORPHOLOGY AND REGRESSION</b>	
<b>MA-L4.1: A NEW FAMILY OF ORDER-STATISTICS BASED SWITCHING VECTOR FILTERS</b> .....	<b>97</b>
<i>M. Emre Celebi, Louisiana State University in Shreveport, United States; Gerald Schaefer, Loughborough University, United Kingdom; Huiyu Zhou, Queens University Belfast, United Kingdom</i>	
<b>MA-L4.2: A COMPACT SINGLE-PASS ARCHITECTURE FOR HYSTERESIS THRESHOLDING AND COMPONENT LABELING</b> .....	<b>101</b>
<i>Maysaa Al Najjar, Swetha Karlapudi, Magdy Bayoumi, University of Louisiana at Lafayette, United States</i>	
<b>MA-L4.3: A FAST WEIGHTED MEDIAN ALGORITHM BASED ON QUICKSELECT</b> .....	<b>105</b>
<i>Andre Rauh, Gonzalo R. Arce, University of Delaware, United States</i>	
<b>MA-L4.4: LOCAL MULTIPLE ORIENTATIONS ESTIMATION USING K-MEDOIDS</b> .....	<b>109</b>
<i>Zhanghui Kuang, Guodong Pan, Kwan-Yee K. Wong, Hong Kong University, Hong Kong SAR of China</i>	
<b>MA-L4.5: COMPARISON OF ORIENTATED AND SPATIALLY VARIANT MORPHOLOGICAL FILTERS VS MEAN/MEDIAN FILTERS FOR ADAPTIVE IMAGE DENOISING</b> .....	<b>113</b>
<i>Rafael Verdú-Monedero, Universidad Politécnica de Cartagena, Spain; Jesús Angulo, MINES ParisTech, France; Jorge Larrey-Ruiz, Juan Morales-Sánchez, Universidad Politécnica de Cartagena, Spain</i>	
<b>MA-L4.6: DECISION BASED ADAPTIVE MEDIAN FILTER TO REMOVE BLOTCHES SCRATCHES STRIPES AND IMPULSE NOISE IN IMAGES</b> .....	<b>117</b>
<i>Vijaykumar Vaithyam Rengarajan, Jothibasu Palaniswamy, Anna University Coimbatore, India</i>	
<b>MA-L4.7: STRUCTURALLY ADAPTIVE MATHEMATICAL MORPHOLOGY ON NONLINEAR SCALE-SPACE REPRESENTATIONS</b> .....	<b>121</b>
<i>Jesús Angulo, Santiago Velasco-Forero, MINES ParisTech, France</i>	
<b>MA-L4.8: A NOVEL NOISE-FREE PIXELS BASED IMPULSE NOISE FILTERING</b> .....	<b>125</b>
<i>Abdul Majid, Muhammad Tariq Mahmood, Tae-Sun Choi, Gwangju Institute of Science and Technology, Republic of Korea</i>	

## **MA-L5: MOSAICING, REGISTRATION, AND ALIGNMENT I**

### **MA-L5.1: MULTI-MODAL IMAGE REGISTRATION USING LINE FEATURES AND MUTUAL INFORMATION .....129**

*Mehrnaz Zouqi, Jagath Samarabandu, University of Western Ontario, Canada; Yanbo Zhou, iLookabout Inc., Canada*

### **MA-L5.2: TOPOLOGY BASED AFFINE INVARIANT DESCRIPTOR FOR MSERS.....133**

*Chenbo Shi, Guijin Wang, Xinggang Lin, Tsinghua University, China; Yongming Wang, Advanced Information Technology Institute, China; Chao Liao, Quan Miao, Tsinghua University, China*

### **MA-L5.3: GRADIENT BASED THRESHOLD FREE COLOR FILTER ARRAY INTERPOLATION .....137**

*Ibrahim Pekkucuksen, Yucel Altunbasak, Georgia Institute of Technology, United States*

### **MA-L5.4: COMPARISON OF IMAGE ALIGNMENT ON HEXAGONAL AND SQUARE LATTICES .....141**

*Tetsuo Shima, Shigeki Sugimoto, Masatoshi Okutomi, Tokyo Institute of Technology, Japan*

### **MA-L5.5: HISTOGRAM-BASED IMAGE REGISTRATION FOR REAL-TIME HIGH DYNAMIC RANGE VIDEOS .....145**

*Benjamin Guthier, Stephan Kopf, Wolfgang Effelsberg, University of Mannheim, Germany*

### **MA-L5.6: DECOLORIZING IMAGES FOR ROBUST MATCHING.....149**

*Codruta Ancuti, Cosmin Ancuti, Philippe Bekaert, Hasselt University, Belgium*

### **MA-L5.7: ESTIMATION OF LINEAR DEFORMATIONS OF 3D OBJECTS.....153**

*Attila Tanacs, University of Szeged, Hungary; Joakim Lindblad, Swedish University of Agricultural Sciences, Sweden; Natasa Sladoje, University of Novi Sad, Yugoslavia; Zoltan Kato, University of Szeged, Hungary*

### **MA-L5.8: ENDOSCOPIC BLADDER IMAGE REGISTRATION USING SPARSE GRAPH CUTS .....157**

*Thomas Weibel, Fraunhofer Institut für Techno- und Wirtschaftsmathematik ITWM / Centre de Recherche en Automatique de Nancy - ENSEM, Germany; Christian Daul, Didier Wolf, Centre de Recherche en Automatique de Nancy - ENSEM, France; Ronald Rösch, Fraunhofer Institut für Techno- und Wirtschaftsmathematik ITWM, Germany; Achraf Ben-Hamadou, Centre de Recherche en Automatique de Nancy - ENSEM, France*

## **MA-L6: TRANSFORM CODING I**

### **MA-L6.1: SIMPLE ORDER-16 INTEGER TRANSFORM FOR VIDEO CODING .....161**

*Chi-Keung Fong, Wai-Kuen Cham, Chinese University of Hong Kong, China*

### **MA-L6.2: IMPROVED H.264-BASED VIDEO CODING USING AN ADAPTIVE TRANSFORM .....165**

*Moyuresh Biswas, Mark Pickering, Michael Frater, University of New South Wales, Australia*

### **MA-L6.3: EDGE-BASED IMAGE CODING AT LOW BIT-RATE .....169**

*Yi Niu, Xidian University, Canada; Xiaolin Wu, McMaster University, Canada; Guangming Shi, Xiaotian Wang, Xidian University, China*

<b>MA-L6.4: GLOBAL AND LOCAL RATE-DISTORTION OPTIMIZATION FOR LAPPED BIORTHOGONAL TRANSFORM CODING</b>	<b>173</b>
<i>Martin Winken, Detlev Marpe, Thomas Wiegand, Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute, Germany</i>	
<b>MA-L6.5: A NOVEL THREE-DIMENSIONAL TRANSFORM AND ITS SUPPORTING TOOLS FOR IMPROVING INTER CODING PERFORMANCE IN H.264/AVC</b>	<b>177</b>
<i>Jaekyu Jo, Hye-Jeong Cho, Kwangwoon university, Republic of Korea; Jinho Lee, Seyoon Jung, Electronics and Telecommunications Research Institute, Republic of Korea; Seoung-Jun Oh, Kwangwoon university, Republic of Korea</i>	
<b>MA-L6.6: TWO DIMENSIONAL SINGULAR VALUE DECOMPOSITION (2D-SVD) BASED VIDEO CODING</b>	<b>181</b>
<i>Zhouye Gu, Weisi Lin, Bu-Sung Lee, Chiew Tong Lau, Manoranjan Paul, Nanyang Technological University, Singapore</i>	
<b>MA-L6.7: DIRECTION-ADAPTIVE TRANSFORMS FOR CODING PREDICTION RESIDUALS</b>	<b>185</b>
<i>Robert Cohen, Mitsubishi Electric Research Laboratories, United States; Sven Klomp, Leibniz Universität Hannover, Germany; Anthony Vetro, Huifang Sun, Mitsubishi Electric Research Laboratories, United States</i>	
<b>MA-L6.8: CONTENT-ADAPTIVE COLOR TRANSFORM FOR IMAGE COMPRESSION</b>	<b>189</b>
<i>Alexander Suhre, Kivanc Kose, A. Enis Çetin, Bilkent University, Turkey; Metin Gurcan, Ohio State University, United States</i>	
 <b>MA-L7: IMAGE PROCESSING FOR WATERMARKING I</b>	
<b>MA-L7.1: PERCEPTUAL TAGGING OF VIDEO FILES IN P2P NETWORKS</b>	<b>193</b>
<i>Alper Koz, Reginald Lagendijk, Delft University of Technology, Netherlands</i>	
<b>MA-L7.2: A LEARNING FRAMEWORK FOR ROBUST HASHING OF FACE IMAGES</b>	<b>197</b>
<i>Kamil Senel, M. Kivanç Mihçak, Bogazici University, Turkey; Vishal Monga, Pennsylvania State University, India</i>	
<b>MA-L7.3: A SUBJECTIVE STUDY OF VISIBILITY THRESHOLDS FOR WAVELET DOMAIN WATERMARKING</b>	<b>201</b>
<i>Florent Autrusseau, Sylvain David, Vinod Pankajakshan, University of Nantes, France</i>	
<b>MA-L7.4: CORRELATION-AWARE DATA HIDING BASED ON SPREAD SPECTRUM EMBEDDING</b>	<b>205</b>
<i>Amir Valizadeh, Z. Jane Wang, University of British Columbia, Canada</i>	
<b>MA-L7.5: GEODESIC DISTANCE-BASED POSE-INVARIANT BLIND WATERMARKING ALGORITHM FOR THREE-DIMENSIONAL TRIANGULAR MESH MODEL</b>	<b>209</b>
<i>Jen-Sheng Tsai, Ming-Chou Liao, Win-Bin Huang, Yau-Hwang Kuo, National Cheng Kung University, Taiwan</i>	
<b>MA-L7.6: ANALYSIS OF THE RESISTANCE OF THE SPREAD TRANSFORM AGAINST TEMPORAL FRAME AVERAGING ATTACK</b>	<b>213</b>
<i>Sofiane Braci, Rémy Boyer, Claude Delpha, Laboratoire des signaux et systèmes (L2S) Univ. Paris Sud 11-SUPELEC-CNRS, France</i>	

<b>MA-L7.7: HIGH CAPACITY REVERSIBLE IMAGE WATERMARKING BASED ON INTEGER TRANSFORM</b>	<b>217</b>
<i>Chao Wang, Xiaolong Li, Bin Yang, Institute of Computer Science and Technology, Peking University, China</i>	
<b>MA-L7.8: DETECTION OF LSB MATCHING STEGANOGRAPHY BASED ON THE LAPLACIAN MODEL OF PIXEL DIFFERENCE DISTRIBUTIONS</b>	<b>221</b>
<i>Tao Zhang, Wenxiang Li, Zhengzhou Information Science and Technology Institute, China; Yan Zhang, Zhengzhou Institute of Light Industry, China; Xijian Ping, Zhengzhou Information Science and Technology Institute, China</i>	
<b>MA-L8: SEGMENTATION I</b>	
<b>MA-L8.1: ROBUST INTERACTIVE IMAGE SEGMENTATION WITH AUTOMATIC BOUNDARY REFINEMENT</b>	<b>225</b>
<i>Dingding Liu, Nokia / University of Washington, United States; Yingen Xiong, Nokia Research Center, United States; Linda Shapiro, University of Washington, United States; Kari Pulli, Nokia, United States</i>	
<b>MA-L8.2: FAST SEMANTIC SCENE SEGMENTATION WITH CONDITIONAL RANDOM FIELD</b>	<b>229</b>
<i>Wen Yang, Dengxin Dai, Wuhan University, China; Bill Triggs, Laboratoire Jean Kuntzmann, France; Guisong Xia, Télécom ParisTech, France; Chu He, Wuhan University, China</i>	
<b>MA-L8.3: AN AUTOMATED VERTEBRA IDENTIFICATION AND SEGMENTATION IN CT IMAGES</b>	<b>233</b>
<i>Melih Aslan, Asem Ali, Ham Rara, Aly Farag, University of Louisville, United States</i>	
<b>MA-L8.4: TRANSFERABLE BELIEF MODEL FOR HAIR MASK SEGMENTATION</b>	<b>237</b>
<i>Cédric Rousset, Pierre Yves Coulon, Michèle Rombaut, GIPSA-Lab, Grenoble Institute of Technology, France</i>	
<b>MA-L8.5: AN ADAPTIVE CLUSTERING AND CHROMINANCE-BASED MERGING APPROACH FOR IMAGE SEGMENTATION AND ABSTRACTION</b>	<b>241</b>
<i>Lulu He, Thrasyvoulos Pappas, Northwestern University, United States</i>	
<b>MA-L8.6: IMAGE PARTITIONING WITH KERNEL MAPPING AND GRAPH CUTS</b>	<b>245</b>
<i>Mohamed Ben Salah, Amar Mitiche, Institut National de la Recherche Scientifique, Canada; Ismail Ben Ayed, General Electric (GE) Canada, Canada</i>	
<b>MA-L8.7: AN IMPROVED FUZZY CLUSTERING APPROACH FOR IMAGE SEGMENTATION</b>	<b>249</b>
<i>Ivana Despotovic, Bart Goossens, Ewout Vansteenkiste, Wilfried Philips, Ghent University, Belgium</i>	
<b>MA-L8.8: NONPARAMETRIC SALIENCY DETECTION USING KERNEL DENSITY ESTIMATION</b>	<b>253</b>
<i>Zhi Liu, Yinzhu Xue, Liquan Shen, Zhaoyang Zhang, Shanghai University, China</i>	
<b>MA-L9: CLASSIFICATION I</b>	
<b>MA-L9.1: A ROTATION AND SCALE INVARIANT DESCRIPTOR FOR SHAPE RECOGNITION</b>	<b>257</b>
<i>Antonella Di Lillo, Brandeis University, United States; Giovanni Motta, Hewlett-Packard Corp., United States; James A. Storer, Brandeis University, United States</i>	

<b>MA-L9.2: LEARNING SIMPLE TEXTURE DISCRIMINATION FILTERS.....</b>	<b>261</b>
<i>Rui Guerreiro, Pedro M. Q. Aguiar, Instituto Superior Técnico, Portugal</i>	
<b>MA-L9.3: CLASSIFICATION OF HIGH-DIMENSIONAL DATA USING THE SPARSE MATRIX TRANSFORM .....</b>	<b>265</b>
<i>Leonardo Bachega, Charles Bouman, Purdue University, United States</i>	
<b>MA-L9.4: MULTI-FOCAL NEMATODE IMAGE CLASSIFICATION USING THE 3D X-RAY TRANSFORM .....</b>	<b>269</b>
<i>Min Liu, Amit Roy-Chowdhury, Melissa Yoder, Paul De Ley, University of California, Riverside, United States</i>	
<b>MA-L9.6: SIMILARITY-BASED IMAGE CLASSIFICATION VIA KERNELIZED SPARSE REPRESENTATION .....</b>	<b>277</b>
<i>Zhi Zeng, Heping Li, Wei Liang, Shuwu Zhang, Institute of Automation, Chinese Academy of Sciences, China</i>	
<b>MA-L9.7: ORTHOGONAL PROJECTION TRANSFORM WITH APPLICATION TO SHAPE DESCRIPTION .....</b>	<b>281</b>
<i>Rushi Lan, Jianwei Yang, Nanjing University of Information Science &amp; Technology, China</i>	
<b>MA-L9.8: ROTATION INVARIANT TEXTURE CLASSIFICATION USING ADAPTIVE LBP WITH DIRECTIONAL STATISTICAL FEATURES .....</b>	<b>285</b>
<i>Zhenhua Guo, Lei Zhang, David Zhang, Hong Kong Polytechnic University, China; Su Zhang, Shanghai Jiao Tong University, China</i>	
 <b>MA-L10: DETECTION, TRACKING, AND RECOGNITION OF OBJECTS I</b>	
<b>MA-L10.1: A BACK PROJECTION SCHEME FOR ACCURATE MEAN SHIFT BASED TRACKING .....</b>	<b>33</b>
<i>Ishtiaq Rasool Khan, Farzam Farbiz, Institute for Infocomm Research, Singapore</i>	
<b>MA-L10.2: DISTRIBUTED PARTICLE FILTER TRACKING WITH ONLINE MULTIPLE INSTANCE LEARNING IN A CAMERA SENSOR NETWORK .....</b>	<b>37</b>
<i>Zefeng Ni, Santhoshkumar Sunderrajan, Amir Rahimi, B. S. Manjunath, University of California, Santa Barbara, United States</i>	
<b>MA-L10.3: MULTIPLE OBJECT TRACKING BY HIERARCHICAL ASSOCIATION OF SPATIO-TEMPORAL DATA .....</b>	<b>41</b>
<i>Csaba Beleznai, David Schreiber, Austrian Institute of Technology, Austria</i>	
<b>MA-L10.5: MULTIPLE OBJECT TRACKING USING AN AUTOMATIC VARIABLE-DIMENSION PARTICLE FILTER .....</b>	<b>49</b>
<i>Jon Arróspide, Luis Salgado, Marcos Nieto, Universidad Politécnica de Madrid, Spain</i>	
<b>MA-L10.6: A CONCAVE COST FORMULATION FOR PARAMETRIC CURVE FITTING: DETECTION OF LEUKOCYTES FROM INTRAVITAL MICROSCOPY IMAGES .....</b>	<b>53</b>
<i>Nilanjan Ray, University of Alberta, Canada</i>	



<b>MA-L10.7: MULTI-TARGET TRACKING USING LONG-TERM STOCHASTIC ASSOCIATIONS</b>	<b>57</b>
<i>Ting-Yueh Jeng, Bi Song, Elliot Staudt, Min Liu, Amit Roy-Chowdhury, University of California, Riverside, United States; Ashis SenGupta, Indian Statistical Institute, India</i>	
<b>MA-L10.8: TRAINING A MULTI-EXIT CASCADE WITH LINEAR ASYMMETRIC CLASSIFICATION FOR EFFICIENT OBJECT DETECTION</b>	<b>61</b>
<i>Peng Wang, Beihang University, China; Chunhua Shen, National ICT Australia, Australia; Hong Zheng, Zhang Ren, Beihang University, China</i>	
<b>MA-PA: PERCEPTION AND QUALITY MODELS FOR IMAGES</b>	
<b>MA-PA.1: REDUCED-REFERENCE SSIM ESTIMATION</b>	<b>289</b>
<i>Abdul Rehman, Zhou Wang, University of Waterloo, Canada</i>	
<b>MA-PA.3: NO-REFERENCE IMAGE QUALITY ASSESSMENT OF WAVELET CODED IMAGES</b>	<b>293</b>
<i>Mohd. Haroon Khan, Athar Ali Moinuddin, Ekram Khan, Aligarh Muslim University, India; Mohammed Ghanbari, University of Essex, United Kingdom</i>	
<b>MA-PA.4: INTER MODE DECISION BASED ON JUST NOTICEABLE DIFFERENCE PROFILE</b>	<b>297</b>
<i>Huan Wang, Xueming Qian, Guizhong Liu, Xi'an Jiaotong University, China</i>	
<b>MA-PA.5: COLORIZING SINGLE-BAND THERMAL NIGHT VISION IMAGES</b>	<b>301</b>
<i>Xiaojing Gu, Donghua University, China; Henry Leung, University of Calgary, Canada; Shaoyuan Sun, Jian'an Fang, Donghua University, Canada; Haitao Zhao, Shanghai Jiao Tong University, China</i>	
<b>MA-PA.6: IMAGE QUALITY ASSESSMENT BASED ON WAVE ATOMS TRANSFORM</b>	<b>305</b>
<i>Zehira Haddad, Azeddine Beghdadi, L2TI, Université paris 13, France; Amina Serir, LTIR, USTHB, Algeria; Anissa Mokraoui, L2TI, Université paris13, France</i>	
<b>MA-PA.7: GENERIC IMAGE SIMILARITY BASED ON KOLMOGOROV COMPLEXITY</b>	<b>309</b>
<i>Nima Nikvand, Zhou Wang, University of Waterloo, Canada</i>	
<b>MA-PA.8: NATURAL DCT STATISTICS APPROACH TO NO-REFERENCE IMAGE QUALITY ASSESSMENT</b>	<b>313</b>
<i>Michele Saad, Alan Bovik, University of Texas at Austin, United States; Christophe Charrier, University of Caen Basse-Normandie, France</i>	
<b>MA-PA.9: ENHANCED JUST NOTICEABLE DIFFERENCE (JND) ESTIMATION WITH IMAGE DECOMPOSITION</b>	<b>317</b>
<i>Anmin Liu, Weisi Lin, Fan Zhang, Manoranjan Paul, National Taiwan University, Singapore</i>	
<b>MA-PA.10: RFSIM: A FEATURE BASED IMAGE QUALITY ASSESSMENT METRIC USING RIESZ TRANSFORMS</b>	<b>321</b>
<i>Lin Zhang, Lei Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Xuanqin Mou, Xi'an Jiaotong University, China</i>	
<b>MA-PA.11: PERCEPTUAL IMAGE QUALITY ASSESSMENT USING A GEOMETRIC STRUCTURAL DISTORTION MODEL</b>	<b>325</b>
<i>Guangquan Cheng, Jincui Huang, Cheng Zhu, Zhong Liu, Lizhi Cheng, National University of Defense Technology, China</i>	



<b>MA-PA.12: A QUALITY MEASURE OF MOBILE PHONE CAPTURED 2D BARCODE IMAGES</b>	<b>329</b>
<i>Changsheng Chen, Alex C. Kot, Huijuan Yang, Nanyang Technological University, Singapore</i>	
<b>MA-PB: MULTIREOLUTION PROCESSING OF IMAGES AND VIDEO</b>	
<b>MA-PB.1: LOCAL TWO-CHANNEL CRITICALLY SAMPLED FILTER-BANKS ON GRAPHS</b>	<b>333</b>
<i>Sunil K. Narang, Antonio Ortega, University of Southern California, United States</i>	
<b>MA-PB.2: ON OPTICAL PHASE SHIFT PROFILOMETRY BASED ON DUAL TREE COMPLEX WAVELET TRANSFORM</b>	<b>337</b>
<i>Tai-Chiu Hsung, Daniel Pak-Kong Lun, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>MA-PB.3: DUAL-TREE WAVELETS FOR ESTIMATION OF LOCALLY VARYING AND ANISOTROPIC FRACTAL DIMENSION</b>	<b>341</b>
<i>James Nelson, Nick Kingsbury, University of Cambridge, United Kingdom</i>	
<b>MA-PB.4: DETECTION OF QRS COMPLEX IN ECG SIGNAL BASED ON CLASSIFICATION APPROACH</b>	<b>345</b>
<i>Bushra Jalil, Olivier Laligant, Eric Fauvet, Ouadi Beya, Université de Bourgogne, France</i>	
<b>MA-PB.5: A SIMPLIFIED LATTICE STRUCTURE OF TWO-DIMENSIONAL GENERALIZED LAPPED ORTHOGONAL TRANSFORM (2-D GENLOT) FOR IMAGE CODING</b>	<b>349</b>
<i>Taichi Yoshida, Seisuke Kyochi, Masaaki Ikehara, Keio University, Japan</i>	
<b>MA-PB.6: THE MONOGENIC CURVELET TRANSFORM</b>	<b>353</b>
<i>Martin Storath, Technische Universität München, Germany</i>	
<b>MA-PB.7: ILLUMINATION INVARIANT OBJECT TRACKING BASED ON MULTISCALE PHASE</b>	<b>357</b>
<i>Di Zang, Tongji University, China</i>	
<b>MA-PB.8: SELECTION OF GABOR FILTERS FOR IMPROVED TEXTURE FEATURE EXTRACTION</b>	<b>361</b>
<i>Weitao Li, Northeastern University, China; Kezhi Mao, Nanyang Technological University, Singapore; Hong Zhang, University of Alberta, Canada; Tianyou Chai, Northeastern University, China</i>	
<b>MA-PB.9: SEMI-REGULAR REMESHING WITH REDUCED REMESHING ERROR</b>	<b>365</b>
<i>Leon Denis, Adrian Munteanu, Peter Schelkens, Vrije Universiteit Brussel, Belgium</i>	
<b>MA-PB.10: TOPOGRAPHIC GRAY LEVEL MULTISCALE ANALYSIS AND ITS APPLICATION TO HISTOGRAM MODIFICATION</b>	<b>369</b>
<i>Chu He, Xin-Ping Deng, Wuhan University, China; Gui-Song Xia, Télécom ParisTech, France; Wen Yang, Hong Sun, Wuhan University, China</i>	
<b>MA-PB.11: FIDUCIAL POINT TRACKING FOR FACIAL EXPRESSION USING MULTIPLE PARTICLE FILTERS WITH KERNEL CORRELATION ANALYSIS</b>	<b>373</b>
<i>Yun Tie, Ling Guan, Ryerson University, Canada</i>	

<b>MA-PB.12: CLOSED FORM OF THE STEERED ELONGATED HERMITE-GAUSS WAVELETS</b>	<b>377</b>
<i>Giuseppe Papari, University of Groningen, Netherlands; Patrizio Campisi, Università degli Studi di Roma Tre, Italy; Nicolai Petkov, University of Groningen, Netherlands</i>	
<b>MA-PB.13: A DIRECTION-ADAPTIVE IMAGE CODING USING TWO-DIMENSIONAL DIRECT LIFTING WAVELET TRANSFORM</b>	<b>381</b>
<i>Seisuke Kyochi, NTT Corporation, Japan; Junya Aoyama, Masaaki Ikehara, Keio University, Japan</i>	
<b>MA-PB.14: 2-D NON-SEPARABLE GENLOT WITH TREND VANISHING MOMENTS</b>	<b>385</b>
<i>Tomoya Kobayashi, Shogo Muramatsu, Hisakazu Kikuchi, Niigata University, Japan</i>	
<b>MA-PB.15: REALIZATION OF LOSSLESS-TO-LOSSY IMAGE CODING COMPATIBLE WITH JPEG STANDARD BY DIRECT-LIFTING OF DCT-IDCT</b>	<b>389</b>
<i>Taizo Suzuki, Masaaki Ikehara, Keio University, Japan</i>	
<b>MA-PB.16: ORTHOGONAL 4-TAP INTEGER MULTI-WAVELET TRANSFORMS USING MATRIX FACTORIZATION</b>	<b>393</b>
<i>MingLi Jing, Hua Huang, Xi'an Jiaotong University, China; WuLing Liu, Southeast University, China; Chun Qi, Xi'an Jiaotong University, China</i>	
<b>MA-PC: INPAINTING AND IMAGE SYNTHESIS</b>	
<b>MA-PC.1: A ROBUST AND FAST ANTI-GHOSTING ALGORITHM FOR HIGH DYNAMIC RANGE IMAGING</b>	<b>397</b>
<i>Shiqian Wu, Shoulie Xie, Susanto Rahardja, Zhengguo Li, Institute for Infocomm Research, Singapore</i>	
<b>MA-PC.2: A NOVEL SHADOW RESTORATION ALGORITHM BASED ON ATMOSPHERIC EFFECTS FOR AERIAL IMAGES</b>	<b>401</b>
<i>Çaglar Aytekin, A. Aydin Alatan, Middle East Technical University, Turkey</i>	
<b>MA-PC.3: COMPETITIVE IMAGE COLORIZATION</b>	<b>405</b>
<i>Michal Kawulok, Bogdan Smolka, Silesian University of Technology, Poland</i>	
<b>MA-PC.4: A FAST AND SIMPLE GRADIENT FUNCTION GUIDED FILLING ORDER PRIORITIZATION FOR EXEMPLAR-BASED COLOR IMAGE INPAINTING</b>	<b>409</b>
<i>Sai Haresh A., V. Chandrasekaran, Sri Sathya Sai University, India</i>	
<b>MA-PC.5: A STUDY ON HIGH-QUALITY FREE VIEWPOINT IMAGE RECONSTRUCTION SYSTEMS USING MULTI-FOCUS IMAGES BY FPGA-BASED SIGNAL PROCESSING</b>	<b>413</b>
<i>Ippeita Izawa, Takayuki Hamamoto, Tokyo University of Science, Japan; Kazuya Kodama, National Institute of Informatics, Japan</i>	
<b>MA-PC.6: TOWARDS UNIFYING DIFFUSION AND EXEMPLAR-BASED INPAINTING</b>	<b>417</b>
<i>Emmanuel d'Angelo, Pierre Vanderghyest, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>MA-PC.7: ADAPTIVE PATCH SIZE DETERMINATION FOR PATCH-BASED IMAGE COMPLETION</b>	<b>421</b>
<i>Hailing Zhou, Jianmin Zheng, Nanyang Technological University, Singapore</i>	

<b>MA-PC.8: VIDEO OBJECT INPAINTING USING MANIFOLD-BASED ACTION PREDICTION</b>	<b>425</b>
<i>Chih-Hung Ling, National Chiao Tung University, Taiwan; Yu-Ming Liang, Aletheia University, Taiwan; Chia-Wen Lin, National Tsing Hua University, Taiwan; Yong-Sheng Chen, National Chiao Tung University, Taiwan; Hong-Yuan Mark Liao, Academia Sinica, Taiwan</i>	
<b>MA-PC.9: PYRAMID MODEL BASED DOWN-SAMPLING FOR IMAGE INPAINTING</b>	<b>429</b>
<i>Miaohui Wang, Bo Yan, Fudan University, China; Hamid Gharavi, National Institute of Standards and Technology, United States</i>	
<b>MA-PC.10: VIEW SYNTHESIS BASED ON CONDITIONAL RANDOM FIELDS AND GRAPH CUTS</b>	<b>433</b>
<i>Lam Tran, University Of California, San Diego, United States; Christopher Pal, École Polytechnique de Montréal, Canada; Truong Q. Nguyen, University of California, San Diego, United States</i>	
<b>MA-PD: JOINT SOURCE/CHANNEL CODING AND LOSSLESS CODING</b>	
<b>MA-PD.1: FRAME LOSS CONCEALMENT FOR STEREOSCOPIC VIDEO BASED ON INTER-VIEW SIMILARITY OF MOTION AND INTENSITY DIFFERENCE</b>	<b>441</b>
<i>Tae-Young Chung, Sanghoon Sull, Chang-Su Kim, Korea University, Republic of Korea</i>	
<b>MA-PD.2: FAST AND ROBUST SPATIO-TEMPORAL IMAGE ALIGNMENT FOR INTER-SEQUENCE ERROR CONCEALMENT</b>	<b>445</b>
<i>Tobias Tröger, André Kaup, University of Erlangen-Nuremberg, Germany</i>	
<b>MA-PD.3: VIDEO ERROR CONCEALMENT BY USING ITERATIVE DYNAMIC-PROGRAMMING OPTIMIZATION</b>	<b>449</b>
<i>Wen-Nung Lie, Chung-Hua Yeh, National Chung Cheng University, Taiwan; Zhi-Wei Gao, TECO Group Research Institute, Taiwan</i>	
<b>MA-PD.4: ERROR CONCEALMENT OF H.264/AVC INTER-CODED VIDEO FRAMES</b>	<b>453</b>
<i>Riccardo Bernardini, University of Udine, Italy; Luca Celetto, Gianluca Gennari, STMicroelectronics, Italy; Manuel Cargnelutti, Roberto Rinaldo, University of Udine, Italy</i>	
<b>MA-PD.5: SHAPE ERROR CONCEALMENT BASED ON A SHAPE-PRESERVING BOUNDARY APPROXIMATION</b>	<b>457</b>
<i>Evaggelia Tsiligianni, Lisimachos P. Kondi, University of Ioannina, Greece; Aggelos K. Katsaggelos, Northwestern University, United States</i>	
<b>MA-PD.6: IN-LOOP DENOISING OF REFERENCE FRAMES FOR LOSSLESS CODING OF NOISY IMAGE SEQUENCES</b>	<b>461</b>
<i>Eugen Wige, University of Erlangen-Nuremberg Erlangen, Germany; Peter Amon, Andreas Hutter, Siemens AG, Germany; André Kaup, University of Erlangen-Nuremberg Erlangen, Germany</i>	
<b>MA-PD.7: OPTIMUMIZATION OF LIFTING STRUCTURE OF REVERSIBLE KLT BASED ON PERMUTATION OF SIGNAL'S ORDER AND SIGN</b>	<b>465</b>
<i>Masahiro Iwahashi, Nagaoka University of Technology, Japan; Hitoshi Kiya, Tokyo Metropolitan University, Japan</i>	

<b>MA-PD.8: CONTENT-ADAPTIVE MOTION COMPENSATED FREQUENCY SELECTIVE EXTRAPOLATION FOR ERROR CONCEALMENT IN VIDEO COMMUNICATION</b>	<b>469</b>
<i>Jürgen Seiler, André Kaup, University of Erlangen-Nuremberg, Germany</i>	
<b>MA-PD.9: ROBUST DECODING OF A 3D-ESCOT BITSTREAM TRANSMITTED OVER A NOISY CHANNEL</b>	<b>473</b>
<i>Manel Abid, Télécom ParisTech, France; Michel Kieffer, Télécom ParisTech (on leave from L2S - CNRS - SUPELEC - Univ Paris-Sud), France; Marco Cagnazzo, Béatrice Pesquet-Popescu, Télécom ParisTech, France</i>	
<b>MA-PD.10: OVERSAMPLED FILTER BANKS WITH INSTANTANEOUS ERASURES</b>	<b>477</b>
<i>Mohsen Akbari, Fabrice Labeau, McGill University, Canada</i>	
<b>MA-PD.11: NEAR-LOSSLESS AND SCALABLE COMPRESSION FOR MEDICAL IMAGING USING A NEW ADAPTIVE HIERARCHICAL ORIENTED PREDICTION</b>	<b>481</b>
<i>Jonathan Taquet, Claude Labit, INRIA, Centre Inria Rennes Bretagne Atlantique, France</i>	
<b>MA-PD.12: LOW COMPLEXITY LOSSLESS IMAGE COMPRESSION USING EFFICIENT CONTEXT MODELING</b>	<b>485</b>
<i>Sung-Bum Park, Jung-Woo Kim, Dai-Woong Choi, Jae-Won Yoon, Jae-Hyun Kim, Samsung Electronics, Republic of Korea</i>	
<b>MA-PD.13: COLOR MAPS AND GRAPHS COMPRESSION</b>	<b>489</b>
<i>Saif alZahir, University of Northern British Columbia, Canada</i>	
 <b>MA-PE: MULTISPECTRAL AND WAVELET-BASED CODING</b>	
<b>MA-PE.2: MULTIVIEW IMAGE COMPRESSION USING A LAYER-BASED REPRESENTATION</b>	<b>493</b>
<i>Andriy Gelman, Pier Luigi Dragotti, Imperial College London, United Kingdom; Vladan Velisavljevic, Deutsche Telekom Laboratories, Germany</i>	
<b>MA-PE.3: STATIONARY MODEL OF PROBABILITIES FOR SYMBOLS EMITTED BY BITPLANE IMAGE CODERS</b>	<b>497</b>
<i>Francesc Auli-Llinas, Ian Blanes, Joan Bartrina-Rapesta, Joan Serra-Sagrsta, Universitat Autònoma de Barcelona, Spain</i>	
<b>MA-PE.4: DIRECTIONAL LIFTING WAVELET AND UNIVERSAL TRELLIS CODED QUANTIZATION BASED IMAGE CODING ALGORITHM AND OBJECTIVE QUALITY EVALUATION</b>	<b>501</b>
<i>Xingsong Hou, Guifeng Jiang, Rongjing Ji, Chenglong Shi, Xi'an Jiaotong University, China</i>	
<b>MA-PE.5: LOW-COMPLEXITY LOSSY COMPRESSION OF HYPERSPECTRAL IMAGES VIA INFORMED QUANTIZATION</b>	<b>505</b>
<i>Andrea Abrardo, Mauro Barni, University of Siena, Italy; Enrico Magli, Politecnico di Torino, Italy</i>	
<b>MA-PE.6: DISTRIBUTED LOSSLESS CODING OF HYPERSPECTRAL IMAGES</b>	<b>509</b>
<i>Wei Zhang, Qiwei Liu, Houqiang Li, University of Science and Technology of China, China</i>	
<b>MA-PE.7: A DUAL SYMBOL ARITHMETIC CODER ARCHITECTURE WITH REDUCED MEMORY FOR JPEG2000</b>	<b>513</b>
<i>Kai Liu, Yunsong Li, Xidian University, China</i>	

<b>MA-PE.8: TENSOR COMPLETION FOR ON-BOARD COMPRESSION OF HYPERSPECTRAL IMAGES</b>	<b>517</b>
<i>Nan Li, Baoxin Li, Arizona State University, United States</i>	
<b>MA-PE.9: MULTISPECTRAL IMAGE COMPRESSION BY CLUSTER-ADAPTIVE SUBSPACE REPRESENTATION</b>	<b>521</b>
<i>Hui-Liang Shen, Ke Li, Zhejiang University, China; John H. Xin, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>MA-PF: VIDEO SIGNAL CAPTURE AND DISPLAY</b>	
<b>MA-PF.1: LAPLACIAN BASED STRUCTURE-AWARE ERROR DIFFUSION</b>	<b>525</b>
<i>Han-Sang Lee, Kang-Kook Kong, Ki-Sang Hong, Pohang University of Science and Technology, Republic of Korea</i>	
<b>MA-PF.2: VORONOI TESSELLATED HALFTONE MASKS</b>	<b>529</b>
<i>Gonzalo J. Garateguy, Gonzalo R. Arce, University of Delaware, United States; Daniel L. Lau, University of Kentucky, United States</i>	
<b>MA-PF.3: IMAGING SENSOR MODULATION TRANSFER FUNCTION ESTIMATION</b>	<b>533</b>
<i>Junqing Chen, Dongqing Cao, Qun Sun, Robert Gravelle, Aptina Imaging, United States</i>	
<b>MA-PF.4: ADAPTIVE SAMPLING FOR OUTPUT DEVICE CHARACTERIZATION</b>	<b>537</b>
<i>Henry Joel Trussell, Jayakumar Nanjappan, North Carolina State University, United States</i>	
<b>MA-PF.5: POINT-AND-CLICK REGION BASED METHOD FOR COLOR EDITING AND CONTROL FOR DIGITAL COLOR PRINTERS</b>	<b>541</b>
<i>Siyu Zhu, Sohail Dianat, Rochester Institute of Technology, United States; Lalit K. Mestha, Xerox Corporation, United States</i>	
<b>MA-PF.6: CHARACTERIZATION OF SIGNAL PERTURBATION USING VOTING BASED CURVE FITTING FOR MULTISPECTRAL IMAGES</b>	<b>545</b>
<i>Sebastiano Battiato, Giovanni Puglisi, Rosetta Rizzo, University of Catania, Italy</i>	
<b>MA-PF.7: REMOVAL OF NON-DIFFRACTION WAVE IN OPTICAL-PATH-LENGTH-SHIFTING DIGITAL HOLOGRAPHY</b>	<b>549</b>
<i>Tatsuki Tahara, Yuki Shimosato, Yasuhiro Awatsuji, Kenzo Nishio, Shogo Ura, Kyoto Institute of Technology, Japan; Toshihiro Kubota, Kubota Holography Laboratory Corporation, Japan; Osamu Matoba, Kobe University, Japan</i>	
<b>MA-PF.8: A KEYSTONE-FREE HAND-HELD MOBILE PROJECTION SYSTEM</b>	<b>553</b>
<i>Zhaorong Li, Kin Hong Wong, Yibo Gong, Kai Ki Lee, Michael Ming Yuen Chang, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>MA-PF.9: EDGE PRESERVING MULTISCALE ERROR DIFFUSION ALGORITHM FOR GREEN NOISE DIGITAL HALFTONING</b>	<b>557</b>
<i>Yik-Hing Fung, Yuk-Hee Chan, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>MA-PF.10: FLEXIBLE READOUT IMAGE CAPTURE WITH A FOUR-CHANNEL CFA</b>	<b>561</b>
<i>Bruce Pillman, Aaron Deever, Mrityunjay Kumar, Eastman Kodak Company, United States</i>	

<b>MA-PF.11: AUTOMATIC PRODUCTION OF PERSONALIZED BASKETBALL VIDEO</b>	<b>565</b>
<b>SUMMARIES FROM MULTI-SENSORED DATA</b>	
<i>Fan Chen, Japan Advanced Institute of Science and Technology, Japan; Christophe De Vleeschouwer, Université catholique de Louvain, Belgium</i>	
<b>MA-PF.12: IMAGING SYSTEM HAVING WHITE-RGB COLOR FILTER ARRAY</b>	<b>569</b>
<i>Alexander Getman, Jinhak Kim, Tae-Chan Kim, Samsung Electronics, Republic of Korea</i>	
<b>MA-PF.13: FIXED PATTERN NOISE COLUMN DRIFT COMPENSATION (CDC) FOR</b>	<b>573</b>
<b>DIGITAL MOVING PICTURE CAMERAS</b>	
<i>Michael Schöberl, University of Erlangen-Nuremberg, Germany; Siegfried Föbel, Fraunhofer IIS, Germany; André Kaup, University of Erlangen-Nuremberg, Germany</i>	
<b>MA-PF.14: HIGH FRAME RATE VIDEO CAPTURE BY MULTIPLE CAMERAS WITH</b>	<b>577</b>
<b>CODED EXPOSURE</b>	
<i>Xiaolin Wu, Reza Pournaghi, McMaster University, Canada</i>	
 <b>MA-PG: MEDICAL IMAGING</b>	
<b>MA-PG.1: ACCELERATED WAVELET-REGULARIZED DECONVOLUTION FOR 3-D</b>	<b>581</b>
<b>FLUORESCENT MICROSCOPY</b>	
<i>Ilker Bayram, Matthieu Guerquin-Kern, Raquel Terres-Cristofani, Michael Unser, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>MA-PG.2: RECONSTRUCTION COMPARISON AND A COMPOSITE SEGMENTATION</b>	<b>585</b>
<b>METHOD FOR ELECTRON TOMOGRAPHY</b>	
<i>Ajay Gopinath, University of Texas at Austin, United States</i>	
<b>MA-PG.3: FMRI GROUP STUDIES OF BRAIN CONNECTIVITY VIA A GROUP</b>	<b>589</b>
<b>ROBUST LASSO</b>	
<i>Xiaohui Chen, Z. Jane Wang, Martin J. McKeown, University of British Columbia, Canada</i>	
<b>MA-PG.4: REDUCING THE SPIRAL CT SLICE THICKNESS USING SUPER</b>	<b>593</b>
<b>RESOLUTION</b>	
<i>Ziye Yan, Yao Lu, Beijing Institute of Technology, China; Hongxia Yan, Peking Union Medical college, China</i>	
<b>MA-PG.5: EFFECTIVE SINOGRAM-INPAINTING FOR METAL ARTIFACTS</b>	<b>597</b>
<b>REDUCTION IN X-RAY CT IMAGES</b>	
<i>Youngshin Kim, Seongbeak Yoon, Juneho Yi, Sungkyunkwan University, Republic of Korea</i>	
<b>MA-PG.6: IMPROVEMENT OF MEDICAL IMAGE RESOLUTION USING AN</b>	<b>601</b>
<b>EXTENDED 2D FACTORIZED FORM COMPLEX NUMBER PARAMETRIC MODEL</b>	
<i>Marie Ploquin, INSERM U930, France; Denis Kouame, IRIT UMR CNRS 5505, France</i>	
<b>MA-PG.7: ELASTIC MODULUS IMAGING USING OPTICAL FLOW AND IMAGE</b>	<b>605</b>
<b>REGISTRATION</b>	
<i>Robert Martí, University of Girona, Spain; Alison Noble, University of Oxford, United Kingdom</i>	
<b>MA-PG.8: ALIGNING TILT SLICES FOR 3D TEM TOMOGRAPHY BASED ON 2D TO</b>	<b>609</b>
<b>1D RADON TRANSFORM</b>	
<i>Wei-Jun Chen, Carl Zeiss Meditec AG, Germany</i>	



<b>MA-PG.9: SEGMENTATION OF OCT SKIN IMAGES BY CLASSIFICATION OF SPECKLE STATISTICAL PARAMETERS</b>	<b>613</b>
<i>Ali Mcheik, Hadj Batatia, University of Toulouse, France</i>	
<b>MA-PG.10: SPIRAL FFT: AN EFFICIENT METHOD FOR 3-D FFTS ON SPIRAL MRI CONTOURS</b>	<b>617</b>
<i>Christopher Turnes, Justin Romberg, Georgia Institute of Technology, United States</i>	
<b>MA-PG.11: APPROXIMATE INVERSE BASED IMPLEMENTATION FOR TUY'S FORMULA</b>	<b>621</b>
<i>Hong-Li Hu, Jian-Zhou Zhang, Sichuan University, China</i>	
<b>MA-PG.12: GATED DYNAMIC IMAGE RECONSTRUCTION USING TEMPORAL B-SPLINES</b>	<b>625</b>
<i>Xiaofeng Niu, Yongyi Yang, Illinois Institute of Technology, United States; Mingwu Jin, University of Colorado, Denver, United States; Miles N. Wernick, Illinois Institute of Technology, United States</i>	
<b>MA-PG.13: A NOVEL V-LINE RADON TRANSFORM AND ITS IMAGING APPLICATIONS</b>	<b>629</b>
<i>Marcela Morvidone, Tuong T. Truong, Mai K. Nguyen, University of Cergy-Pontoise, France; Habib Zaidi, University of Geneva, Switzerland</i>	
<b>MA-PG.14: 4D CT IMAGE RECONSTRUCTION BASED ON INTERPOLATED OPTICAL FLOW FIELDS</b>	<b>633</b>
<i>Zehor Ouksili, Hadj Batatia, University of Toulouse, France</i>	
<b>MA-PG.15: DISCRETE WAVELET FOR MULTIFRACTAL TEXTURE CLASSIFICATION: APPLICATION TO MEDICAL ULTRASOUND IMAGING</b>	<b>637</b>
<i>Meriem Djeddi, University of Toulouse, France; Abdeldjalil Ouahabi, University of Tours, France; Hadj Batatia, Adrian Basarab, Denis Kouame, University of Toulouse, France</i>	
<b>MA-PH: ACTIVE-CONTOUR AND LEVEL-SET METHODS</b>	
<b>MA-PH.2: FAST AND ROBUST ACTIVE CONTOURS FOR IMAGE SEGMENTATION</b>	<b>641</b>
<i>Wei Yu, Franz Franchetti, Carnegie Mellon University, United States; Yao-Jen Chang, Tsuhan Chen, Cornell University, United States</i>	
<b>MA-PH.3: VECTOR-VALUED CHAN-VESE MODEL DRIVEN BY LOCAL HISTOGRAM FOR TEXTURE SEGMENTATION</b>	<b>645</b>
<i>Yuanquan Wang, Yue Xiong, Liping Lv, Hua Zhang, Zuoliang Cao, Degan Zhang, Tianjin University of Technology, China</i>	
<b>MA-PH.4: HESSIAN BASED IMAGE STRUCTURE ADAPTIVE GRADIENT VECTOR FLOW FOR PARAMETRIC ACTIVE CONTOURS</b>	<b>649</b>
<i>Y.Q. Wang, Tianjin University of Technology, China; W.F. Chen, Southern Medical University, China; T.L. Yu, Y.T. Zhang, General Hospital of Tianjin Medical University, China</i>	
<b>MA-PH.5: EDGE TYPE-SELECTABLE ACTIVE CONTOUR USING LOCAL REGIONAL INFORMATION ON EXTENDABLE SEARCH LINES</b>	<b>653</b>
<i>Sopon Phumeechanya, Charnchai Pluempitiwiriyaewej, Chulalongkorn University, Thailand; Saowapak Thongvigitmanee, National Electronics and Computer Technology Center, Thailand</i>	

<b>MA-PH.6: IMPROVING THE ROBUSTNESS OF GRADIENT VECTOR FLOW IN CLUTTERED IMAGES</b>	<b>657</b>
<i>Jacinto Nascimento, Jorge Marques, ISR-IST, Portugal</i>	
<b>MA-PH.7: A COMPUTATIONAL EFFICIENT EXTERNAL ENERGY FOR ACTIVE CONTOUR SEGMENTATION USING EDGE PROPAGATION</b>	<b>661</b>
<i>Jonas De Vylder, Wilfried Philips, Ghent university, Belgium</i>	
<b>MA-PH.8: CREASEG: A FREE SOFTWARE FOR THE EVALUATION OF IMAGE SEGMENTATION ALGORITHMS BASED ON LEVEL-SET</b>	<b>665</b>
<i>Thomas Dietenbeck, Creatis, France; Martino Alessandrini, ARCES, Italy; Denis Friboulet, Olivier Bernard, Creatis, France</i>	
<b>MA-PH.9: USING A GEOMETRIC FORMULATION OF ANNULAR-LIKE SHAPE PRIORS FOR CONSTRAINING VARIATIONAL LEVEL-SETS</b>	<b>669</b>
<i>Martino Alessandrini, University of Bologna, Italy; Thomas Dietenbeck, Olivier Basset, Denis Friboulet, Olivier Bernard, University of Lyon, France</i>	
<b>MA-PH.10: IMPROVED LEVEL SET METHOD FOR LIP CONTOUR DETECTION</b>	<b>673</b>
<i>Kunlun Li, Miao Wang, Ming Liu, Aimin Zhao, Hebei University, China</i>	
<b>MA-PI: VIDEO SURVEILLANCE</b>	
<b>MA-PI.1: BACTERIA-FILTERS: PERSISTENT PARTICLE FILTERS FOR BACKGROUND SUBTRACTION</b>	<b>677</b>
<i>Yair Movshovitz-Attias, Shmuel Peleg, Hebrew University of Jerusalem, Israel</i>	
<b>MA-PI.2: AUTOMATIC MULTI-CAMERA PLACEMENT AND OPTIMISATION USING RAY TRACING</b>	<b>681</b>
<i>Samira Bouyagoub, David R. Bull, Nishan Canagarajah, Andrew Nix, University of Bristol, United Kingdom</i>	
<b>MA-PI.3: VEHICLE DETECTION AND TRACKING WITH LOW-ANGLE CAMERAS</b>	<b>685</b>
<i>Jun Yang, University of New South Wales, Australia; Yang Wang, National ICT Australia, Australia; Arcot Sowmya, Zhidong Li, University of New South Wales, Australia</i>	
<b>MA-PI.4: REAL-TIME INTERACTIVE MULTI-TARGET TRACKING USING KERNEL-BASED TRACKERS</b>	<b>689</b>
<i>Guorong Li, Wei Qu, Qingming Huang, Graduate University of Chinese Academy of Sciences, China</i>	
<b>MA-PI.5: MASKS BASED HUMAN ACTION DETECTION IN CROWDED VIDEOS</b>	<b>693</b>
<i>Ping Guo, Zhenjiang Miao, Beijing Jiaotong University, China; Heng-Da Cheng, Utah State University, United States</i>	
<b>MA-PI.6: REAL-TIME DISTRIBUTED TRACKING WITH NON-OVERLAPPING CAMERAS</b>	<b>697</b>
<i>Youlu Wang, Li He, Senem Velipasalar, University of Nebraska - Lincoln, United States</i>	
<b>MA-PI.7: EFFICIENT HUMAN ACTION DETECTION: A COARSE-TO-FINE STRATEGY</b>	<b>701</b>
<i>Xian Wu, Jianhuang Lai, Sun Yat-sen University, China; Xilin Chen, Chinese Academy of Sciences, China</i>	
<b>MA-PI.8: VIDEO ANOMALY DETECTION IN SPATIOTEMPORAL CONTEXT</b>	<b>705</b>
<i>Fan Jiang, Northwestern University, United States; Junsong Yuan, Nanyang Technological University, Singapore; Sotirios A. Tsafaris, Aggelos K. Katsaggelos, Northwestern University, United States</i>	

<b>MA-PI.9: HUMAN ACTION RECOGNITION USING THE MOTION OF INTEREST POINTS</b>	<b>709</b>
<i>Francesco Monti, Carlo S. Regazzoni, University of Genoa, Italy</i>	
<b>MA-PI.10: HUMAN ACTIVITY RECOGNITION VIA 3-D JOINT ANGLE FEATURES AND HIDDEN MARKOV MODELS</b>	<b>713</b>
<i>Md. Zia Uddin, Nguyen Duc Thang, Tae-Seong Kim, Kyung Hee University, Republic of Korea</i>	
<b>MA-PI.11: ANOMALY DETECTION IN SURVEILLANCE VIDEO USING MOTION DIRECTION STATISTICS</b>	<b>717</b>
<i>Chang Liu, Guijin Wang, Wenxin Ning, Xingang Lin, Tsinghua University, China; Liang Li, Zhou Liu, Sony China Research Lab Beijing, China</i>	
<b>MA-PI.12: HUMAN DETECTION IN CROWDED SCENES</b>	<b>721</b>
<i>Ya-Li Hou, Grantham K. H. Pang, University of Hong Kong, Hong Kong SAR of China</i>	
<b>MA-PI.13: HIGH LEVEL FEATURES: HEAD AND BODY CO-TRACKING BY KALMAN FILTER</b>	<b>725</b>
<i>Chun-Hua Chen, Chung-Yuan Lin, Sz-Yan Li, Tsung-Han Tsai, National Central University, Taiwan</i>	
<b>MA-PI.14: FAST VIDEO OBJECT DETECTION VIA MULTIPLE BACKGROUND MODELING</b>	<b>729</b>
<i>Kin-Yi Yan, Wan-Chi Siu, Ngai-Fong Law, Chok-Ki Chan, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>MA-PI.15: PEOPLE CONSISTENT LABELING BETWEEN UNCALIBRATED CAMERAS WITHOUT PLANAR GROUND ASSUMPTION</b>	<b>733</b>
<i>Guoyun Lian, Jianhuang Lai, Yang Gao, Sun Yat-sen University, China</i>	
<b>MA-PJ: MOTION ESTIMATION AND OPTICAL FLOW</b>	
<b>MA-PJ.1: ROBUST GLOBAL MOTION ESTIMATION USING MOTION VECTORS OF VARIABLE SIZE BLOCKS AND AUTOMATIC MOTION MODEL SELECTION</b>	<b>737</b>
<i>Martin Haller, Andreas Krutz, Thomas Sikora, Technische Universität Berlin, Germany</i>	
<b>MA-PJ.2: EXPLOITING SPARSITY IN DENSE OPTICAL FLOW</b>	<b>741</b>
<i>Xiaohui Shen, Ying Wu, Northwestern University, United States</i>	
<b>MA-PJ.3: FAST AND CORRESPONDENCE-LESS CAMERA MOTION ESTIMATION BASED ON VOTING MECHANISM AND MORTON CODES</b>	<b>745</b>
<i>Mauricio Soto Alvarez, Stefano Maludrottu, Genoa University, Italy; Carlo S. Regazzoni, University of Genoa, Italy</i>	
<b>MA-PJ.4: HARDWARE-ORIENTED MODIFIED DIAMOND SEARCH FOR MOTION ESTIMATION IN H.264/AVC</b>	<b>749</b>
<i>Obianuju Ndili, Tokunbo Ogunfunmi, Santa Clara University, United States</i>	
<b>MA-PJ.5: FAST MULTIFRAME MOTION ESTIMATION FOR SURVEILLANCE VIDEOS</b>	<b>753</b>
<i>Muhammad Akram, Ebroul Izquierdo, Queen Mary, University of London, United Kingdom</i>	

<b>MA-PJ.6: REAL TIME CONSTRAINED MOTION ESTIMATION FOR ECG-GATED CARDIAC MRI</b>	<b>757</b>
<i>Sébastien Roujol, CNRS/Université Bordeaux 2, France; Jenny Benois-Pineau, Université Bordeaux I/CNRS, France; Baudouin Denis de Senneville, Bruno Quesson, Mario Ries, Chrit Moonen, CNRS/Université Bordeaux 2, France</i>	
<b>MA-PJ.7: FIRE AND SMOKE DETECTION IN VIDEO WITH OPTIMAL MASS TRANSPORT BASED OPTICAL FLOW AND NEURAL NETWORKS</b>	<b>761</b>
<i>Ivan Kolesov, Peter Karasev, Georgia Institute of Technology, United States; Eldad Haber, University of British Columbia, Canada; Allen Tannenbaum, Georgia Institute of Technology, United States</i>	
<b>MA-PJ.8: POLYCONVEXIFICATION OF THE MULTI-LABEL OPTICAL FLOW PROBLEM</b>	<b>765</b>
<i>Nicolas Papadakis, Antonio Baeza, Pau Gargallo, Barcelona Media, Spain; Vicent Caselles, Universitat Pompeu Fabra, Spain</i>	
<b>MA-PJ.9: ADAPTIVE PARTITIONING METHOD IN HIGH RESOLUTION SPECKLE IMAGERY FOR SUB-PIXEL DIGITAL IMAGE CORRELATION</b>	<b>769</b>
<i>Corneliu Cofaru, Wilfried Philips, TELIN-IPI-IBBT, Belgium; Wim Van Paeppegem, Gent University, Belgium</i>	
<b>MA-PJ.10: BAYESIAN DENSE MOTION FIELD ESTIMATION WITH LANDMARK CONSTRAINT</b>	<b>773</b>
<i>Yi Chin, Chun-Jen Tsai, National Chiao Tung University, Taiwan</i>	
<b>MA-PJ.11: COMPRESSED DOMAIN GLOBAL MOTION ESTIMATION USING THE HELMHOLTZ TRADEOFF ESTIMATOR</b>	<b>777</b>
<i>Michael Tok, Alexander Glantz, Marina Georgia Arvanitidou, Andreas Krutz, Thomas Sikora, Technische Universität Berlin, Germany</i>	
<b>MA-PJ.12: RANDOMIZED MOTION ESTIMATION</b>	<b>781</b>
<i>Sylvain Boltz, Frank Nielsen, Ecole Polytechnique, France</i>	
<b>MA-PJ.13: ON HANDLING OF OCCLUSION FOR FRAME RATE UP-CONVERSION USING VIDEO IN-PAINTING</b>	<b>785</b>
<i>Mainak Biswas, Vipin Namboodiri, Marvell Semiconductor Inc, United States</i>	
<b>MP-L1: HUAWEI BEST STUDENT PAPER AWARD SPECIAL SESSION</b>	
<b>MP-L1.1: IMAGE PREDICTION: TEMPLATE MATCHING VS. SPARSE APPROXIMATION</b>	<b>789</b>
<i>Mehmet Turkan, Christine Guillemot, INRIA/IRISA, France</i>	
<b>MP-L1.2: A CONVEX NEIGHBOR-CONSTRAINED ACTIVE CONTOUR MODEL FOR IMAGE SEGMENTATION</b>	<b>793</b>
<i>Hongda Mao, Rochester Institute of Technology, United States; Huafeng Liu, Zhejiang University, China; Pengcheng Shi, Rochester Institute of Technology, United States</i>	
<b>MP-L1.3: FRAME-BUFFERLESS SUM-RATE CONSTRAINED VIDEO ENCODING USING FEEDBACK</b>	<b>797</b>
<i>Ermin Kozica, KTH - Royal Institute of Technology, Sweden; Hao Zhang, Kannan Ramchandran, University of California, Berkeley, United States</i>	

<b>MP-L1.4: POISSON NL MEANS: UNSUPERVISED NON LOCAL MEANS FOR POISSON NOISE</b>	<b>801</b>
<i>Charles-Alban Deledalle, Florence Tupin, Institut Telecom, Telecom ParisTech, France; Loïc Denis, Observatoire de Lyon, CNRS CRAL, UCBL, ENS de Lyon, Université de Lyon, France</i>	
<b>MP-L1.5: ADAPTIVE MOTION MODEL SELECTION USING A CUBIC SPLINE BASED ESTIMATION FRAMEWORK</b>	<b>805</b>
<i>Haricharan Lakshman, Heiko Schwarz, Thomas Wiegand, Fraunhofer HHI, Germany</i>	
<b>MP-L1.6: BAYESIAN SUPER-RESOLUTION PANSHARPENING USING CONTOURLETS</b>	<b>809</b>
<i>Israa Amro, Javier Mateos, Miguel Vega, University of Granada, Spain</i>	
<b>MP-L1.7: SURFACE RECONSTRUCTION BY RESTRICTED AND ORIENTED PROPAGATION</b>	<b>813</b>
<i>Xavier Suau, Josep R. Casas, Javier Ruiz-Hidalgo, Universitat Politècnica de Catalunya, Spain</i>	
<b>MP-L1.8: JOINT INTEGRAL HISTOGRAMS AND ITS APPLICATION IN STEREO MATCHING</b>	<b>817</b>
<i>Ke Zhang, imec &amp; Katholieke Universiteit Leuven, Belgium; Gauthier Lafruit, imec, Belgium; Rudy Lauwereins, imec &amp; Katholieke Universiteit Leuven, Belgium; Luc Van Gool, Katholieke Universiteit Leuven &amp; ETH Zurich, Belgium</i>	
 <b>MP-L3: IMAGE AND VIDEO REPRESENTATION I</b>	
<b>MP-L3.2: PROBING THE LOCAL-FEATURE SPACE OF INTEREST POINTS</b>	<b>857</b>
<i>Wei-Ting Lee, Hwann-Tzong Chen, National Tsing Hua University, Taiwan</i>	
<b>MP-L3.3: AN IMPROVED LOCAL FEATURE DESCRIPTOR VIA SOFT BINNING</b>	<b>861</b>
<i>Feng Tang, Suk Hwan Lim, Nelson L. Chang, Hewlett-Packard Labs., United States</i>	
<b>MP-L3.4: A NOVEL GEOMETRIC FILTER FOR AFFINE INVARIANT FEATURES</b>	<b>865</b>
<i>Chunhui Cui, King Ngi Ngan, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>MP-L3.5: RAPID IMAGE RETARGETING BASED ON CURVE-EDGE GRID REPRESENTATION</b>	<b>869</b>
<i>Tongwei Ren, Nanjing University, China; Yan Liu, Hong Kong Polytechnic University, China; Gangshan Wu, Nanjing University, China</i>	
<b>MP-L3.6: AN IMPROVED CONTENT-ADAPTIVE MESH-GENERATION METHOD FOR IMAGE REPRESENTATION</b>	<b>873</b>
<i>Michael Adams, University of Victoria, Canada</i>	
<b>MP-L3.7: A COMPUTABLE STRUCTURE MODEL FOR HOLLYWOOD FILM</b>	<b>877</b>
<i>Zhicheng Zhao, Beijing University of Posts and Telecommunications, China; Xiaojuan Ge, China Central Television, China</i>	

<b>MP-L3.8: FAST PEDESTRIAN DETECTION WITH MULTI-SCALE ORIENTATION FEATURES AND TWO-STAGE CLASSIFIERS</b>	<b>881</b>
<i>Qixiang Ye, Jianbin Jiao, Graduate University of Chinese Academy of Sciences, China; Baochang Zhang, BUAA, China</i>	
 <b>MP-L4: INTERPOLATION AND SUPERRESOLUTION I</b>	
<b>MP-L4.1: FRAME RATE UP CONVERSION VIA IMAGE FUSION BASED ON VARIATIONAL APPROACH</b>	<b>885</b>
<i>Won-Hee Lee, Yunjun Choi, Kyuha Choi, Jong Beom Ra, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>MP-L4.2: HIGH QUALITY ARTIFACT-FREE SUPER-RESOLUTION</b>	<b>889</b>
<i>Wei Zhang, Wai-Kuen Cham, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>MP-L4.3: USING THE KULLBACK-LEIBLER DIVERGENCE TO COMBINE IMAGE PRIORS IN SUPER-RESOLUTION IMAGE RECONSTRUCTION</b>	<b>893</b>
<i>Salvador Villena, Miguel Vega, Universidad de Granada, Spain; S. Derin Babacan, Northwestern University, United States; Rafael Molina, Universidad de Granada, Spain; Aggelos K. Katsaggelos, Northwestern University, United States</i>	
<b>MP-L4.4: LOCALLY ADAPTIVE REGULARIZED SUPER-RESOLUTION ON VIDEO WITH ARBITRARY MOTION</b>	<b>897</b>
<i>I-Hsien Lee, Nirmal K. Bose, Pennsylvania State University, Taiwan; Chih-Wei Lin, Industrial Technology Research Institute, Taiwan</i>	
<b>MP-L4.5: STREAM CARVING: AN ADAPTIVE SEAM CARVING ALGORITHM</b>	<b>901</b>
<i>Daniel Domingues, Alexandre Alahi, Pierre Vanderghenst, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>MP-L4.6: A SIMPLE, FAST AND EFFICIENT APPROACH TO DENOISAICKING: JOINT DEMOSAICKING AND DENOISING</b>	<b>905</b>
<i>Laurent Condat, CNRS-UCBN-ENSICAEN, France</i>	
<b>MP-L4.7: E-SPLINE SAMPLING FOR PRECISE AND ROBUST LINE-EDGE EXTRACTION</b>	<b>909</b>
<i>Akira Hirabayashi, Yamaguchi University, Japan; Pier Luigi Dragotti, Imperial College London, United Kingdom</i>	
<b>MP-L4.8: FACE IMAGE SUPER RESOLUTION BY LINEAR TRANSFORMATION</b>	<b>913</b>
<i>Hua Huang, Ning Wu, Xi'an Jiaotong University, China; Xin Fan, Dalian University of Technology, China; Chun Qi, Xi'an Jiaotong University, China</i>	
 <b>MP-L5: MOSAICING, REGISTRATION, AND ALIGNMENT II</b>	
<b>MP-L5.1: IMAGE REGISTRATION UNDER LOCAL ILLUMINATION VARIATIONS USING ROBUST BISQUARE M-ESTIMATION</b>	<b>917</b>
<i>Mohamed M. Fouad, Richard M. Dansereau, Anthony D. Whitehead, Carleton University, Canada</i>	



<b>MP-L5.2: ACQUIRING SHAKING FREE ROUTE PANORAMA BY STATIONARY BLURRING</b>	<b>921</b>
<i>Hongyuan Cai, Jiang Yu Zheng, Indiana University-Purdue University Indianapolis, United States; Hiromi Tanaka, Ritsumei University, Japan</i>	
<b>MP-L5.3: SATELLITE IMAGE REGISTRATION FOR ATTITUDE ESTIMATION WITH A CONSTRAINED POLYNOMIAL MODEL</b>	<b>925</b>
<i>Régis Perrier, Elise Arnaud, Peter Sturm, INRIA Rhone Alpes, France; Mathias Ortner, EADS Astrium, France</i>	
<b>MP-L5.5: RELIABLE MATCHING OF BUILDING FACADES USING GEOMETRIC MEASUREMENTS AND AN ITERATIVE RELIABILITY VERIFICATION MODEL</b>	<b>933</b>
<i>Kin Choong Yow, Lin Aung Thet, Nanyang Technological University, Singapore</i>	
<b>MP-L5.6: LOCAL MULTI-MODAL IMAGE MATCHING BASED ON SELF-SIMILARITY</b>	<b>937</b>
<i>Christoph Bodensteiner, Wolfgang Huebner, Kai Juengling, Juergen Mueller, Michael Arens, Fraunhofer, Germany</i>	
<b>MP-L5.8: REGISTERING AERIAL PHOTOGRAPHS OF FARMLAND WITH SATELLITE IMAGERY</b>	<b>945</b>
<i>Sajid Saleem, NWFP University of Engineering and Technology, Pakistan; Abdul Bais, Sarhad University of Science and Information Technology, Pakistan; Yahya Khawaja, NWFP University of Engineering and Technology, Pakistan</i>	
<b>MP-L6: MOTION COMPENSATED CODING I</b>	
<b>MP-L6.1: ON THE ANALYSIS AND DESIGN OF MOTION SAMPLING STRUCTURE FOR ADVANCED MOTION-COMPENSATED PREDICTION</b>	<b>949</b>
<i>Yu-Chen Tseng, Chung-Hao Wu, Yi-Wen Chen, Tse-Wei Wang, Wen-Hsiao Peng, National Chiao Tung University, Taiwan</i>	
<b>MP-L6.2: TRANSFORM-DOMAIN TEMPORAL PREDICTION IN VIDEO CODING: EXPLOITING CORRELATION VARIATION ACROSS COEFFICIENTS</b>	<b>953</b>
<i>Jingning Han, Vinay Melkote, Kenneth Rose, University of California, Santa Barbara, United States</i>	
<b>MP-L6.3: GLOBAL MOTION TEMPORAL FILTERING FOR IN-LOOP DEBLOCKING</b>	<b>957</b>
<i>Alexander Glantz, Andreas Krutz, Thomas Sikora, Technische Universität Berlin, Germany</i>	
<b>MP-L6.4: NEW MODEL OF MPEG-4 AVC/H.264 VIDEO ENCODERS</b>	<b>961</b>
<i>Tomasz Grajek, Marek Domanski, Poznan University of Technology, Poland</i>	
<b>MP-L6.5: SIMPLIFIED GEOMETRY-ADAPTIVE BLOCK PARTITIONING FOR VIDEO CODING</b>	<b>965</b>
<i>Liwei Guo, Peng Yin, Yunfei Zheng, Xiaolan Lu, Qian Xu, Joel Sole, Technicolor, United States</i>	

<b>MP-L6.6: BLOCK SIZE DEPENDENT ERROR MODEL FOR MOTION .....969</b> <b>COMPENSATION</b>	
<i>Sven Klomp, Marco Munderloh, Jörn Ostermann, Leibniz Universität Hannover, Germany</i>	
<b>MP-L6.7: COMPLEXITY-OUTSOURCED LOW-LATENCY VIDEO ENCODING .....973</b> <b>THROUGH FEEDBACK UNDER A SUM-RATE CONSTRAINT</b>	
<i>Ermin Kozica, Kannan Ramchandran, W. Bastiaan Kleijn, KTH - Royal Institute of Technology, Sweden</i>	
<b>MP-L6.8: HISTOGRAM-OFFSET-BASED COLOR CORRECTION FOR MULTI-VIEW .....977</b> <b>VIDEO CODING</b>	
<i>Yibin Chen, Temasek Laboratories (TL@NTU), Singapore; Kai-Kuang Ma, Nanyang Technological University, Singapore; Canhui Cai, Huaqiao University, China</i>	
 <b>MP-L7: IMAGE AND VIDEO PROCESSING FOR SECURITY I</b>	
<b>MP-L7.1: MULTIPLEXED CLUSTERED-DOT HALFTONE WATERMARKS USING .....981</b> <b>BI-DIRECTIONAL PHASE MODULATION AND DETECTION</b>	
<i>Basak Oztan, Gaurav Sharma, University of Rochester, United States</i>	
<b>MP-L7.2: SCALABLE AUTHENTICATION FOR VARIOUS REPRESENTATIONS OF JPEG .....985</b> <b>2000 IMAGES</b>	
<i>Masafumi Koide, Keiichi Iwamura, Tokyo University of Science, Japan</i>	
<b>MP-L7.3: MULTIMEDIA FORENSIC HASH BASED ON VISUAL WORDS .....989</b>	
<i>Wenjun Lu, Min Wu, University of Maryland, College Park, United States</i>	
<b>MP-L7.4: PREVENTING RE-RECORDING BASED ON DIFFERENCE BETWEEN .....993</b> <b>SENSORY PERCEPTIONS OF HUMANS AND DEVICES</b>	
<i>Takayuki Yamada, National Institute of Informatics, Japan; Seiichi Gohshi, Sharp, Ltd., Japan; Isao Echizen, National Institute of Informatics, Japan</i>	
<b>MP-L7.5: SECURE AND ROBUST SIFT WITH RESISTANCE TO CHOSEN-PLAINTEXT .....997</b> <b>ATTACK</b>	
<i>Chao-Yung Hsu, Chun-Shien Lu, Academia Sinica, Taiwan; Soo-Chang Pei, National Taiwan University, Taiwan</i>	
<b>MP-L7.6: RESOLVING DISTORTION BETWEEN LINEAR AND AREA SENSORS FOR .....1001</b> <b>FORENSIC PRINT INSPECTION</b>	
<i>Stephen Pollard, Guy Adams, Steven Simske, Hewlett Packard, United Kingdom</i>	
<b>MP-L7.7: STEGANALYSIS OF LSB MATCHING BASED ON LOCAL VARIANCE .....1005</b> <b>HISTOGRAM</b>	
<i>Ergong Zheng, Xijian Ping, Tao Zhang, Gang Xiong, Zhengzhou Information Science and Technology Institute, China</i>	
<b>MP-L7.8: AN IMAGE COPY DETECTION SCHEME BASED ON RADON TRANSFORM.....1009</b>	
<i>Yuan-Gen Wang, Yanqiang Lei, Jiwu Huang, Sun Yat-sen University, China</i>	

## **MP-L8: INDEXING AND RETRIEVAL I**

### **MP-L8.1: SCALABLE ACTIVE LEARNING STRATEGY FOR OBJECT CATEGORY .....1013 RETRIEVAL**

*David Gorisse, ETIS/ENSEA/CNRS UMR8051/Univ. Cergy-Pontoise, France; Matthieu Cord, LIP6, UPMC - PARIS VI, France; Frederic Precioso, ETIS/ENSEA/CNRS UMR8051/Univ. Cergy-Pontoise, France*

### **MP-L8.2: DYNAMIC SELECTION OF A FEATURE-RICH QUERY FRAME FOR .....1017 MOBILE VIDEO RETRIEVAL**

*David Chen, Ngai-Man Cheung, Sam Tsai, Vijay Chandrasekhar, Gabriel Takacs, Stanford University, United States; Ramakrishna Vedantham, Radek Grzeszczuk, Nokia Research Center, United States; Bernd Girod, Stanford University, United States*

### **MP-L8.3: FAST AND ROBUST CONTENT-BASED COPY DETECTION BASED ON .....1021 QUADRANT OF LUMINANCE CENTROID AND ADAPTIVE FEATURE COMPARISON**

*Yusuke Uchida, Masayuki Hashimoto, Ryoichi Kawada, KDDI R&D Laboratories Inc., Japan*

### **MP-L8.4: GRADIENT FIELD DESCRIPTOR FOR SKETCH BASED RETRIEVAL AND .....1025 LOCALIZATION**

*Rui Hu, Mark Barnard, John Collomosse, University of Surrey, United Kingdom*

### **MP-L8.5: FAST GEOMETRIC RE-RANKING FOR IMAGE-BASED RETRIEVAL .....1029**

*Sam Tsai, David Chen, Gabriel Takacs, Vijay Chandrasekhar, Stanford University, United States; Ramakrishna Vedantham, Radek Grzeszczuk, Nokia, United States; Bernd Girod, Stanford University, United States*

### **MP-L8.6: ROBUST FEATURE DETECTION BASED ON LOCAL VARIATION FOR .....1033 IMAGE RETRIEVAL**

*Shao-Hu Peng, Khairul Muzzammil Saipullah, Deok-Hwan Kim, Inha University, Republic of Korea*

### **MP-L8.7: IN-SEQUENCE VIDEO DUPLICATE DETECTION WITH FAST .....1037 POINT-TO-LINE MATCHING**

*Bo Liu, Zhu Li, Hong Kong Polytechnic University, Hong Kong SAR of China; Meng Wang, Microsoft Research Asia, China; Aggelos K. Katsaggelos, Northwestern University, United States*

### **MP-L8.8: HFAG: HIERARCHICAL FRAME AFFINITY GROUP FOR VIDEO RETRIEVAL .....1041 ON VERY LARGE VIDEO DATASET**

*Yinjun Miao, Chao Wang, Peng Cui, Lifan Sun, Pin Tao, Shiqiang Yang, Tsinghua University, China*

## **MP-L9: CLASSIFICATION II**

### **MP-L9.1: GEOMETRICAL FEATURES FOR THE CLASSIFICATION OF VERY HIGH .....1045 RESOLUTION MULTISPECTRAL REMOTE-SENSING IMAGES**

*Bin Luo, Jocelyn Chanussot, GIPSA-Lab, Grenoble Institute of Technology, France*

### **MP-L9.2: IMAGE RECOGNITION BY LEARNED LINEAR SUBSPACE OF COMBINED .....1049 BAG-OF-FEATURES AND LOW-LEVEL FEATURES**

*Xian-Hua Han, Yen-Wei Chen, Ritsumei University, Japan; Xiang Ruan, Omron Corporation, Japan*

### **MP-L9.3: IMPROVING OBJECT COLOR CATEGORIZATION WITH SHAPES.....1053**

*Yimeng Zhang, Cornell University, United States; Shiaw-Shian Yu, Industrial Technology Research Institute, Taiwan; Tsuhan Chen, Cornell University, United States*

<b>MP-L9.4: AUTOMATIC DETECTION OF MALIGNANT PROSTATIC GLAND UNITS IN CROSS-SECTIONAL MICROSCOPIC IMAGES</b>	<b>1057</b>
<i>Tian Xia, Yizhou Yu, University of Illinois at Urbana-Champaign, United States; Jing Hua, Wayne State University, United States</i>	
<b>MP-L9.5: COMBINING SUPPORT VECTOR MACHINES AND INFORMATION GAIN RANKING FOR CLASSIFICATION OF MARS MCMURDO PANORAMA IMAGES</b>	<b>1061</b>
<i>Changjing Shang, Dave Barnes, Aberystwyth University, United Kingdom</i>	
<b>MP-L9.6: DISCOVERING LATENT SEMANTIC FACTORS FOR EMOTIONAL PICTURE CATEGORIZATION</b>	<b>1065</b>
<i>Shuo Li, Yu-Jin Zhang, Tsinghua University, China; Hua-Chun Tan, Beijing Institute of Technology, China</i>	
<b>MP-L9.7: ONLINE ADABOOST ECOC FOR IMAGE CLASSIFICATION</b>	<b>1069</b>
<i>Hongwen Huo, Jufu Feng, Peking University, China</i>	
<b>MP-L9.8: AN EFFICIENT COLOR IMAGE CLASSIFICATION METHOD USING GRADIENT MAGNITUDE BASED ANGLE COOCCURRENCE MATRIX</b>	<b>1073</b>
<i>Rui Zhang, Baolin Yin, Qiyang Zhao, Bin Yang, Beihang University, China</i>	
 <b>MP-L10: DETECTION, TRACKING, AND RECOGNITION OF OBJECTS II</b>	
<b>MP-L10.1: VISUAL TRACKING OF MULTIPLE INTERACTING OBJECTS THROUGH RAO-BLACKWELLIZED DATA ASSOCIATION PARTICLE FILTERING</b>	<b>821</b>
<i>Carlos R. del Blanco, Fernando Jaureguizar Nuñez, Narciso García, Universidad Politécnica de Madrid, Spain</i>	
<b>MP-L10.2: EVALUATION OF ON-LINE QUALITY ESTIMATORS FOR OBJECT TRACKING</b>	<b>825</b>
<i>Juan C. SanMiguel, University Autonoma of Madrid, Spain; Andrea Cavallaro, Queen Mary, University of London, United Kingdom; Jose M. Martinez, University Autonoma of Madrid, Spain</i>	
<b>MP-L10.3: ROBUST LOW COMPLEXITY FEATURE TRACKING</b>	<b>829</b>
<i>Pradip Mainali, Katholieke Universiteit Leuven, Belgium; Qiong Yang, Gauthier Lafruit, Rudy Lauwereins, Interuniversitair Micro-electronica Centrum vzw, Belgium; Luc Van Gool, Katholieke Universiteit Leuven, Belgium</i>	
<b>MP-L10.4: AUTOMATIC OPTIC DISC DETECTION THROUGH BACKGROUND ESTIMATION</b>	<b>833</b>
<i>Shijian Lu, Joo Hwee Lim, Institute for Infocomm Research, A*STAR, Singapore</i>	
<b>MP-L10.5: COLLABORATIVE PARTICLE FILTERS FOR GROUP TRACKING</b>	<b>837</b>
<i>Loris Bazzani, Marco Cristani, Vittorio Murino, University of Verona, Italy</i>	
<b>MP-L10.6: AUTOMATED DETECTION OF BLOB STRUCTURES BY HESSIAN ANALYSIS AND OBJECT SCALE</b>	<b>841</b>
<i>Jiamin Liu, Jacob White, Ronald Summers, National Institutes of Health, United States</i>	
<b>MP-L10.7: TRACKING-BASED NON-PARAMETRIC BACKGROUND-FOREGROUND CLASSIFICATION IN A CHROMATICITY-GRADIENT SPACE</b>	<b>845</b>
<i>Carlos Cuevas, Narciso García, Universidad Politécnica de Madrid, Spain</i>	

**MP-L10.8: ROBUST OBJECT DETECTION SCHEME USING FEATURE SELECTION .....849**  
*Hong Pan, Liangzheng Xia, Southeast University, China; Truong Q. Nguyen, University of California, San Diego, United States*

## **MP-PA: SALIENCY AND ATTENTION MODELING**

**MP-PA.1: SPATIO-TEMPORAL COMBINATION OF SALIENCY MAPS AND .....1077**  
**EYE-TRACKING ASSESSMENT OF DIFFERENT STRATEGIES**  
*Christel Chamaret, Technicolor, France; Olivier Le Meur, University of Rennes 1, France; Jean-Claude Chevet, Technicolor, France*

**MP-PA.2: SPATIAL BAYESIAN SURPRISE FOR IMAGE SALIENCY AND QUALITY .....1081**  
**ASSESSMENT**  
*Ioannis Gkioulekas, Harvard University, United States; Georgios Evangelopoulos, Petros Maragos, National Technical University of Athens, Greece*

**MP-PA.3: ANALYSING INTER-OBSERVER SALIENCY VARIATIONS IN TASK-FREE .....1085**  
**VIEWING OF NATURAL IMAGES**  
*Ulrich Engelke, Blekinge Institute of Technology, Sweden; Anthony Maeder, University of Western Sydney, Australia; Hans-Jürgen Zepernick, Blekinge Institute of Technology, Sweden*

**MP-PA.4: VISUAL SALIENCY DETECTION VIA RANK-SPARSITY DECOMPOSITION .....1089**  
*Junchi Yan, Jian Liu, Yin Li, Zhibin Niu, Yuncai Liu, Shanghai Jiao Tong University, China*

**MP-PA.5: VISUAL SALIENCY AS SEQUENTIAL EYE FIXATION PROBABILITY .....1093**  
*Xiaoshuai Sun, Hongxun Yao, Rongrong Ji, Pengfei Xu, Xianming Liu, Shaohui Liu, Harbin Institute of Technology, China*

**MP-PA.6: THE INFLUENCE OF SPACE AND TIME VARYING DISTORTIONS ON .....1097**  
**OBJECTIVE INTELLIGIBILITY ESTIMATORS FOR REGION-OF-INTEREST VIDEO**  
*Frank Ciaramello, Sheila Hemami, Cornell University, United States*

**MP-PA.7: SALIENCY DETECTION BASED ON SHORT-TERM SPARSE .....1101**  
**REPRESENTATION**  
*Xiaoshuai Sun, Hongxun Yao, Rongrong Ji, Pengfei Xu, Xianming Liu, Shaohui Liu, Harbin Institute of Technology, China*

**MP-PA.8: REFINING A REGION BASED ATTENTION MODEL USING EYE TRACKING .....1105**  
**DATA**  
*Zhen Liang, Hong Fu, Zheru Chi, Dagan (David) Feng, Hong Kong Polytechnic University, China*

**MP-PA.9: EYE TRACKING BASED PERCEPTUAL IMAGE INPAINTING QUALITY .....1109**  
**ANALYSIS**  
*Vijay Venkatesh Mahalingam, Sen-ching Cheung, University of Kentucky, United States*

**MP-PA.10: SALIENT REGION EXTRACTION BASED ON LOCAL EXTREMA OF .....1113**  
**NATURAL IMAGES**  
*Hidenori Maruta, Nagasaki University, Japan; Masahiro Ishii, University of Toyama, Japan; Makoto Sato, Tokyo Institute of Technology, Japan*

**MP-PA.11: PREATTENTIVE CO-SALIENCY DETECTION.....1117**  
*Hwann-Tzong Chen, National Tsing Hua University, Taiwan*

<b>MP-PA.12: IMAGE RECOGNITION USING MAXIMAL CLIQUES OF INTEREST</b> .....	<b>1121</b>
<b>POINTS</b>	
<i>Fred Stentiford, University College London, United Kingdom; Ade Bamidele, Nokia UK Limited, United Kingdom</i>	
 <b>MP-PB: DEBLURRING AND DENOISING</b>	
<b>MP-PB.1: A GAME THEORETICAL APPROACH FOR IMAGE DENOISING</b> .....	<b>1125</b>
<i>Yan Chen, K. J. Ray Liu, University of Maryland, College Park, United States</i>	
<b>MP-PB.2: PATCH CONFIDENCE K-NEAREST NEIGHBORS DENOISING</b> .....	<b>1129</b>
<i>Cesario Vincenzo Angelino, Eric Debreuve, Michel Barlaud, I3S Laboratory UNS/CNRS, France</i>	
<b>MP-PB.3: MRI MOTION ARTIFACT CORRECTION BASED ON SPECTRAL</b> .....	<b>1133</b>
<b>EXTRAPOLATION WITH GENERALIZED SERIES</b>	
<i>Hong-Ren Su, Tung-Ying Lee, Shang-Hong Lai, National Tsing Hua University, Taiwan; Ti-chiun Chang, Siemens Corporate Research, United States</i>	
<b>MP-PB.4: CONTINUOUS MRF BASED IMAGE DENOISING WITH A CLOSED FORM</b> .....	<b>1137</b>
<b>SOLUTION</b>	
<i>Ming Liu, Chinese University of Hong Kong, Hong Kong SAR of China; Shifeng Chen, Chinese Academy of Sciences, China; Jianzhuang Liu, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>MP-PB.5: IMAGE DEBLUR WITH REGULARIZED BACKWARD HEAT DIFFUSION</b> .....	<b>1141</b>
<i>Liang Wang, Siwei Luo, Zhe Wang, Beijing Jiaotong University, China</i>	
<b>MP-PB.6: A NO-REFERENCE IMAGE CONTENT METRIC AND ITS APPLICATION TO</b> .....	<b>1145</b>
<b>DENOISING</b>	
<i>Xiang Zhu, Peyman Milanfar, University of California, Santa Cruz, United States</i>	
<b>MP-PB.7: SINGLE IMAGE MOTION DEBLURRING USING ANISOTROPIC</b> .....	<b>1149</b>
<b>REGULARIZATION</b>	
<i>Hanyu Hong, In Kyu Park, Inha University, Republic of Korea</i>	
<b>MP-PB.8: CEPSTRAL ANALYSIS BASED BLIND DECONVOLUTION FOR MOTION</b> .....	<b>1153</b>
<b>BLUR</b>	
<i>Haruka Asai, Yuji Oyamada, Julien Pilet, Hideo Saito, Keio University, Japan</i>	
<b>MP-PB.9: LEARNING DENOISING BOUNDS FOR NOISY IMAGES</b> .....	<b>1157</b>
<i>Priyam Chatterjee, Peyman Milanfar, University of California, Santa Cruz, United States</i>	
<b>MP-PB.10: INSTRUMENT PARAMETER ESTIMATION IN BAYESIAN CONVEX</b> .....	<b>1161</b>
<b>DECONVOLUTION</b>	
<i>François Orieux, Thomas Rodet, Laboratoire des signaux et systèmes, France; Jean-François Giovannelli, Laboratoire d'intégration du matériau au système, France</i>	
<b>MP-PB.11: IMAGE DENOISING USING MULTI-STAGE SPARSE REPRESENTATIONS</b> .....	<b>1165</b>
<i>Tao Gan, Wenmiao Lu, Nanyang Technological University, Singapore</i>	
<b>MP-PB.12: SINGLE IMAGE DEBLURRING WITH ADAPTIVE DICTIONARY LEARNING</b> .....	<b>1169</b>
<i>Zhe Hu, Jia-Bin Huang, Ming-Hsuan Yang, University of California, Merced, United States</i>	



<b>MP-PB.13: USING ADABOOST ON CONTOURLET BASED IMAGE DEBLURRING FOR FLUID LENS CAMERA SYSTEMS</b>	<b>1173</b>
<i>Jack Tzeng, Yoav Freund, Truong Q. Nguyen, University of California, San Diego, United States</i>	
<b>MP-PB.14: POISSON NOISE REMOVAL VIA LEARNED DICTIONARY</b>	<b>1177</b>
<i>Yu Xiao, Beijing Jiaotong University, China; Tieyong Zeng, Hong Kong Baptist University, Hong Kong SAR of China</i>	
<b>MP-PB.15: DEBLURRING OF IRREGULARLY SAMPLED IMAGES BY TV REGULARIZATION IN A SPLINE SPACE</b>	<b>1181</b>
<i>Andrés Almansa, Télécom ParisTech, France; Julien Caron, University of Picardie Jules Verne, France; Sylvain Durand, University Paris Descartes, France</i>	
<b>MP-PB.16: A NEW APPROACH FOR VERY DARK VIDEO DENOISING AND ENHANCEMENT</b>	<b>1185</b>
<i>Qing Xu, Hailin Jiang, Tianjin University, China; Riccardo Scopigno, Istituto Superiore Mario Boella, Italy; Mateu Sbert, University of Girona, Spain</i>	
 <b>MP-PC: IMAGE REGISTRATION AND FUSION</b>	
<b>MP-PC.1: PERFORMANCE EVALUATION OF A GEOMETRIC CORRECTION METHOD FOR MULTI-PROJECTOR DISPLAY USING SIFT AND PHASE-ONLY CORRELATION</b>	<b>1189</b>
<i>Toru Takahashi, Tatsuya Kawano, Koichi Ito, Takafumi Aoki, Tohoku University, Japan; Satoshi Kondo, Panasonic Corporation, Japan</i>	
<b>MP-PC.2: FAST STITCHING OF VIDEOS CAPTURED FROM FREELY MOVING DEVICES BY EXPLOITING TEMPORAL REDUNDANCY</b>	<b>1193</b>
<i>Motaz El-Saban, Microsoft and Cairo University, Egypt; Mostafa Izz, Cairo University, Egypt; Ayman Kaheel, Microsoft, Egypt</i>	
<b>MP-PC.4: CONSISTENT JOINT PHOTOMETRIC AND GEOMETRIC IMAGE REGISTRATION</b>	<b>1197</b>
<i>Hiệp Luong, Bart Goossens, Aleksandra Pizurica, Wilfried Philips, Ghent University, Belgium</i>	
<b>MP-PC.5: JOINT PHOTOMETRIC REGISTRATION AND OPTICAL FLOW ESTIMATION</b>	<b>1201</b>
<i>Imtiaz Hossain, Bahadır Gunturk, Louisiana State University, United States</i>	
<b>MP-PC.6: MULTI-FOCUS IMAGE FUSION USING WAVELET-DOMAIN STATISTICS</b>	<b>1205</b>
<i>Jing Tian, Li Chen, Wuhan University of Science and Technology, China</i>	
<b>MP-PC.7: EXPLOITING SPATIAL DOMAIN AND WAVELET DOMAIN CUMULANTS FOR FUSION OF SAR AND OPTICAL IMAGES</b>	<b>1209</b>
<i>Esra Tunc Gormus, C. Nishan Canagarajah, Alin M. Achim, University of Bristol, United Kingdom</i>	
<b>MP-PC.8: HIGH QUALITY PANORAMIC IMAGE GENERATION USING MULTIPLE PANORAMIC ANNULAR LENS IMAGES</b>	<b>1213</b>
<i>Satoshi Araki, Kei Maeda, Keiji Shibata, Yuukou Horita, University of Toyama, Japan</i>	

## **MP-PD: TRANSFORM CODING II**

### **MP-PD.1: EFFICIENT INTRA CODING STRUCTURE FOR HIGH RESOLUTION VIDEOS USING LINE-BY-LINE PREDICTION AND ADAPTIVE TRANSFORM SELECTION .....1217**

*Jung-Ah Choi, Yo-Sung Ho, Gwangju Institute of Science and Technology, Republic of Korea*

### **MP-PD.2: INTRA FRAME CODING WITH TEMPLATE MATCHING PREDICTION AND ADAPTIVE TRANSFORM .....1221**

*Cuiling Lan, Xidian University, China; Jizheng Xu, Feng Wu, Microsoft Research Asia, China; Guangming Shi, Xidian University, China*

### **MP-PD.3: IMPROVED IMAGE CONCENTRATION FOR ARTIFACT-FREE IMAGE DILUTION AND ITS APPLICATION TO IMAGE CODING .....1225**

*Yuichi Tanaka, Madoka Hasegawa, Shigeo Kato, Utsunomiya University, Japan*

### **MP-PD.4: EXAMPLE-BASED IMAGE COMPRESSION .....1229**

*Jing-Yu Cui, Stanford University, United States; Saurabh Mathur, Michele Covell, Vivek Kwatra, Mei Han, Google Inc., United States*

### **MP-PD.5: AN EFFICIENT ALGORITHM FOR JOINT QP AND QUANTIZATION OPTIMIZATION FOR H.264/AVC .....1233**

*Mou Xiao, Tsinghua University, China; JiangTao Wen, Stretch Inc, China; JianWen Chen, Pin Tao, Tsinghua University, China*

### **MP-PD.6: H.264/AVC BASED COLOR FILTER ARRAY COMPRESSION WITH INTER-CHANNEL PREDICTION MODEL .....1237**

*Sang Heon Lee, Nam Ik Cho, Seoul National University, Republic of Korea*

### **MP-PD.7: QUANTIZATION OPTIMIZED H.264 ENCODING FOR TRAFFIC VIDEO TRACKING APPLICATIONS .....1241**

*Eren Soyak, Sotirios A. Tsaftaris, Aggelos K. Katsaggelos, Northwestern University, United States*

### **MP-PD.8: IMPROVED INTRA PREDICTION FOR HIGH DEFINITION VIDEO USING LOCALIZED HORIZONTAL SPATIAL PREDICTION .....1245**

*Wenting Wu, Pin Tao, Mou Xiao, Jiangtao Wen, Ruiping Li, Tsinghua University, China*

### **MP-PD.10: A FAST DISCRETE TRANSFORM ARCHITECTURE FOR FREQUENCY DOMAIN MOTION ESTIMATION .....1249**

*Yasser Ismail, Jason McNeely, Mohsen Shaaban, Mayssaa Al Najjar, Magdy Bayoumi, CACS, University of Louisiana at Lafayette, United States*

### **MP-PD.11: PATTERN-BASED ASSEMBLED DCT SCHEME WITH DC PREDICTION AND ADAPTIVE MODE CODING .....1253**

*Zhibo Chen, Technicolor, China; Xiaozhong Xu, Polytechnic Institute of NYU, United States*

## **MP-PE: SCALABLE CODING AND MULTIPLE DESCRIPTION CODING**

### **MP-PE.1: A THREE-LAYER ALGORITHM FOR M-CHANNEL MULTIPLE .....1261 DESCRIPTION IMAGE CODING**

*Upul Samarawickrama, Jie Liang, Simon Fraser University, Canada; Chao Tian, AT&T Labs - Research, United States*

### **MP-PE.2: ROUTING-AWARE MULTIPLE DESCRIPTION VIDEO CODING OVER .....1265 WIRELESS AD-HOC NETWORKS USING MULTIPLE PATHS**

*Yiting Liao, Jerry Gibson, University of California, Santa Barbara, United States*

### **MP-PE.3: RATE-CONTROLLED REDUNDANCY-ADAPTIVE MULTIPLE DESCRIPTION .....1269 CODING FOR VIDEO TRANSMISSION OVER MIMO SYSTEMS**

*Nawat Kamnoonwatana, Dimitris Agrafiotis, Nishan Canagarajah, University of Bristol, United Kingdom*

### **MP-PE.4: JOINT TEMPORAL AND SPATIAL MULTIPLE DESCRIPTION CODING FOR .....1273 H.264 VIDEO**

*Jian-Yu Chen, Wen-Jiin Tsai, National Chiao Tung University, Taiwan*

### **MP-PE.5: LOW-COMPLEXITY RATE CONTROL BASED ON $\alpha$ -DOMAIN MODEL FOR .....1277 SCALABLE VIDEO CODING**

*Meng Liu, Guo Yi, Houqiang Li, Chang Wen Chen, University of Science and Technology of China, China*

### **MP-PE.6: JOINT QUANTIZER OPTIMIZATION FOR SCALABLE CODING.....1281**

*Maria Koziri, University of Thessaly, Greece; Alex Eleftheriadis, University of Athens, Greece*

### **MP-PE.7: VISUALLY-FAVORABLE TONE-MAPPING WITH HIGH COMPRESSION .....1285 PERFORMANCE**

*Zicong Mai, Hassan Mansour, Panos Nasiopoulos, Rabab Ward, University of British Columbia, Canada*

### **MP-PE.8: ESTIMATION-THEORETIC APPROACH TO DELAYED PREDICTION IN .....1289 SCALABLE VIDEO CODING**

*Jingning Han, Vinay Melkote, Kenneth Rose, University of California, Santa Barbara, United States*

### **MP-PE.9: VIDEO STREAMING USING STANDARD-COMPATIBLE SCALABLE .....1293 MULTIPLE DESCRIPTION CODING BASED ON SVC**

*Zhijie Zhao, Jörn Ostermann, Leibniz Universität Hannover, Germany*

### **MP-PE.10: ADAPTIVE MODE DECISION ALGORITHM FOR INTER LAYER CODING .....1297 IN SCALABLE VIDEO CODING**

*Seon-Tae Kim, Krishna Reddy Konda, Pyeong-Soo Mah, Electronics and Telecommunications Research Institute, Republic of Korea; Sung-Jea Ko, Korea University, Republic of Korea*

### **MP-PE.11: ENHANCED PREDICTION FOR MOTION ESTIMATION IN SCALABLE .....1301 VIDEO CODING**

*Marijn J.H. Loomans, Cornelis J. Koeleman, VDG Security, Netherlands; Peter H. N. de With, Eindhoven University of Technology, Netherlands*

### **MP-PE.12: BIT ALLOCATION FOR SCALABLE VIDEO CODING OF MULTIPLE .....1305 VIDEO PROGRAMS**

*Yu Wang, Lap-Pui Chau, Kim-Hui Yap, Nanyang Technological University, Singapore*

<b>MP-PE.13: A MULTIPLE DESCRIPTION CODEC BASED ON COMBINATORIAL OPTIMIZATION AND ITS APPLICATION TO IMAGE CODING</b>	<b>1309</b>
<i>Yuhua Fan, Jia Wang, Jun Sun, Cheng Zhi, Shanghai Jiao Tong University, China</i>	
 <b>MP-PF: COLOR AND MULTISPECTRAL IMAGING</b>	
<b>MP-PF.1: DISCRIMINATIVE SPARSE REPRESENTATIONS IN HYPERSPECTRAL IMAGERY</b>	<b>1313</b>
<i>Alexey Castrodad, University of Minnesota, United States; Zhengming Xing, Duke University, United States; John Greer, Edward Bosch, National Geospatial-Intelligence Agency, United States; Lawrence Carin, Duke University, United States; Guillermo Sapiro, University of Minnesota, United States</i>	
<b>MP-PF.2: A FAST ITERATIVE KERNEL PCA FEATURE EXTRACTION FOR HYPERSPECTRAL IMAGES</b>	<b>1317</b>
<i>Wenzhi Liao, Ghent University and South China University of Technology, Belgium; Aleksandra Pizurica, Wilfried Philips, Ghent University, Belgium; Youguo Pi, South China University of Technology, China</i>	
<b>MP-PF.3: A CLASS-SEPARABILITY-BASED METHOD FOR MULTI/HYPERSPECTRAL IMAGE COLOR VISUALIZATION</b>	<b>1321</b>
<i>Steven Le Moan, Alamin Mansouri, Le2i, Université de Bourgogne, France; Jon Y. Hardeberg, ColorLab, Norway; Yvon Voisin, Le2i, Université de Bourgogne, France</i>	
<b>MP-PF.4: AN IMPROVED BAYESIAN ALGORITHM FOR COLOR IMAGE DESATURATION</b>	<b>1325</b>
<i>Di Xu, Colin Doutre, Panos Nasiopoulos, University of British Columbia, Canada</i>	
<b>MP-PF.5: INTRA-PREDICTION FOR COLOR IMAGE CODING USING YUV CORRELATION</b>	<b>1329</b>
<i>Luís Lucas, Nuno Rodrigues, Sérgio Faria, Instituto de Telecomunicações, Portugal; Eduardo Silva, Universidade Federal do Rio de Janeiro, Brazil; Murilo Carvalho, Universidade Federal Fluminense, Brazil; Vitor Silva, Instituto de Telecomunicações, Portugal</i>	
<b>MP-PF.6: JOINT COLOR DECROSSTALK AND DEMOSAICKING FOR CFA CAMERAS</b>	<b>1333</b>
<i>Xiaolin Wu, Xiangjun Zhang, McMaster University, Canada</i>	
<b>MP-PF.7: COMPRESSIVE COLOR IMAGING WITH GROUP-SPARSITY ON ANALYSIS PRIOR</b>	<b>1337</b>
<i>Angshul Majumdar, Rabab Ward, University of British Columbia, Canada</i>	
<b>MP-PF.8: NONLINEAR BARYCENTRIC DIMENSIONALITY REDUCTION</b>	<b>1341</b>
<i>Rob Heylen, Paul Scheunders, University of Antwerp, Belgium</i>	
<b>MP-PF.9: COLOR-COMPONENT BIT ALLOCATION SCHEME FOR JPEG 2000 PARALLEL CODEC</b>	<b>1345</b>
<i>Yoshihide Tonomura, Takayuki Nakachi, Daisuke Shirai, Tatsuya Fujii, NTT, Japan; Hitoshi Kiya, Tokyo Metropolitan University, Japan</i>	
<b>MP-PF.10: ACCELERATING COLOR SPACE TRANSFORMATIONS USING NUMERICAL APPROXIMATIONS</b>	<b>1349</b>
<i>M. Emre Celebi, Louisiana State University in Shreveport, United States; Hassan Kingravi, Georgia Institute of Technology, United States; Fatih Celiker, Wayne State University, United States</i>	

<b>MP-PF.11: TEXTURE-BASED COLOR CONSTANCY USING LOCAL REGRESSION.....</b>	<b>1353</b>
<i>Meng Wu, Jun Zhou, Jun Sun, Gengjian Xue, Shanghai Jiao Tong University, China</i>	
<b>MP-PF.12: HYPERSPECTRAL TARGET DETECTION FROM INCOHERENT PROJECTIONS: NONEQUIPROBABLE TARGETS AND INHOMOGENEOUS SNR .....</b>	<b>1357</b>
<i>Kalyani Krishnamurthy, Maxim Raginsky, Rebecca Willett, Duke University, United States</i>	
<b>MP-PG: COMPUTATIONAL IMAGING</b>	
<b>MP-PG.1: A SCATTERING SIMILARITY BASED CLASSIFICATION SCHEME FOR LAND APPLICATIONS OF POLARIMETRIC SAR IMAGE .....</b>	<b>1361</b>
<i>Qiang Chen, Yong-Mei Jiang, Ling-Jun Zhao, Jun Lu, Hong Ding, Department of Electronic Science and Engineering, NUDT, China</i>	
<b>MP-PG.2: DETECTING SUBPIXEL TARGETS IN HYPERSPECTRAL IMAGES VIA KNOWLEDGE-AIDED ADAPTIVE FILTERING .....</b>	<b>1365</b>
<i>Xiaokun Li, Northrop Grumman Information Systems, United States</i>	
<b>MP-PG.3: A TWO-PASS RANDOM FORESTS CLASSIFICATION OF AIRBORNE LIDAR AND IMAGE DATA ON URBAN SCENES .....</b>	<b>1369</b>
<i>Li Guo, Nesrine Chehata, Samia Boukir, University of Bordeaux, France</i>	
<b>MP-PG.4: HYPERSPECTRAL IMAGE SEGMENTATION AND UNMIXING USING HIDDEN MARKOV TREES .....</b>	<b>1373</b>
<i>Roni Mittelman, Alfred Hero, University of Michigan, United States</i>	
<b>MP-PG.5: AUTOMATIC TARGET RECOGNITION BASED ON SIMULTANEOUS SPARSE REPRESENTATION .....</b>	<b>1377</b>
<i>Vishal Patel, University of Maryland, United States; Nasser Nasrabadi, Army Research Laboratory, United States; Rama Chellappa, University of Maryland, United States</i>	
<b>MP-PG.6: COMPRESSED SENSING FOR APERTURE SYNTHESIS IMAGING .....</b>	<b>1381</b>
<i>Stephan Wenger, Technische Universität Braunschweig, Germany; Soheil Darabi, Pradeep Sen, University of New Mexico, United States; Karl-Heinz Glaßmeier, Marcus Magnor, Technische Universität Braunschweig, Germany</i>	
<b>MP-PG.7: PASSIVE IMAGING EXPLOITING MULTIPLE SCATTERING USING DISTRIBUTED APERTURES .....</b>	<b>1385</b>
<i>Ling Wang, Nanjing University of Aeronautics and Astronautics, China; Il-Young Son, Birsen Yazici, Rensselaer Polytechnic Institute, United States</i>	
<b>MP-PG.8: A REAL TIME BREAST MICROWAVE RADAR IMAGE RECONSTRUCTION TECHNIQUE USING SIMT BASED INTERPOLATION .....</b>	<b>1389</b>
<i>Daniel Flores-Tapia, Stephen Pistorius, CancerCare Manitoba, Canada</i>	
<b>MP-PG.9: HYPER-DEMIX: BLIND SOURCE SEPARATION OF HYPERSPECTRAL IMAGES USING LOCAL ML ESTIMATES .....</b>	<b>1393</b>
<i>Simon Arberet, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>MP-PG.10: SPREAD E, F LAYER IONOSPHERIC CLUTTER IDENTIFICATION IN RANGE-DOPPLER MAP FOR HFSWR .....</b>	<b>1397</b>
<i>Yang Li, Ning Zhang, Qiang Yang, Harbin Institute of Technology, China</i>	

<b>MP-PG.11: ESTIMATION OF THE DEGREE OF POLARIZATION IN DUAL-POLARIZED SAR IMAGERY</b>	<b>.....1401</b>
<i>Reza Shirvany, Marie Chabert, Jean-Yves Tourneret, University of Toulouse, France</i>	
<b>MP-PG.12: IMAGE RECONSTRUCTION OF MILLIMETER-WAVE RADIOMETERS WITH MULTI-QUADRIC SPLINES</b>	<b>.....1405</b>
<i>Michel Sarkis, Sony Deuthschland GmbH, Germany</i>	
<b>MP-PG.13: MORPHOLOGICAL PROCESSING OF HYPERSPECTRAL IMAGES USING KRIGING-BASED SUPERVISED ORDERING</b>	<b>.....1409</b>
<i>Santiago Velasco-Forero, Jesús Angulo, MINES ParisTech, France</i>	
<b>MP-PG.14: 3D SEGMENTATION OF FOREST STRUCTURE USING A MEAN-SHIFT BASED ALGORITHM</b>	<b>.....1413</b>
<i>Antonio Ferraz, Frederic Bretar, Institut Geographique National, France; Stéphane Jacquemoud, IGP, Institut de Physique du Globe de Paris, France; Gil Gonçalves, INESCC, Instituto de Engenharia de Sistemas e Computadores de Coimbra, Portugal; Luisa Pereira, Universidade de Aveiro, Portugal</i>	
 <b>MP-PH: SHAPE AND REGION MODELS</b>	
<b>MP-PH.1: AFFINE-INVARIANT MODELING OF SHAPE-APPEARANCE IMAGES APPLIED ON SIGN LANGUAGE HANDSHAPE CLASSIFICATION</b>	<b>....1417</b>
<i>Anastasios Roussos, Stavros Theodorakis, Vassilis Pitsikalis, Petros Maragos, National Technical University of Athens, Greece</i>	
<b>MP-PH.2: GEODESIC-RING BASED CURVATURE MAPS FOR POLYP DETECTION IN CT COLONOGRAPHY</b>	<b>.....1421</b>
<i>Abd-Krim Seghouane, Ju Lynn Ong, National ICT Australia and the Australian National University, Australia</i>	
<b>MP-PH.3: LOCAL BINARY PATTERN PROBABILITY MODEL BASED FACIAL FEATURE LOCALIZATION</b>	<b>.....1425</b>
<i>Tao Xiong, Lei Xu, Kongqiao Wang, Jiangwei Li, Yong Ma, Nokia, China</i>	
<b>MP-PH.4: A FAST ACCURATE IMPLICIT POLYNOMIAL FITTING APPROACH</b>	<b>.....1429</b>
<i>Mohammad Rouhani, Angel D. Sappa, Computer Vision Center, Spain</i>	
<b>MP-PH.5: SPARSE SHAPES PROTOTYPE MODELING USING GENETIC ALGORITHMS</b>	<b>.....1433</b>
<i>Stefano Maludrottu, Hany Sallam, Carlo S. Regazzoni, University of Genoa, Italy</i>	
<b>MP-PH.6: DISTINGUISHING FACIAL EXPRESSION USING THE FISHER-RAO METRIC.</b>	<b>.....1437</b>
<i>Simone Ceolin, Edwin R. Hancock, University of York, United Kingdom</i>	
<b>MP-PH.7: ESTIMATION OF THE ISING FIELD PARAMETER THANKS TO THE EXACT PARTITION FUNCTION</b>	<b>.....1441</b>
<i>Jean-François Giovannelli, Bordeaux I, University, France</i>	
<b>MP-PH.8: SVD-SIFT FOR WEB NEAR-DUPLICATE IMAGE DETECTION</b>	<b>.....1445</b>
<i>Hong Liu, Hong Lu, Xiangyang Xue, Fudan University, China</i>	



**MP-PH.10: FAST ALGORITHM FOR ERROR-BOUNDED COMPRESSION OF DIGITAL .....1453  
CURVES**

*Alexander Kolesnikov, University of Eastern Finland, Finland*

**MP-PI: EVENT DETECTION**

**MP-PI.1: BUILDING EMERGING PATTERN (EP) RANDOM FOREST FOR .....1457  
RECOGNITION**

*Liang Wang, Harbin Institute of Technology, China; Yizhou Wang, Peking University, China; Debin Zhao, Harbin Institute of Technology, China*

**MP-PI.2: AN INTEGER PROGRAMMING APPROACH TO VISUAL COMPLIANCE.....1461**

*Lei Ding, Ohio State University, United States; Quanfu Fan, Sharath Pankanti, IBM T. J. Watson Research Center, United States*

**MP-PI.3: SPARSE CONSTRAINT NEAREST NEIGHBOUR SELECTION IN .....1465  
CROSS-MEDIA RETRIEVAL**

*Zechao Li, Jing Liu, Hanqing Lu, Institute of Automation, Chinese Academy of Sciences, China*

**MP-PI.4: ROBUST VISUAL FEATURES FOR THE MULTIMODAL IDENTIFICATION .....1469  
OF UNREGISTERED SPEAKERS IN TV TALK-SHOWS**

*Felicien Vallet, Slim Essid, Télécom ParisTech, France; Jean Carrive, Institut National de l'Audiovisuel, France; Gael Richard, Télécom ParisTech, France*

**MP-PI.5: TV PROGRAM SEGMENTATION USING TEXT-VISUAL ANALYSIS.....1473**

*Yoon-Hee Choi, Sang Wook Kang, Ilhwan Choi, Samsung Electronics Co., Ltd., Republic of Korea*

**MP-PI.6: IMPLICIT MOTION-SHAPE MODEL: A GENERIC APPROACH FOR ACTION .....1477  
MATCHING**

*Tuan Hue Thi, University of New South Wales and National ICT of Australia, Australia; Li Cheng, Toyota Technological Institute at Chicago, United States; Jian Zhang, University of New South Wales and National ICT of Australia, Australia; Wang Li, Southeast University, China*

**MP-PI.7: WAVELET-BASED REDUNDANT REPRESENTATION FOR EFFICIENT .....1481  
RANDOM ACCESS OF VOLUMETRIC IMAGES**

*Zihong Fan, Antonio Ortega, University of Southern California, United States*

**MP-PI.8: OPTIMIZING SUPPORT VECTOR MACHINE BASED CLASSIFICATION AND .....1485  
RETRIEVAL OF SEMANTIC VIDEO EVENTS WITH GENETIC ALGORITHMS**

*Bashar Tahayna, Monash University, Malaysia; Mohammed Belkhatir, Université Claude Bernard Lyon 1, France; Saadat M. Alhashmi, Thomas O'Daneil, Monash University, Malaysia*

**MP-PI.9: HORROR MOVIE SCENE RECOGNITION BASED ON EMOTIONAL .....1489  
PERCEPTION**

*Jianchao Wang, Bing Li, Weiming Hu, Ou Wu, Institute of Automation, Chinese Academy of Sciences, China*

- MP-PI.10: DETECTING PITCHING FRAMES IN BASEBALL GAME VIDEO USING .....1493  
MARKOV RANDOM WALK**  
*Chih-Yi Chiu, National Chiayi University, Taiwan; Po-Chih Lin, Chung Yuan Christian University, Taiwan;  
Wei-Ming Chang, National Tsing Hua University, Taiwan; Hsin-Min Wang, Academia Sinica, Taiwan; Shi-  
Nine Yang, Chung Yuan Christian University, Taiwan*
- MP-PI.11: EVENT TACTIC ANALYSIS IN SPORTS VIDEO USING SPATIO-TEMPORAL .....1497  
PATTERN**  
*Minh-Son Dao, MultiMedia Signal Processing and Understanding Lab, Italy; Keita Masui, Noboru Babaguchi,  
Media Integrated Communication Lab, Japan*
- MP-PI.12: CATEGORY-SPECIFIC INCREMENTAL VISUAL CODEBOOK TRAINING .....1501  
FOR SCENE CATEGORIZATION**  
*Jianzhao Qin, Nelson Yung, University of Hong Kong, Hong Kong SAR of China*
- MP-PI.13: A CLOSE-UP DETECTION METHOD FOR MOVIES.....1505**  
*Huiying Liu, Institute of Computing Technology, Chinese Academy of Sciences, China; Min Xu, University of  
Technology, Australia; Qingming Huang, Graduate University of Chinese Academy of Sciences, China; Jesse  
Jin, University of Newcastle, Australia; Shuqiang Jiang, Institute of Computing Technology, Chinese Academy  
of Sciences, China; Changsheng Xu, Institute of Automation, Chinese Academy of Sciences, China*
- MP-PI.14: BALL EVENT RECOGNITION USING HMM FOR AUTOMATIC TENNIS .....1509  
ANNOTATION**  
*Ibrahim Almajai, Josef Kittler, Teo de Campos, William Christmas, Fei Yan, David Windridge, Aftab Khan,  
University of Surrey, United Kingdom*
- MP-PI.15: AUTOMATIC VIDEO-BASED ANALYSIS OF ANIMAL BEHAVIORS .....1513**  
*Jialue Fan, Northwestern University, United States; Nan Jiang, Huazhong University of Science and  
Technology, China; Ying Wu, Northwestern University, United States*
- MP-PJ: POSE ESTIMATION AND CHANGE DETECTION**
- MP-PJ.1: PROBABILISTIC HUMAN POSE RECOVERY FROM 2D IMAGES .....1517**  
*Farid Flitti, Mohammed Bennamoun, Du Huynh, Robyn Owens, University of Western Australia, Australia*
- MP-PJ.2: PERSON-INDEPENDENT HEAD POSE ESTIMATION BASED ON RANDOM .....1521  
FOREST REGRESSION**  
*Yali Li, Shengjin Wang, Xiaoqing Ding, Tsinghua University, China*
- MP-PJ.3: REAL-TIME 3D HEAD POSE ESTIMATION USING BOTH GEOMETRY AND .....1525  
LEARNING**  
*Bisser Raytchev, Hiroshima University, Japan; Yusuke Kimura, Tsukuba University, Japan; Ikushi Yoda,  
Katsuhiko Sakaue, National Institute of Advanced Industrial Science and Technology (AIST), Japan*
- MP-PJ.4: UNSYNCHRONIZED MARKERLESS MOTION CAPTURE WITH SHARP .....1529  
ILLUMINATION CHANGES**  
*Jia Li, Zhenjiang Miao, Beijing Jiaotong University, China; Heng-Da Cheng, Utah State University, United  
States; Dianyong Zhang, Beijing Jiaotong University, China*
- MP-PJ.5: 3-DIMENSIONAL FACE POSE AND SHAPE ESTIMATION BASED ON .....1533  
RELAXED MODEL FITTING OPTIMIZATION**  
*Pathompong Ruangyam, Nongluk Covavisaruch, Chulalongkorn University, Thailand*

<b>MP-PJ.6: ROBUST AND EFFICIENT BACKGROUND SUBTRACTION BY QUADRATIC POLYNOMIAL FITTING</b>	<b>.....1537</b>
<i>Alessandro Lanza, Federico Tombari, Luigi Di Stefano, University of Bologna, Italy</i>	
<b>MP-PJ.8: CROWD BEHAVIOUR ANALYSIS USING HISTOGRAMS OF MOTION DIRECTION</b>	<b>.....1545</b>
<i>Hannah Mary Dee, Alice Caplier, Institut Polytechnique de Grenoble, France</i>	
<b>MP-PJ.9: VIDEO SYNCHRONIZATION USING BIT RATE PROFILES</b>	<b>.....1549</b>
<i>Georg Schroth, Florian Schweiger, Michael Eichhorn, Eckehard Steinbach, Technische Universität München, Germany; Michael Fahrmaier, Wolfgang Kellerer, DOCOMO Euro-Labs, Germany</i>	
<b>TA-L1: COGNITIVE SCIENCE IN IMAGE AND VIDEO ANALYSIS</b>	
<b>TA-L1.1: A SEMANTIC NO-REFERENCE IMAGE SHARPNESS METRIC BASED ON TOP-DOWN AND BOTTOM-UP SALIENCY MAP MODELING</b>	<b>.....1553</b>
<i>Sheng-hua Zhong, Yan Liu, Yang Liu, Fu-lai Chung, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TA-L1.2: CLASSIFICATION AND FEATURE SELECTION WITH HUMAN PERFORMANCE DATA</b>	<b>.....1557</b>
<i>Christina Pavlopoulou, Stella Yu, Boston College, United States</i>	
<b>TA-L1.3: DISCRIMINATIVE DEEP BELIEF NETWORKS FOR IMAGE CLASSIFICATION</b>	<b>.....1561</b>
<i>Shusen Zhou, Qingcai Chen, Xiaolong Wang, Harbin Institute of Technology, China</i>	
<b>TA-L1.4: VISUAL ATTENTION BASED SMALL OBJECT SEGMENTATION IN NATURAL IMAGES</b>	<b>.....1565</b>
<i>Guo Wen, Xu Changshen, Ma Songde, Institute of Automation, Chinese Academy of Sciences, China; Xu Min, University of Technology, Australia</i>	
<b>TA-L1.5: AUTOMATIC IMAGE RETARGETING EVALUATION BASED ON USER PERCEPTION</b>	<b>.....1569</b>
<i>Tongwei Ren, Gangshan Wu, Nanjing University, China</i>	
<b>TA-L1.6: IMAGE LABELING VIA INCREMENTAL MODEL LEARNING</b>	<b>.....1573</b>
<i>Yanyun Qu, Cheng Chen, Diwei Wu, Yi Xie, Xiamen University, China</i>	
<b>TA-L2: EDGE AND BOUNDARY DETECTION</b>	
<b>TA-L2.1: CONTOUR DETECTION USING BINARY PARTITION TREES</b>	<b>.....1609</b>
<i>Jordi Pont-Tuset, Ferran Marques, Universtitat Politècnica de Catalunya, Spain</i>	
<b>TA-L2.2: ASYMMETRIC FOURIER DESCRIPTOR OF NON-CLOSED SEGMENTS</b>	<b>.....1613</b>
<i>Jian-Jiun Ding, Wei-Lun Chao, Jiun-De Huang, Cheng-Jin Kuo, National Taiwan University, Taiwan</i>	

<b>TA-L2.3: HUE-BASED QUATERNIONIC CRITERION FOR FOCUSED-COLOR EXTRACTION</b>	<b>1617</b>
<i>Frédéric Petit, Anne-Sophie Capelle-Laizé, Philippe Carré, XLIM-SIC laboratory, UMR CNRS 6172, France</i>	
<b>TA-L2.4: PCTV: A BIOLOGICALLY- AND PSYCHOLOGICALLY-INSPIRED EDGE AND LINE DETECTION</b>	<b>1621</b>
<i>Xin Kang, Paul Y.S. Cheung, Wai-Pan Yau, Yong Hu, University of Hong Kong, Hong Kong SAR of China</i>	
<b>TA-L2.5: FUNCTIONAL VANISHING POINT ESTIMATION VIA A FILTERED-RADON OPERATOR</b>	<b>1625</b>
<i>William Mantzel, Justin Romberg, Georgia Institute of Technology, United States</i>	
<b>TA-L2.6: ADAPTIVE-SCALE DETERMINING FOR EDGE DETECTION IN CORRELATED TEXTURE NOISE</b>	<b>1629</b>
<i>Xiqun Lu, Zhejiang University, China</i>	
<b>TA-L2.7: HTF: A NOVEL FEATURE FOR GENERAL CRACK DETECTION</b>	<b>1633</b>
<i>Han Hu, Quanquan Gu, Jie Zhou, Tsinghua University, China</i>	
<b>TA-L2.8: COMBINING IMAGE ENTROPY WITH THE PULSE COUPLED NEURAL NETWORK IN EDGE DETECTION</b>	<b>1637</b>
<i>Jiansheng Chen, Jinping He, Guangda Su, Tsinghua University, China</i>	
 <b>TA-L3: SPARSE REPRESENTATION</b>	
<b>TA-L3.1: IMAGE MODELING AND ENHANCEMENT VIA STRUCTURED SPARSE MODEL SELECTION</b>	<b>1641</b>
<i>Guoshen Yu, Guillermo Sapiro, University of Minnesota, United States; Stéphane Mallat, Ecole Polytechnique, France</i>	
<b>TA-L3.2: COLOR DEMOSAICKING WITH SPARSE REPRESENTATIONS</b>	<b>1645</b>
<i>Xiaolin Wu, McMaster University, Canada; Dahua Gao, Guangming Shi, Danhua Liu, Xidian University, China</i>	
<b>TA-L3.3: BLOCK-BASED ADAPTIVE COMPRESSED SENSING FOR VIDEO</b>	<b>1649</b>
<i>Zhaorui Liu, H. Vicky Zhao, A. Y. Elezzabi, University of Alberta, Canada</i>	
<b>TA-L3.4: COMPASS: A JOINT FRAMEWORK FOR PARALLEL IMAGING AND COMPRESSIVE SENSING IN MRI</b>	<b>1653</b>
<i>Jan Aelterman, Hiep Luong, Bart Goossens, Aleksandra Pizurica, Wilfried Philips, Ghent University, Belgium</i>	
<b>TA-L3.5: ROBUST FACE RECOGNITION USING LOCALLY ADAPTIVE SPARSE REPRESENTATION</b>	<b>1657</b>
<i>Yi Chen, Thong Do, Trac D. Tran, The Johns Hopkins University, United States</i>	
<b>TA-L3.6: SPARSE NATURAL IMAGE STATISTICS AND THEIR APPLICATIONS TO COLORIZATION AND COMPRESSION</b>	<b>1661</b>
<i>Alexander Balinsky, Nassir Mohammad, Cardiff University, United Kingdom</i>	
<b>TA-L3.7: JOINT SPARSITY MODEL WITH MATRIX COMPLETION FOR AN ENSEMBLE OF FACE IMAGES</b>	<b>1665</b>
<i>Qiang Zhang, Baoxin Li, Arizona State University, United States</i>	

**TA-L3.8: SPARSE MARGIN BASED DISCRIMINANT ANALYSIS FOR FACE .....1669  
RECOGNITION**

*Zhenghong Gu, Jian Yang, Nanjing University of Science and Technology, China*

**TA-L4: IMAGE ENHANCEMENT I**

**TA-L4.1: ALTERNATING PROXIMAL ALGORITHM FOR SOLVING BLIND RECOVERY .....1673**

*Jerome Bolte, Patrick Louis Combettes, Université Paris 6, France; Jean-Christophe Pesquet, Université Paris-Est, France*

**TA-L4.2: MORPHOLOGICAL WAVELET TRANSFORM WITH ADAPTIVE DYADIC .....1677  
STRUCTURES**

*Zhen Xiang, Peter Ramadge, Princeton University, United States*

**TA-L4.3: IMPROVED IMAGE CAPTURE USING LIVEVIEW IMAGES .....1681**

*Aaron Deever, Eastman Kodak Company, United States*

**TA-L4.4: RESTORATION OF IMAGES AND 3D DATA TO HIGHER RESOLUTION BY .....1685  
DECONVOLUTION WITH SPARSITY REGULARIZATION**

*Yingsong Zhang, Nick Kingsbury, University of Cambridge, United Kingdom*

**TA-L4.5: POWER-CONSTRAINED CONTRAST ENHANCEMENT FOR OLED DISPLAYS .....1689  
BASED ON HISTOGRAM EQUALIZATION**

*Chulwoo Lee, Chul Lee, Chang-Su Kim, Korea University, Republic of Korea*

**TA-L4.6: EFFICIENT REPRESENTATION OF THE VARIANT PSF OF STRUCTURED .....1693  
LIGHT SYSTEM**

*Marc-Antoine Drouin, Guy Godin, Francois Blais, National Research Council, Canada*

**TA-L4.7: UNDECIMATED HAAR THRESHOLDING FOR POISSON INTENSITY .....1697  
ESTIMATION**

*Florian Luisier, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Thierry Blu, Chinese University of Hong Kong (CUHK), Hong Kong SAR of China; Michael Unser, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

**TA-L4.8: DUAL RANGE DERINGING FOR NON-BLIND IMAGE DECONVOLUTION.....1701**

*Le Zou, Intel Corporation, United States; Howard Zhou, Georgia Institute of Technology, United States; Samuel Cheng, University of Oklahoma, United States; Chuan He, Peking University, China*

**TA-L5: SEGMENTATION AND QUANTITATIVE ANALYSIS I**

**TA-L5.1: RECOGNITION OF UNIDEAL IRIS IMAGES USING REGION-BASED ACTIVE .....1705  
CONTOUR MODEL AND GAME THEORY**

*Kaushik Roy, Concordia University, Canada; Prabir Bhattacharya, University of Cincinnati, United States; Ching Y. Suen, Concordia University, Canada; Jane You, Hong Kong Polytechnic University, Hong Kong SAR of China*

**TA-L5.2: AN MRF FRAMEWORK FOR JOINT REGISTRATION AND SEGMENTATION .....1709  
OF NATURAL AND PERFUSION IMAGES**

*Dwarikanath Mahapatra, Ying Sun, National University of Singapore, Singapore*

<b>TA-L5.3: COMPLETELY AUTOMATIC SEGMENTATION FOR BREAST ULTRASOUND USING MULTIPLE-DOMAIN FEATURES</b>	<b>1713</b>
<i>Juan Shan, Yuxuan Wang, Heng-Da Cheng, Utah State University, United States</i>	
<b>TA-L5.4: HUMAN UPPER BODY IDENTIFICATION FROM IMAGES</b>	<b>1717</b>
<i>Julio Cezar Silveira Jacques Junior, Leandro Dihl, Pontificia Universidade Católica do Rio Grande do Sul, Brazil; Claudio Jung, Universidade Federal do Rio Grande do Sul, Brazil; Marcelo Thielo, Hewlett Packard Brazil, Brazil; Renato Keshet, Hewlett Packard Israel, Israel; Soraia Musse, Pontificia Universidade Católica do Rio Grande do Sul, Brazil</i>	
<b>TA-L5.5: TRACKING KIDNEY TUMOR DIMENSIONAL MEASUREMENTS VIA IMAGE MORPHING</b>	<b>1721</b>
<i>Nathaniel Strawn, University of Maryland, United States; Jianhua Yao, National Institutes of Health, United States</i>	
<b>TA-L5.6: DEFORMABLE MODEL GUIDED BY STOCHASTIC SPEED WITH APPLICATION IN CINE IMAGES SEGMENTATION</b>	<b>1725</b>
<i>Fahmi Khalifa, BioImaging Laboratory, University of Louisville, United States; Garth Beache, University of Louisville, United States; Ayman El-Baz, BioImaging Laboratory, University of Louisville, United States; Georgy Gimel'farb, University of Auckland, New Zealand</i>	
<b>TA-L5.7: TEXTURE REMOVAL FOR ADAPTIVE LEVEL SET BASED IRIS SEGMENTATION</b>	<b>1729</b>
<i>Xiaobo Zhang, Zhenan Sun, Tieniu Tan, Chinese Academy of Sciences, China</i>	
<b>TA-L5.8: FULLY AUTOMATED LIVER SEGMENTATION FOR LOW- AND HIGH-CONTRAST CT VOLUMES BASED ON PROBABILISTIC ATLASES</b>	<b>1733</b>
<i>Changyang Li, Xiuying Wang, University of Sydney, Australia; Stefan Eberl, Royal Prince Alfred Hospital, Australia; Michael J. Fulham, University of Sydney, Australia; Yong Yin, Shandong Tumor Hospital, China; Dagan (David) Feng, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TA-L6: FORENSIC IMAGING</b>	
<b>TA-L6.1: WAVELET-BASED IMAGE COMPRESSION ANTI-FORENSICS</b>	<b>1737</b>
<i>Matthew C. Stamm, K. J. Ray Liu, University of Maryland, College Park, United States</i>	
<b>TA-L6.2: DETECTING PHOTO MANIPULATION ON SIGNS AND BILLBOARDS</b>	<b>1741</b>
<i>Valentina Conotter, Giulia Boato, University of Trento, Italy; Hany Farid, Dartmouth College, United States</i>	
<b>TA-L6.3: TWO-DIMENSIONAL STATISTICAL TEST FOR THE PRESENCE OF ALMOST CYCLOSTATIONARITY ON IMAGES</b>	<b>1745</b>
<i>David Vázquez-Padín, Carlos Mosquera, Fernando Pérez-González, University of Vigo, Spain</i>	
<b>TA-L6.4: SOURCE CAMERA IDENTIFICATION FROM SIGNIFICANT NOISE RESIDUAL REGIONS</b>	<b>1749</b>
<i>Bei-bei Liu, Korea Advanced Institute of Science and Technology, Republic of Korea; Yongjian Hu, South China University of Technology, China; Heung-Kyu Lee, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>TA-L6.5: ON THE ROLE OF DIFFERENTIATION FOR RESAMPLING DETECTION</b>	<b>1753</b>
<i>Nahuel Dalgaard, Carlos Mosquera, University of Vigo, Spain; Fernando Pérez-González, University of Vigo / University of New Mexico, Spain</i>	



<b>TA-L6.6: IMPACT OF CONTRAST MODIFICATION ON HUMAN FEELING: AN OBJECTIVE AND SUBJECTIVE ASSESSMENT</b>	<b>1757</b>
<i>Pamela Zontone, University of Trento, Italy; Marco Carli, University of Roma Tre, Italy; Giulia Boato, Francesco G. B. De Natale, University of Trento, Italy</i>	
<b>TA-L6.7: RELIABLE HISTOGRAM FEATURES FOR DETECTING LSB MATCHING</b>	<b>1761</b>
<i>Kaiwei Cai, Xiaolong Li, Institute of Computer Science and Technology, Peking University, China; Tiejong Zeng, Department of Mathematics, Hong Kong Baptist University, Hong Kong SAR of China; Bin Yang, Xiaoqing Lu, Institute of Computer Science and Technology, Peking University, China</i>	
<b>TA-L6.8: SVD BASED IMAGE MANIPULATION DETECTION</b>	<b>1765</b>
<i>Gokhan Gul, Interdisciplinary Centre for Security, Reliability and Trust, Germany; Ismail Avcibas, Baskent University, Turkey; Fatih Kurugollu, Queen's University, United Kingdom</i>	
<b>TA-L7: STEREO AND MULTIVIEW PROCESSING</b>	
<b>TA-L7.1: DEPTH ESTIMATION OF LIGHT FIELD DATA FROM PINHOLE-MASKED DSLR CAMERAS</b>	<b>1769</b>
<i>Chih-Chieh Chen, Shih-Chieh Fan Chiang, Xiao-Xuan Huang, Ming-Shing Su, Yi-Chang Lu, National Taiwan University, Taiwan</i>	
<b>TA-L7.2: A STEREO MATCHING DATA COST ROBUST TO BLURRING</b>	<b>1773</b>
<i>Colin Doutre, Panos Nasiopoulos, University of British Columbia, Canada</i>	
<b>TA-L7.3: OCCLUSION HANDLING BASED ON SUPPORT AND DECISION</b>	<b>1777</b>
<i>Dongbo Min, Sehoon Yea, Anthony Vetro, Mitsubishi Electric Research Laboratories, United States</i>	
<b>TA-L7.4: IMPROVING SUBPIXEL STEREO MATCHING WITH SEGMENT EVOLUTION</b>	<b>1781</b>
<i>Yao-Jen Chang, Cornell University, United States; Hung-Hsun Liu, Chunghwa Telecom Co., Ltd., Taiwan; Tsuhan Chen, Cornell University, United States</i>	
<b>TA-L7.5: PROBABILISTIC RELIABILITY BASED VIEW SYNTHESIS FOR FTV</b>	<b>1785</b>
<i>Lu Yang, Tomohiro Yendo, Mehrdad Panahpour Tehrani, Nagoya University, Japan; Toshiaki Fujii, Tokyo Institute of Technology, Japan; Masayuki Tanimoto, Nagoya University, Japan</i>	
<b>TA-L7.6: MVMP: MULTI-VIEW MATCHING PURSUIT WITH GEOMETRY CONSTRAINTS</b>	<b>1789</b>
<i>Ivana Tosic, University of California, Berkeley, United States; Antonio Ortega, University of Southern California, United States; Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>TA-L7.7: SUPER-RESOLUTION FOR MULTIVIEW IMAGES USING DEPTH INFORMATION</b>	<b>1793</b>
<i>Diogo Garcia, Camilo Dórea, Ricardo L. de Queiroz, Universidade de Brasilia, Brazil</i>	
<b>TA-L7.8: FRAME-RATE CONVERSION FOR MULTIVIEW VIDEO EXPLOITING 3D MOTION MODELS</b>	<b>1797</b>
<i>O. Serdar Gedik, A. Aydin Alatan, Middle East Technical University, Turkey</i>	

## **TA-L8: RENDERING I**

### **TA-L8.1: VIDEO RETARGETING WITH NONLINEAR SPATIAL-TEMPORAL SALIENCY .....1801 FUSION**

*Taoran Lu, Zheng Yuan, University of Florida, United States; Yu Huang, Huawei Research, United States; Dapeng Wu, University of Florida, United States; Heather Yu, Huawei Research, United States*

### **TA-L8.2: SEMANTICS-DRIVEN PORTRAIT CARTOON STYLIZATION .....1805**

*Ming Yang, Shu Lin, Ping Luo, Liang Lin, Hongyang Chao, Sun Yat-sen University, China*

### **TA-L8.3: TEMPORALLY CONSISTENT HANDLING OF DISOCCLUSIONS WITH .....1809 TEXTURE SYNTHESIS FOR DEPTH-IMAGE-BASED RENDERING**

*Martin Köppel, Patrick Ndjiki-Nya, Dimitar Doshkov, Haricharan Lakshman, Philipp Merkle, Karsten Müller, Thomas Wiegand, FhG Heinrich-Hertz-Institut, Germany*

### **TA-L8.4: VIRTUAL JEWEL RENDERING FOR AUGMENTED REALITY .....1813 ENVIRONMENTS**

*Peter Eisert, Fraunhofer HHI / Humboldt University, Germany; Christian Jacquemin, LIMSI CNRS / University Paris 11, France; Anna Hilsmann, Fraunhofer HHI, Germany*

### **TA-L8.5: A PROBABILISTIC APPROACH TO REALISTIC FACE SYNTHESIS .....1817**

*Hyunjung Shim, Inwoo Ha, Taehyun Rhee, James Do Kyoon Kim, Changyeong Kim, Samsung Advanced Institute of Technology, Republic of Korea*

### **TA-L8.6: REALISTIC 3D FACE MODELING USING FEATURE-PRESERVING SURFACE .....1821 REGISTRATION**

*Yong Sun Kim, Hwasup Lim, Byongmin Kang, Ouk Choi, Keechang Lee, James Do Kyoon Kim, Changyeong Kim, Samsung Advanced Institute of Technology, Republic of Korea*

### **TA-L8.7: COLOR TRANSFER VIA LOCAL BINARY PATTERNS MAPPING.....1825**

*Chen Yao, Xiaokang Yang, Li Chen, Institute of Image Communication and Information Processing, Shanghai Jiao Tong University, China; Jian Wang, IBM Research China, China*

### **TA-L8.8: AUTOMATIC FRONTAL VIEW FACE IMAGE SYNTHESIS .....1829**

*Yuelong Li, Jufu Feng, Peking University, China*

## **TA-L9: OBJECT RECOGNITION AND CLASSIFICATION I**

### **TA-L9.1: A CLASSIFIER BASED APPROACH FOR THE DETECTION OF POTENTIAL .....1833 THREATS IN CT BASED BAGGAGE SCREENING**

*Najla Megherbi, Greg Filtton, Toby Breckon, Cranfield university, United Kingdom*

### **TA-L9.2: EXTENDED HIERARCHICAL GAUSSIANIZATION FOR SCENE .....1837 CLASSIFICATION**

*Minqiang Xu, Xi Zhou, Zhen Li, University of Illinois at Urbana-Champaign, United States; Beiqian Dai, University of Science and Technology of China, China; Thomas S. Huang, University of Illinois at Urbana-Champaign, United States*

### **TA-L9.3: HISTOGRAM OF CONFIDENCES FOR PERSON DETECTION .....1841**

*Lee Middleton, James Snowdon, IT Innovation Centre, United Kingdom*

<b>TA-L9.4: THE 2D ORIENTATION IS UNIQUE THROUGH PRINCIPAL MOMENTS ANALYSIS</b>	<b>1845</b>
<i>João F. P. Crespo, Pedro M. Q. Aguiar, Instituto Superior Técnico, Portugal</i>	
<b>TA-L9.5: FAST L1-MINIMIZATION ALGORITHMS AND AN APPLICATION IN ROBUST FACE RECOGNITION: A REVIEW</b>	<b>1849</b>
<i>Allen Yang, University of California, Berkeley, United States; Arvind Ganesh, University of Illinois, United States; Shankar Sastry, University of California, Berkeley, United States; Yi Ma, University of Illinois, United States</i>	
<b>TA-L9.6: AN IMAGE ANALYSIS SYSTEM FOR DIETARY ASSESSMENT AND EVALUATION</b>	<b>1853</b>
<i>Fengqing Zhu, Marc Bosch, Carol J. Boushey, Edward J. Delp, Purdue University, United States</i>	
<b>TA-L9.7: LEARNING IMAGE SIMILARITIES VIA PROBABILISTIC FEATURE MATCHING</b>	<b>1857</b>
<i>Ziming Zhang, Ze-Nian Li, Mark S. Drew, Simon Fraser University, Canada</i>	
<b>TA-L9.8: OPTIMAL LOCALITY PRESERVING PROJECTION</b>	<b>1861</b>
<i>Haitao Zhao, Shanghai Jiao Tong University, China; Shaoyuan Sun, Donghua University, China</i>	
<b>TA-L10: FACE RECOGNITION AND UNDERSTANDING I</b>	
<b>TA-L10.1: TOWARDS COMPUTATIONAL MODELS OF KINSHIP VERIFICATION</b>	<b>1577</b>
<i>Ruogu Fang, Kevin D. Tang, Noah Snavely, Tsuhan Chen, Cornell University, United States</i>	
<b>TA-L10.2: EVALUATION OF STATE-OF-THE-ART ALGORITHMS FOR REMOTE FACE RECOGNITION</b>	<b>1581</b>
<i>Jie Ni, Rama Chellappa, University of Maryland, United States</i>	
<b>TA-L10.3: AN IMPROVED LOCALLY LINEAR EMBEDDING FOR SPARSE DATA SETS</b>	<b>1585</b>
<i>Ying Wen, Zhenyu Zhou, Xunheng Wang, Yudong Zhang, Columbia University, United States; Renhua Wu, Shantou University Medical College, China</i>	
<b>TA-L10.4: HUMAN AGE ESTIMATION USING ENHANCED BIO-INSPIRED FEATURES (EBIF)</b>	<b>1589</b>
<i>Mohamed Eldib, Motaz El-Saban, Cairo University, Egypt</i>	
<b>TA-L10.5: COST-SENSITIVE SUBSPACE LEARNING FOR HUMAN AGE ESTIMATION</b>	<b>1593</b>
<i>Jiwen Lu, Yap-Peng Tan, Nanyang Technological University, Singapore</i>	
<b>TA-L10.6: FACE: FACE ANALYSIS FOR COMMERCIAL ENTITIES</b>	<b>1597</b>
<i>Maria De Marsico, Sapienza Università di Roma, Italy; Michele Nappi, Università di Salerno, Italy</i>	
<b>TA-L10.7: METAFACE LEARNING FOR SPARSE REPRESENTATION BASED FACE RECOGNITION</b>	<b>1601</b>
<i>Meng Yang, Lei Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Jian Yang, Nanjing University of Science and Technology, China; David Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TA-L10.8: FACIAL EXPRESSION RECOGNITION USING LOCAL DIRECTIONAL PATTERN (LDP)</b>	<b>1605</b>
<i>Tasked Jabid, Md. Hasanul Kabir, Oksam Chae, Kyung Hee University, Republic of Korea</i>	

## **TA-PA: STATISTICAL-MODEL BASED METHODS II**

### **TA-PA.2: NONPARAMETRIC IMAGE INTERPOLATION AND DICTIONARY LEARNING .....1869 USING SPATIALLY-DEPENDENT DIRICHLET AND BETA PROCESS PRIORS**

*John Paisley, Mingyuan Zhou, Duke University, United States; Guillermo Sapiro, University of Minnesota, United States; Lawrence Carin, Duke University, United States*

### **TA-PA.4: MULTIVARIATE STATISTICAL MODELING OF IMAGES IN SPARSE .....1877 MULTISCALE TRANSFORMS DOMAIN**

*Larbi Boubchir, Amine Nait-Ali, Eric Petit, Laboratoire Images, Signaux et Systèmes Intelligents (LiSSi, E.A. 3956), France*

### **TA-PA.5: STABILIZED THRESHOLDING WITH GENERALIZED SURE FOR IMAGE .....1881 DENOISING**

*Hsin-Cheng Huang, Academia Sinica, Taiwan; Thomas C. M. Lee, University of California, Davis, United States*

### **TA-PA.6: NON-LINEAR OPTIMIZATION FOR ROBUST ESTIMATION OF VANISHING .....1885 POINTS**

*Marcos Nieto, Luis Salgado, Universidad Politécnica de Madrid, Spain*

### **TA-PA.7: A FAST MULTILINEAR ICA ALGORITHM.....1889**

*Raghu Raj, U.S. Naval Research Laboratory, United States; Alan Bovik, University of Texas at Austin, United States*

### **TA-PA.8: GRAPH MATCHING BASED ON MEAN FIELD THEORY.....1893**

*Shijun Wang, U.S. National Institutes of Health, United States; Nicholas Petrick, U.S. Food and Drug Administration, United States; Robert Van Uitert, Senthil Periaswamy, iCAD Inc., United States; Ronald Summers, U.S. National Institutes of Health, United States*

### **TA-PA.9: LEARNING CELL GEOMETRY MODELS FOR CELL IMAGE SIMULATION: .....1897 AN UNBIASED APPROACH**

*Wei Xiong, Institute for Infocomm Research, A\*STAR, Singapore; Yanbo Wang, Sim Heng Ong, National University of Singapore, Singapore; Joo Hwee Lim, Lijun Jiang, Institute for Infocomm Research, Singapore*

### **TA-PA.10: PLANE RECTIFICATION THROUGH ROBUST VANISHING POINT .....1901 TRACKING USING THE EXPECTATION-MAXIMIZATION ALGORITHM**

*Marcos Nieto, Luis Salgado, Universidad Politécnica de Madrid, Spain*

### **TA-PA.11: AN INTERACTIVE METHOD FOR CURVE EXTRACTION .....1905**

*Ge Guo, Luoqi Liu, Zhebin Zhang, Institute of Computing Technology, Chinese Academy of Sciences, China; Yizhou Wang, Wen Gao, Peking University, China*

## **TA-PB: LINEAR AND NONLINEAR IMAGE FILTERING I**

### **TA-PB.1: GENERALIZED YUV INTERPOLATION OF CFA IMAGES.....1909**

*Meng Wang, Thierry Blu, Chinese University of Hong Kong, Hong Kong SAR of China*

### **TA-PB.2: IMAGE ANALYSIS WITH REGULARIZED LAPLACIAN EIGENMAPS.....1913**

*Frank Tompkins, Patrick J. Wolfe, Harvard University, United States*

### **TA-PB.3: A SPLIT BREGMAN METHOD FOR NON-NEGATIVE SPARSITY PENALIZED .....1917 LEAST SQUARES WITH APPLICATIONS TO HYPERSPECTRAL DEMIXING.**

*Arthur Szlam, New York University, United States; Zhaohui Guo, Stanley Osher, University of California, Los angeles, United States*

### **TA-PB.4: COLOR IMAGE DENOISING USING E-NEIGHBORHOOD GAUSSIAN .....1921 MODEL**

*Takayuki Hara, Haike Guan, Ricoh Company, Ltd., Japan*

### **TA-PB.5: AN ALTERNATIVE GABOR FILTERING SCHEME.....1925**

*Adams Wai Kin Kong, Nanyang Technological University, Singapore*

### **TA-PB.6: FROM PATCHES TO PIXELS IN NON-LOCAL METHODS: .....1929 WEIGHTED-AVERAGE REPROJECTION**

*Joseph Salmon, Yann Strozeczi, Université Paris 7- Diderot, France*

### **TA-PB.7: REGULARIZATION OF TRANSPORTATION MAPS FOR COLOR AND .....1933 CONTRAST TRANSFER**

*Julien Rabin, CNRS and Université Paris-Dauphine, France; Julie Delon, CNRS and Télécom Paristech, France; Yann Gousseau, Télécom ParisTech, France*

### **TA-PB.8: CONTOUR DETECTION BASED ON SUSAN PRINCIPLE AND SURROUND .....1937 SUPPRESSION**

*Zhiguo Qu, Ping Wang, Yinghui Gao, Peng Wang, Zhenkang Shen, National University of Defense Technology, China*

### **TA-PB.9: WHY AND HOW TO DESIGN A GENERIC AND EFFICIENT IMAGE .....1941 PROCESSING FRAMEWORK: THE CASE OF THE MILENA LIBRARY**

*Roland Levillain, Thierry Géraud, EPITA, France; Laurent Najman, Université Paris-Est, France*

### **TA-PB.10: AN EFFICIENT LEARNED DICTIONARY AND ITS APPLICATION TO .....1945 NON-LOCAL DENOISING**

*Shutao Li, Leyuan Fang, Hunan University, China*

### **TA-PB.11: SEPARATION OF OVERLAPPED COLOR PLANES FOR DOCUMENT .....1949 IMAGES**

*Danian Zheng, Jun Sun, Satoshi Naoi, Fujitsu R&D Co. Ltd., China; Misako Suwa, Hiroaki Takebe, Yoshinobu Hotta, Fujitsu Labs Ltd., Japan*

### **TA-PB.12: METRIC TENSOR FOR MULTICOMPONENT EDGE DETECTION.....1953**

*Sylvain Rousseau, XLIM, CNRS, DGA, France; David Helbert, Philippe Carré, XLIM, CNRS, University of Poitiers, France; Jacques Blanc-Talon, DGA/MRIS, France*

<b>TA-PB.13: GRID ARTIFACT REDUCTION IN RADIOGRAPHY WITH</b>	<b>1957</b>
<b>ARCTAN(1/2)-DEGREE ROTATED GRID</b>	
<i>Dong Sik Kim, Hankuk University of Foreign Studies, Republic of Korea; Sanggyun Lee, DRTECH Co., Republic of Korea</i>	
<b>TA-PB.14: ADAPTIVE TRI-DIRECTION EDGE DETECTION OPERATORS BASED ON</b>	<b>1961</b>
<b>THE SPIRAL ARCHITECTURE</b>	
<i>Sonya Coleman, Bryan Gardiner, Bryan Scotney, University of Ulster, United Kingdom</i>	
<b>TA-PB.15: IMAGE DECOMPOSITION USING DECONVOLUTION</b>	<b>1965</b>
<i>Sunghyun Cho, Hyunjun Lee, Seungyong Lee, Pohang University of Science and Technology, Republic of Korea</i>	
<b>TA-PC: INTERPOLATION AND SUPERRESOLUTION II</b>	
<b>TA-PC.1: OPTICAL FLOW ESTIMATION WITH P-HARMONIC REGULARIZATION</b>	<b>1969</b>
<i>Jiading Gai, Robert L. Stevenson, University of Notre Dame, United States</i>	
<b>TA-PC.2: LEARNING SPARSE IMAGE REPRESENTATION WITH SUPPORT VECTOR</b>	<b>1973</b>
<b>REGRESSION FOR SINGLE-IMAGE SUPER-RESOLUTION</b>	
<i>Ming-Chun Yang, National Taiwan University, Taiwan; Chao-Tsung Chu, Yu-Chiang Frank Wang, Academia Sinica, Taiwan</i>	
<b>TA-PC.3: PANSHARPENING WITH A DECISION FUSION BASED ON THE LOCAL SIZE</b>	<b>1977</b>
<b>INFORMATION</b>	
<i>Bin Luo, Muhammad Murtaza Khan, Thibaut Bienvenu, Jocelyn Chanussot, GIPSA-Lab, Grenoble Institute of Technology, France</i>	
<b>TA-PC.4: FILTERBANK-BASED UNIVERSAL DEMOSAICKING</b>	<b>1981</b>
<i>Jing Gu, Patrick J. Wolfe, Harvard University, United States; Keigo Hirakawa, University of Dayton, United States</i>	
<b>TA-PC.5: SUPER-RESOLUTION IMAGE RECONSTRUCTION BASED ON GUIDED</b>	<b>1985</b>
<b>COST FUNCTION</b>	
<i>Ruomei Yan, Yunfeng Zhang, Yunsong Li, Chengke Wu, Xidian University, China</i>	
<b>TA-PC.6: A PRACTICAL ALGORITHM FOR TANNER GRAPH BASED IMAGE</b>	<b>1989</b>
<b>INTERPOLATION</b>	
<i>Ruiqin Xiong, Peking University, China; Wenpeng Ding, Beijing University of Technology, China; Siwei Ma, Wen Gao, Peking University, China</i>	
<b>TA-PC.7: SUPER RESOLUTION IMAGE RECONSTRUCTION USING TOTAL</b>	<b>1993</b>
<b>VARIATION REGULARIZATION AND LEARNING-BASED METHOD</b>	
<i>Akihiro Yoshikawa, Shotaro Suzuki, Tomio Goto, Satoshi Hirano, Masaru Sakurai, Nagoya Institute of Technology, Japan</i>	
<b>TA-PC.8: GENERATION OF HIGH RESOLUTION IMAGE BASED ON ACCUMULATED</b>	<b>1997</b>
<b>FEATURE TRAJECTORY</b>	
<i>Yang-Ho Cho, Kyu-Young Hwang, Ho-Young Lee, Du-Sik Park, Samsung Electronics Co., Ltd., Republic of Korea</i>	
<b>TA-PC.9: DIRECTIONAL IMAGE INTERPOLATION WITH ANOVA METHODOLOGY</b>	<b>2001</b>
<i>Amin Behnad, Konstantinos N. Plataniotis, University of Toronto, Canada; Xiaolin Wu, McMaster University, Canada</i>	



<b>TA-PC.10: EDGE-CONTRAST-GUIDED IMAGE INTERPOLATION USING DIRECTIONAL VARIATION FIELD DIFFUSION</b>	<b>2005</b>
<i>Zhe Wei, Kai-Kuang Ma, Nanyang Technological University, Singapore; Canhui Cai, Huaqiao University, China</i>	
<b>TA-PC.11: DETAIL WARPING BASED VIDEO SUPER-RESOLUTION USING IMAGE GUIDES</b>	<b>2009</b>
<i>Basavaraja SV, Ajit Bopardikar, Sudha Velusamy, Samsung India Software Operations Ltd, India</i>	
<b>TA-PC.12: AN ALIASING DETECTION ALGORITHM BASED ON SUSPICIOUS COLOCALIZATIONS OF FOURIER COEFFICIENTS</b>	<b>2013</b>
<i>Baptiste Coulange, Lionel Moisan, Université Paris Descartes, France</i>	
<b>TA-PC.13: ROBUST LEARNING-BASED SUPER-RESOLUTION</b>	<b>2017</b>
<i>Changhyun Kim, Kyuha Choi, Korea Advanced Institute of Science and Technology, Republic of Korea; Ho-young Lee, Kyu-Young Hwang, Samsung Electronics, Republic of Korea; Jong Beom Ra, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>TA-PC.14: A FACE SUPER-RESOLUTION APPROACH USING SHAPE SEMANTIC MODE REGULARIZATION</b>	<b>2021</b>
<i>Chengdong Lan, Ruimin Hu, Zhen Han, Zhongyuan Wang, Wuhan University, China</i>	
<b>TA-PC.15: A PCA-BASED SUPER-RESOLUTION ALGORITHM FOR SHORT IMAGE SEQUENCES</b>	<b>2025</b>
<i>Carlos Miravet, SENER Ingenieria y Sistemas, S.A., Spain; Francisco B. Rodríguez, Universidad Autónoma de Madrid, Spain</i>	
<b>TA-PC.16: SUPER-RESOLUTION USING MULTIPLE QUANTIZED IMAGES</b>	<b>2029</b>
<i>Ayca Ozcelikkale, Bilkent University, Turkey; Gozde B. Akar, Middle East Technical University, Turkey; Haldun M. Ozaktas, Bilkent University, Turkey</i>	
<b>TA-PD: MOTION COMPENSATED CODING II</b>	
<b>TA-PD.2: ACCELERATED VIDEO ENCODING USING RENDER CONTEXT INFORMATION</b>	<b>2033</b>
<i>Philipp Fechteler, Peter Eisert, Fraunhofer HHI, Germany</i>	
<b>TA-PD.3: COMPARISON BETWEEN H.264/AVC AND MOTION JPEG2000 FOR SUPER-HIGH DEFINITION VIDEO CODING</b>	<b>2037</b>
<i>Chenwei Deng, Weisi Lin, Bu-sung Lee, Chiew Tong Lau, Manoranjan Paul, Nanyang Technological University, Singapore</i>	
<b>TA-PD.4: A LOW COMPLEXITY ARCHITECTURE FOR VIDEO CODING WITH OVERLAPPED BLOCK MOTION COMPENSATION</b>	<b>2041</b>
<i>Yiting Liao, University of California, Santa Barbara, United States; Athanasios Leontaris, Alexis M. Tourapis, Dolby Laboratories, Inc., United States</i>	
<b>TA-PD.5: EXTENDED DYNAMIC TEXTURE PREDICTION FOR H.264/AVC INTER CODING</b>	<b>2045</b>
<i>Aleksandar Stojanovic, Philipp Kosse, RWTH Aachen University, Germany</i>	
<b>TA-PD.6: MESH-BASED DECODER-SIDE MOTION ESTIMATION</b>	<b>2049</b>
<i>Marco Munderloh, Sven Klomp, Jörn Ostermann, Leibniz Universität Hannover, Germany</i>	

<b>TA-PD.7: LOW-COMPLEXITY SCHEME FOR ADAPTIVE INTERPOLATION FILTER</b> .....	<b>2053</b>
<b>BASED ON AMPLITUDE CHARACTERISTIC ANALYSIS</b>	
<i>Tomonobu Yoshino, Sei Naito, Shigeyuki Sakazawa, Shuichi Matsumoto, KDDI R&amp;D Laboratories, Japan</i>	
<b>TA-PD.8: ADAPTIVE MOTION VECTOR RESOLUTION WITH IMPLICIT SIGNALING</b> .....	<b>2057</b>
<i>Liwei Guo, Peng Yin, Yunfei Zheng, Xiaoan Lu, Qian Xu, Joel Sole, Technicolor, United States</i>	
<b>TA-PD.9: AN ADAPTIVE LOGLUV TRANSFORM FOR HIGH DYNAMIC RANGE VIDEO</b> .....	<b>2061</b>
<b>COMPRESSION</b>	
<i>Ajit Motra, Herbert Thoma, Fraunhofer IIS, Germany</i>	
<b>TA-PD.10: PATTERN BASED VIDEO CODING WITH UNCOVERED BACKGROUND</b> .....	<b>2065</b>
<i>Manoranjan Paul, Weisi Lin, Chiew Tong Lau, Bu-sung Lee, Nanyang Technological University, Singapore</i>	
<b>TA-PD.11: H.264 VIDEO CODING WITH MULTIPLE WEIGHTED PREDICTION</b> .....	<b>2069</b>
<b>MODELS</b>	
<i>Sik-Ho Tsang, Yui-Lam Chan, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TA-PD.12: A LOOP FILTER WITH SEGMENTATION MODE IN VIDEO CODING</b> .....	<b>2073</b>
<i>Ilsoon Lim, Du-Sik Park, Changyeong Kim, Samsung Electronics, Republic of Korea</i>	
<b>TA-PD.13: AN IMPROVED RATE-DISTORTION MODEL FOR MULTIVIEW VIDEO</b> .....	<b>2077</b>
<b>CODING</b>	
<i>Xiaoyu Xiu, Jie Liang, Simon Fraser University, Canada</i>	
<b>TA-PD.14: A SPLIT AND MERGE ALGORITHM FOR INTER-MODE DECISION IN</b> .....	<b>2081</b>
<b>EXTENDED MACROBLOCKS</b>	
<i>Jiyuan Lu, Sun Yat-sen University / Guangdong University of Finance, China; Peizhao Zhang, Hongyang Chao, Sun Yat-sen University, China</i>	
 <b>TA-PE: IMAGE AND VIDEO PROCESSING FOR SECURITY II</b>	
<b>TA-PE.1: AN IMPROVED DC RECOVERY METHOD FROM AC COEFFICIENTS OF</b> .....	<b>2085</b>
<b>DCT-TRANSFORMED IMAGES</b>	
<i>Shujun Li, Junaid Jameel Ahmad, Dietmar Saupe, University of Konstanz, Germany; C.-C. Jay Kuo, University of Southern California, United States</i>	
<b>TA-PE.2: RESTRICTED H.264/AVC VIDEO CODING FOR PRIVACY REGION</b> .....	<b>2089</b>
<b>SCRAMBLING</b>	
<i>Lingling Tong, Feng Dai, Yongdong Zhang, Jintao Li, Institute of Computing Technology, Chinese Academy of Sciences, China</i>	
<b>TA-PE.3: SECURITY ANALYSIS FOR PRIVACY PRESERVING SEARCH OF</b> .....	<b>2093</b>
<b>MULTIMEDIA</b>	
<i>Wenjun Lu, Avinash Varna, Min Wu, University of Maryland, College Park, United States</i>	
<b>TA-PE.4: FORENSIC ESTIMATION OF GAMMA CORRECTION IN DIGITAL IMAGES</b> .....	<b>2097</b>
<i>Gang Cao, Yao Zhao, Rongrong Ni, Beijing Jiaotong University, China</i>	
<b>TA-PE.5: IMAGE TAMPERING DETECTION BASED ON STATIONARY DISTRIBUTION</b> .....	<b>2101</b>
<b>OF MARKOV CHAIN</b>	
<i>Wei Wang, Jing Dong, Tieniu Tan, National Laboratory of Pattern Recognition, China</i>	

<b>TA-PE.6: SPREAD SPECTRUM-BASED WATERMARKING FOR TARDOS CODE-BASED FINGERPRINTING OF H.264/AVC VIDEO</b>	<b>.....2105</b>
<i>Zafar Shahid, Marc Chaumont, William Puech, LIRMM Labs, France</i>	
<b>TA-PE.7: UNDETECTABLE IMAGE TAMPERING THROUGH JPEG COMPRESSION ANTI-FORENSICS</b>	<b>.....2109</b>
<i>Matthew C. Stamm, Steven K. Tjoa, W. Sabrina Lin, K. J. Ray Liu, University of Maryland, College Park, United States</i>	
<b>TA-PE.8: ROTATION ROBUST DETECTION OF COPY-MOVE FORGERY</b>	<b>.....2113</b>
<i>Weihai Li, Nenghai Yu, University of Science and Technology of China, China</i>	
<b>TA-PE.9: DETECTING MULTIPLE COPIES IN TAMPERED IMAGES</b>	<b>.....2117</b>
<i>Edoardo Ardizzone, Alessandro Bruno, Giuseppe Mazzola, Università degli Studi di Palermo, Italy</i>	
<b>TA-PE.10: SCANNER IDENTIFICATION USING SPECTRAL NOISE IN THE FREQUENCY DOMAIN</b>	<b>.....2121</b>
<i>Chang-Hee Choi, Min-Jeong Lee, Heung-Kyu Lee, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>TA-PE.11: IDENTIFYING COLOR IMAGE ORIGIN USING CURVELET TRANSFORM</b>	<b>.....2125</b>
<i>Chi Zhang, Hongbin Zhang, Beijing University of Technology, China</i>	
<b>TA-PE.12: FAST AND EFFICIENT VIDEO SIGNATURE GENERATION AND MATCHING FOR ONLINE VIDEO SHARING</b>	<b>.....2129</b>
<i>Lekha Chaisorn, Institute for Infocomm Research, A*STAR, Singapore; Janya Sainui, Prince of Songkla University, Thailand; Corey Manders, Institute for Infocomm Research, A*STAR, Singapore</i>	
<b>TA-PF: SCANNED DOCUMENT ANALYSIS, PROCESSING, AND CODING</b>	
<b>TA-PF.1: VISUAL APPEARANCE BASED DOCUMENT IMAGE CLASSIFICATION</b>	<b>.....2133</b>
<i>Sergey Usilin, Moscow Institute of Physics and Technology, Russian Federation; Dmitry Nikolaev, Vassili Postnikov, Russian Academy of Sciences, Russian Federation; Gerald Schaefer, Loughborough University, United Kingdom</i>	
<b>TA-PF.2: PAPER WIDGETS: VISUALLY AESTHETIC “SMARTS” FOR DOCUMENT IMAGES</b>	<b>.....2137</b>
<i>Yogesh Sankarasubramaniam, Krusheel Munnangi, Serene Banerjee, Anjaneyulu Kuchibhotla, Hewlett-Packard Labs India, India</i>	
<b>TA-PF.3: A NOVEL FORM DETECTION AND REMOVAL SCHEME FOR DOCUMENT IMAGES</b>	<b>.....2141</b>
<i>Tien-Ying Kuo, Yi-Chung Lo, National Taipei University of Technology, Taiwan</i>	
<b>TA-PF.4: DISCRIMINATIVE LEARNING FOR SCRIPT RECOGNITION</b>	<b>.....2145</b>
<i>Sheikh Faisal Rashid, Image Understanding and Pattern Recognition, Germany; Faisal Shafait, German Research Center for Artificial Intelligence, Germany; Thomas M. Breuel, Image Understanding and Pattern Recognition, Germany</i>	
<b>TA-PF.5: LEARNING ALGORITHMS OF FORM STRUCTURE FOR BAYESIAN NETWORKS</b>	<b>.....2149</b>
<i>Emilie Philippot, Yolande Belaïd, Abdel Belaïd, Nancy2 - Loria, France</i>	

<b>TA-PF.6: GRAPHICAL SYMBOL RETRIEVAL USING A BRANCH AND BOUND ALGORITHM</b>	<b>2153</b>
<i>Nibal Nayef, Thomas M. Breuel, Technical University of Kaiserslautern, Germany</i>	
<b>TA-PF.7: IMAGE CLASSIFICATION BASED ON SEGMENTATION-FREE OBJECT RECOGNITION</b>	<b>2157</b>
<i>Jun Ma, Long Zheng, Yuichi Yaguchi, Mianxiong Dong, Ryuichi Oka, University of Aizu, Japan</i>	
<b>TA-PF.8: PERFORMANCE EVALUATION OF CURLED TEXTLINE SEGMENTATION ALGORITHMS ON CBDAR 2007 DEWARPING CONTEST DATASET</b>	<b>2161</b>
<i>Syed Saqib Bukhari, Technical University of Kaiserslautern, Germany; Faisal Shafait, German Research Center for Artificial Intelligence (DFKI), Germany; Thomas M. Breuel, Technical University of Kaiserslautern, Germany</i>	
<b>TA-PF.9: HIGH QUALITY SCANNED BOOK COMPRESSION USING PATTERN MATCHING</b>	<b>2165</b>
<i>Alexandre Zaghetto, Ricardo L. de Queiroz, Universidade de Brasília, Brazil</i>	
<b>TA-PF.10: JPEG COMPRESSION OF MONOCHROME 2D-BARCODE IMAGES USING DCT COEFFICIENT DISTRIBUTIONS</b>	<b>2169</b>
<i>Keng T. Tan, Hong Kong Baptist University, Hong Kong SAR of China; Douglas Chai, Edith Cowan University, Australia</i>	
<b>TA-PF.11: A MEDIAL AXIS BASED THINNING STRATEGY AND STRUCTURAL FEATURE EXTRACTION OF CHARACTER IMAGES</b>	<b>2173</b>
<i>Soumen Bag, Gaurav Harit, Indian Institute of Technology Kharagpur, India</i>	
<b>TA-PF.12: FONT RETRIEVAL ON A LARGE SCALE: AN EXPERIMENTAL STUDY</b>	<b>2177</b>
<i>Saurabh Kataria, Pennsylvania State University, United States; Luca Marchesotti, Florent Perronnin, Xerox Research Centre Europe, France</i>	
<b>TA-PF.13: REAL-TIME EMBEDDED SKEW DETECTION AND FRAME REMOVAL</b>	<b>2181</b>
<i>Serene Banerjee, Hewlett-Packard Labs India, India; Shaffi Noushath, College of Applied Sciences, Oman; Pulkit Parikh, Kritikal Securescan, India; Sitaram Ramachandrula, Anjaneyulu Kuchibhotla, Avinash Sharma, Hewlett-Packard Labs India, India</i>	
<b>TA-PG: SEGMENTATION II</b>	
<b>TA-PG.1: RED-EYES REMOVAL THROUGH CLUSTER BASED LINEAR DISCRIMINANT ANALYSIS</b>	<b>2185</b>
<i>Sebastiano Battiato, Giovanni Maria Farinella, University of Catania, Italy; Mirko Guarnera, Giuseppe Messina, Daniele Ravì, STMicroelectronics, Italy</i>	
<b>TA-PG.2: AN EVOLVING MOG FOR ONLINE IMAGE SEQUENCE SEGMENTATION</b>	<b>2189</b>
<i>Cyril Charron, Yulia Hicks, Cardiff University, United Kingdom</i>	
<b>TA-PG.3: 3D VERTEBRAE SEGMENTATION USING GRAPH CUTS WITH SHAPE PRIOR CONSTRAINTS</b>	<b>2193</b>
<i>Melih Aslan, Asem Ali, Dongqing Chen, University of Louisville, United States; Ben Arnold, Image Analysis, Inc, United States; Aly Farag, University of Louisville, United States; Ping Xiang, Image Analysis, Inc, United States</i>	

<b>TA-PG.4: COMBINING DARK CHANNEL PRIOR AND COLOR CUES FOR ROAD FOLLOWING IN OUTDOOR ENVIRONMENTS</b>	<b>2197</b>
<i>Wenhui Zhou, HangZhou Dianzi University, China; Lili Lin, Zhejiang Gongshang University, China; Xuehui Wei, Bin Lou, HangZhou Dianzi University, China</i>	
<b>TA-PG.5: IMPROVED ROAD CRACK DETECTION BASED ON ONE-CLASS PARZEN DENSITY ESTIMATION AND ENTROPY REDUCTION</b>	<b>2201</b>
<i>Henrique Oliveira, Instituto de Telecomunicações - Instituto Superior Técnico, Portugal; José Jasnao Caeiro, Grupo de Sistemas de Processamento de Sinal – SIPS/INESC-ID, Portugal; Paulo Lobato Correia, Instituto de Telecomunicações - Instituto Superior Técnico, Portugal</i>	
<b>TA-PG.6: COLOR- AND TEXTURE-BASED SALIENT MAP HIERARCHY</b>	<b>2205</b>
<i>Stéphane Paris, Paul Verlaine University, France</i>	
<b>TA-PG.7: STRUCTURE PRESERVING SEMANTIC COHERENT OBJECT SEGMENTATION</b>	<b>2209</b>
<i>Xiaoqian Jiang, Qi Wu, Peng Tao, Latanya Sweeney, Carnegie Mellon University, United States</i>	
<b>TA-PG.8: DETECTION OF THE INTIMA AND MEDIA WALLS OF THE CAROTID ARTERY WITH GEODESIC ACTIVE CONTOURS</b>	<b>2213</b>
<i>M. Consuelo Bastida-Jumilla, Juan Morales-Sánchez, Rafael Verdú-Monedero, Jorge Larrey-Ruíz, José Luis Sancho-Gómez, Universidad Politécnica de Cartagena, Spain</i>	
<b>TA-PG.9: TRANSFORMED DOMAIN GMM FOREGROUND SEGMENTATION FOR MOBILE VIDEO CAMERA</b>	<b>2217</b>
<i>Yuki Hishinuma, Tomoyuki Suzuki, Kazuki Nakagami, Takao Nishitani, Tokyo Metropolitan University, Japan</i>	
<b>TA-PG.10: ACTIVE IMAGE: A SHAPE AND TOPOLOGY PRESERVING SEGMENTATION METHOD USING B-SPLINE FREE FORM DEFORMATIONS</b>	<b>2221</b>
<i>Chao Li, Ying Sun, National University of Singapore, Singapore</i>	
<b>TA-PG.11: A DYNAMIC THRESHOLD APPROACH FOR SKIN SEGMENTATION IN COLOR IMAGES</b>	<b>2225</b>
<i>Pratheepan Yogarajah, Joan Condell, Kevin Curran, Abbas Cheddad, Paul Mc Kevitt, University of Ulster, United Kingdom</i>	
<b>TA-PG.12: STATISTICALLY CONSISTENT IMAGE SEGMENTATION</b>	<b>2229</b>
<i>Alexander Aue, Thomas C. M. Lee, University of California, Davis, United States</i>	
<b>TA-PG.13: NATURAL IMAGE MATTING FOR MULTIPLE WIDE-BASELINE VIEWS</b>	<b>2233</b>
<i>Muhammad Sarim, Adrian Hilton, Jean-Yves Guillemaut, Takeshi Takai, Hansung Kim, University of Surrey, United Kingdom</i>	
<b>TA-PG.14: REGION MERGING PARAMETER DEPENDENCY AS INFORMATION DIVERSITY TO CREATE SPARSE HIERARCHIES OF PARTITIONS</b>	<b>2237</b>
<i>Felipe Calderero, Ferran Marques, Technical University of Catalonia (UPC), Spain</i>	
<b>TA-PG.15: VISUAL TRACKING AND SEGMENTATION USING TIME-OF-FLIGHT SENSOR.</b>	<b>2241</b>
<i>Omar Arif, Wayne Daley, Patricio Vela, Jochen Teizer, John Stewart, Georgia Institute of Technology, United States</i>	



<b>TA-PG.16: MOTION-BASED OBJECT SEGMENTATION USING FRAME ALIGNMENT AND CONSENSUS FILTERING</b>	<b>.....2245</b>
<i>Malavika Bhaskaranand, University of California, Santa Barbara, United States; Sitaram Bhagavathy, Technicolor Corporate Research, United States</i>	
<b>TA-PG.17: ROBUST SEGMENTATION OF LUNG TISSUE IN CHEST CT SCANNING</b>	<b>.....2249</b>
<i>Amal Farag, James Graham, Aly Farag, University of Louisville, United States</i>	
<b>TA-PH: CLASSIFICATION III</b>	
<b>TA-PH.1: A REAL-TIME GRID MAP GENERATION AND OBJECT CLASSIFICATION FOR GROUND-BASED 3D LIDAR DATA USING IMAGE ANALYSIS TECHNIQUES</b>	<b>....2253</b>
<i>Sang-Mook Lee, Jeong Joon Im, Virginia Tech, United States; Bo-Hee Lee, Semyung University, Republic of Korea; Alexander Leonessa, Andrew Kurdila, Virginia Tech, United States</i>	
<b>TA-PH.2: NETWORK OF EVOLUTIONARY BINARY CLASSIFIERS FOR CLASSIFICATION AND RETRIEVAL IN MACROINVERTEBRATE DATABASES</b>	<b>.....2257</b>
<i>Serkan Kiranyaz, Moncef Gabbouj, Jenni Pulkkinen, Tampere University of Technology, Finland; Turker Ince, Izmir University of Technology, Turkey; Kristian Meissner, Finnish Environment Institute, Finland</i>	
<b>TA-PH.3: TEXT LOCALIZATION USING IMAGE CUES AND TEXT LINE INFORMATION</b>	<b>.....2261</b>
<i>Toan Nguyen Dinh, Jonghyun Park, Guesang Lee, Chonnam National University, Republic of Korea</i>	
<b>TA-PH.4: A NOVEL SHAPE FEATURE TO CLASSIFY MICROCALCIFICATIONS</b>	<b>.....2265</b>
<i>Yiming Ma, Peter Tay, Robert Adams, James Zhang, Western Carolina University, United States</i>	
<b>TA-PH.5: FAST SCENE TEXT LOCALIZATION BY LEARNING-BASED FILTERING AND VERIFICATION</b>	<b>.....2269</b>
<i>Yi-Feng Pan, Cheng-Lin Liu, Xinwen Hou, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China</i>	
<b>TA-PH.6: SYMMETRIC IMAGE RECOGNITION BY TCHEBICHEF MOMENT INVARIANTS</b>	<b>.....2273</b>
<i>Hui Zhang, Xiubing Dai, Pei Sun, Southeast University, China; Hongqing Zhu, East China University of Science and Technology, China; Huazhong Shu, Southeast University, China</i>	
<b>TA-PH.7: MULTIPLE FEATURE EXTRACTION FOR EARLY PARKINSON RISK ASSESSMENT BASED ON TRANSCRANIAL SONOGRAPHY IMAGE</b>	<b>.....2277</b>
<i>Lei Chen, Luebeck University, Germany; Günter Seidel, University Hospital Schleswig-Holstein, Germany; Alfred Mertins, University of Luebeck, Germany</i>	
<b>TA-PH.8: IMPROVED HYPERSPECTRAL LAND-COVER ANALYSIS USING RELEVANCE VECTOR MACHINE</b>	<b>.....2281</b>
<i>Fereidoun A. Mianji, Ye Zhang, Harbin Institute of Technology, China</i>	
<b>TA-PH.9: EFFICIENT FEATURE SELECTION FOR POLYP DETECTION</b>	<b>.....2285</b>
<i>Abd-Krim Seghouane, Ju Lynn Ong, National ICT Australia and the Australian National University, Australia</i>	
<b>TA-PH.10: GRAPH-BASED MULTI-SCALE ANALYSIS OF PLATES AND RODS IN HUMAN TRABECULAR BONE</b>	<b>....2289</b>
<i>Jerome Dias, Sebastien Valette, Julien Dardenne, Remy Prost, Francoise Peyrin, Creatis, France</i>	



<b>TA-PH.11: METAL SURFACE CONTROL SYSTEM BASED ON SUCCESSIVE CONTOUR ESTIMATION</b>	<b>.....2293</b>
<i>Julien Marot, Salah Bourennane, Institut Fresnel, France; Klaus Spinnler, Fraunhofer Institut, Germany</i>	
<b>TA-PH.12: HIERARCHICAL DENSITY ESTIMATION FOR IMAGE CLASSIFICATION</b>	<b>.....2297</b>
<i>Zhen Li, Xi Zhou, Thomas S. Huang, University of Illinois at Urbana-Champaign, United States</i>	
<b>TA-PI: SPECTRAL IMAGE PROCESSING AND DATA FUSION IN SURVEILLANCE SYSTEMS</b>	
<b>TA-PI.1: ILLUMINATION LEARNING FROM A SINGLE IMAGE WITH UNKNOWN SHAPE AND TEXTURE</b>	<b>.....2301</b>
<i>Tingbo Hou, Stony Brook University, United States; Sen Wang, Eastman Kodak Company, United States; Hong Qin, Stony Brook University, United States</i>	
<b>TA-PI.2: HIERARCHICAL ALTERNATING LEAST SQUARES ALGORITHM WITH SPARSITY CONSTRAINT FOR HYPERSPECTRAL UNMIXING</b>	<b>.....2305</b>
<i>Sen Jia, Shenzhen University, China; Yuntao Qian, Jiming Li, Zhejiang University, China; Yan Li, Zhong Ming, Shenzhen University, China</i>	
<b>TA-PI.3: REGULARIZED LOGISTIC REGRESSION METHOD FOR CHANGE DETECTION IN MULTISPECTRAL DATA VIA PATHWISE COORDINATE OPTIMIZATION</b>	<b>.....2309</b>
<i>Jiming Li, Yuntao Qian, Zhejiang University, China; Sen Jia, Shenzhen University, China</i>	
<b>TA-PI.4: IMPROVED HUMAN DETECTION AND CLASSIFICATION IN THERMAL IMAGES</b>	<b>.....2313</b>
<i>Weihong Wang, Jian Zhang, Chunhua Shen, National ICT Australia (NICTA), Australia</i>	
<b>TA-PI.5: ESUR: A SYSTEM FOR EVENTS DETECTION IN SURVEILLANCE VIDEO</b>	<b>.....2317</b>
<i>Yaowei Wang, Beijing Institute of Technology, China; Yonghong Tian, Lingyu Duan, Zhipeng Hu, Guochen Jia, Peking University, China</i>	
<b>TA-PI.6: TENSOR ERROR CORRECTION FOR CORRUPTED VALUES IN VISUAL DATA</b>	<b>.....2321</b>
<i>Yin Li, Yue Zhou, Junchi Yan, Jie Yang, Shanghai Jiao Tong University, China; Xiangjian He, University of Technology, Australia</i>	
<b>TA-PI.7: HYPERSPECTRAL IMAGING FOR SKIN RECOGNITION AND BIOMETRICS</b>	<b>.....2325</b>
<i>Cong Phuoc Huynh, Australian National University, Australia; Antonio Robles-Kelly, National ICT Australia (NICTA)/Australian National University, Australia</i>	
<b>TA-PI.8: REGISTRATION OF HYPERSPECTRAL AND TRICHROMATIC IMAGES VIA CROSS CUMULATIVE RESIDUAL ENTROPY MAXIMISATION</b>	<b>.....2329</b>
<i>Mahmudul Hasan, Mark Pickering, University of New South Wales, Australia; Antonio Robles-Kelly, Jun Zhou, National ICT Australia, Australia; Xiuping Jia, University of New South Wales, Australia</i>	

## **TA-PJ: INDEXING AND RETRIEVAL II**

### **TA-PJ.1: FAST SCALABLE RETRIEVAL OF MULTISPECTRAL IMAGES WITH .....2333 KULLBACK-LEIBLER DIVERGENCE**

*Sarra Sakji-Nsibi, Amel Benazza-Benyahia, SUP'COM/URISA, Tunisia*

### **TA-PJ.2: MULTI-LABEL IMAGE ANNOTATION VIA MAXIMUM CONSISTENCY .....2337**

*Hua Wang, University of Texas at Arlington, United States; Jian Hu, Xi'an JiaoTong University City College, China*

### **TA-PJ.3: ADAPTIVE REFERENCE FRAME SELECTION FOR NEAR-DUPLICATE VIDEO .....2341 SHOT DETECTION**

*Shiyang Lu, Zhiyong Wang, University of Sydney, Australia; Meng Wang, Microsoft Research Asia, China; Max Ott, National ICT Australia (NICTA), Australia; Dagan (David) Feng, University of Sydney, Australia*

### **TA-PJ.4: TOWARD A MULTI-FEATURE APPROACH TO CONTENT-BASED COPY .....2345 DETECTION**

*Marzia Corvaglia, Fabrizio Guerrini, Riccardo Leonardi, Pierangelo Migliorati, Eliana Rossi, University of Brescia, Italy*

### **TA-PJ.5: A HIERARCHICAL ALGORITHM FOR IMAGE MULTI-LABELING .....2349**

*Jiwei Hu, Kin-Man Lam, Hong Kong Polytechnic University, Hong Kong SAR of China; Guoping Qiu, Nottingham University, United Kingdom*

### **TA-PJ.6: IMAGE CLUSTERING THROUGH COMMUNITY DETECTION ON HYBRID .....2353 IMAGE SIMILARITY GRAPHS**

*Symeon Papadopoulos, Christos Zigkolis, Centre for Research & Technology Hellas, Greece; Giorgos Toliass, Yannis Kalantidis, Phivos Mylonas, National Technical University, Greece; Yiannis Kompatsiaris, Centre for Research & Technology Hellas, Greece; Athena Vakali, Aristotle University, Greece*

### **TA-PJ.7: NETWORK-DEPENDENT KERNELS FOR IMAGE RANKING.....2357**

*Hichem Sahbi, CNRS/TELECOM ParisTech, France; Jean-Yves Audibert, Ponts ParisTech, France*

### **TA-PJ.8: MULTI-DESCRIPTION OF LOCAL INTEREST POINT FOR .....2361 PARTIAL-DUPLICATE IMAGE RETRIEVAL**

*Liang Li, Shuqiang Jiang, Institute of Computing Technology, Chinese Academy of Sciences, China; Qingming Huang, Graduate University of Chinese Academy of Sciences, China*

### **TA-PJ.9: IMPROVING IMAGE SIMILARITY MEASURES FOR IMAGE BROWSING AND .....2365 RETRIEVAL THROUGH LATENT SPACE LEARNING BETWEEN IMAGES AND LONG TEXTS**

*Yoshitaka Ushiku, Tatsuya Harada, Yasuo Kuniyoshi, University of Tokyo, Japan*

### **TA-PJ.10: PERFORMANCE IMPACT OF ORDINAL RANKING ON CONTENT .....2369 FINGERPRINTING**

*Wei-Hong Chuang, Avinash Varna, Min Wu, University of Maryland, College Park, United States*

### **TA-PJ.11: KEY-FRAME BASED VIDEO FINGERPRINTING BY NMF.....2373**

*Ozgun Cirakman, Bilge Günsel, Neslihan Sengor, Ozan Gursoy, Istanbul Technical University, Turkey*

### **TA-PJ.12: A SCORE BASED INDEXING SCHEME FOR PALMPRINT DATABASES .....2377**

*Ashish Paliwal, Umarani Jayaraman, Phalguni Gupta, Indian Institute of Technology Kanpur, India*

<b>TA-PJ.13: AUTOMATIC ANNOTATION OF GEO-INFORMATION IN PANORAMIC STREET VIEW BY IMAGE RETRIEVAL</b>	<b>.....2381</b>
<i>Ming Chen, Yueting Zhuang, Fei Wu, Zhejiang University, China</i>	
<b>TA-PJ.14: BILINEAR INVARIANT REPRESENTATION FOR VIDEO CLASSIFICATION AND RETRIEVAL</b>	<b>.....2385</b>
<i>Xu Chen, Dan Schonfeld, Ashfaq Khokhar, University of Illinois at Chicago, United States</i>	
<b>TP-L1: STATE OF THE ART IN 3D MEDIA NETWORKING AND BROADCASTING</b>	
<b>TP-L1.1: 3D VIDEO FORMATS AND CODING METHODS.....</b>	<b>2389</b>
<i>Karsten Müller, Philipp Merkle, Gerhard Tech, Thomas Wiegand, Fraunhofer HHI, Germany</i>	
<b>TP-L1.2: FTV (FREE-VIEWPOINT TV).....</b>	<b>2393</b>
<i>Masayuki Tanimoto, Nagoya University, Japan</i>	
<b>TP-L1.3: MOBILE 3D VIDEO BROADCAST.....</b>	<b>2397</b>
<i>M. Oguz Bici, Done Bugdayci, Gozde B. Akar, Middle East Technical University, Turkey; Atanas Gotchev, Tampere University of Technology, Finland</i>	
<b>TP-L1.4: A SCALABLE MULTI-VIEW AUDIOVISUAL ENTERTAINMENT FRAMEWORK WITH CONTENT-AWARE DISTRIBUTION</b>	<b>.....2401</b>
<i>Erhan Ekmekcioglu, Banu Günel, Maheshi Dissanayake, Stewart Worrall, Ahmet Kondoç, University of Surrey, United Kingdom</i>	
<b>TP-L1.5: FRAME COMPATIBLE FORMATS FOR 3D VIDEO DISTRIBUTION.....</b>	<b>2405</b>
<i>Anthony Vetro, Mitsubishi Electric Research Laboratories, United States</i>	
<b>TP-L1.6: ADAPTIVE STEREOSCOPIC 3D VIDEO STREAMING.....</b>	<b>2409</b>
<i>Cihat Goktug Gurler, Kadir Tolga Bagci, A. Murat Tekalp, Koç University, Turkey</i>	
<b>TP-L2: BODY MODELS AND GAIT ANALYSIS</b>	
<b>TP-L2.1: GRAPHICAL MODELS FOR REAL-TIME CAPABLE GESTURE RECOGNITION.....</b>	<b>2445</b>
<i>Tobias Rehrl, Nikolaus Theißing, Alexander Bannat, Jürgen Gast, Dejan Arsic, Frank Wallhoff, Gerhard Rigoll, Christoph Mayer, Bernd Radig, Technische Universität München, Germany</i>	
<b>TP-L2.2: REGULARIZED TRACE RATIO DISCRIMINANT ANALYSIS WITH PATCH DISTRIBUTION FEATURE FOR HUMAN GAIT RECOGNITION</b>	<b>.....2449</b>
<i>Yi Huang, Dong Xu, Feiping Nie, Nanyang Technological University, Singapore</i>	
<b>TP-L2.3: PEOPLE IDENTIFICATION USING SHADOW DYNAMICS.....</b>	<b>2453</b>
<i>Yumi Iwashita, Kyushu University, Japan; Adrian Stoica, Jet Propulsion Laboratory, United States; Ryo Kurazume, Kyushu University, Japan</i>	
<b>TP-L2.4: VIEW RECOGNITION OF HUMAN GAIT SEQUENCES IN VIDEOS.....</b>	<b>2457</b>
<i>Jiwen Lu, Yap-Peng Tan, Nanyang Technological University, Singapore</i>	
<b>TP-L2.5: GAIT RECOGNITION USING LINEAR DISCRIMINANT ANALYSIS WITH ARTIFICIAL WALKING CONDITIONS</b>	<b>.....2461</b>
<i>Xiaxi Huang, Nikolaos Boulgouris, King's College London, United Kingdom</i>	

<b>TP-L2.6: CUE-INDEPENDENT EXTENDING INVERSE KINEMATICS FOR ROBUST POSE ESTIMATION IN 3D POINT CLOUDS</b>	<b>2465</b>
<i>Nicolas H. Lehment, Moritz Kaiser, Dejan Arsic, Gerhard Rigoll, Technische Universität München, Germany</i>	
<b>TP-L2.7: HUMAN ACTIVITIES DISCRIMINATION WITH MOTION APPROXIMATION IN POLYNOMIAL BASES</b>	<b>2469</b>
<i>Olivier Kihl, Benoit Tremblais, Bertrand Augereau, Majdi Khoudeir, XLIM-SIC, France</i>	
<b>TP-L2.8: LOGISTIC DYNAMIC TEXTURE MODEL FOR HUMAN ACTIVITY AND GAIT RECOGNITION</b>	<b>2473</b>
<i>Changhong Chen, Nanjing University of Posts and Telecommunications, China; Jimin Liang, Xidian University, China; Xiuchang Zhu, Nanjing University of Posts and Telecommunications, China</i>	
 <b>TP-L3: PERCEPTION AND QUALITY MODELS FOR IMAGES AND VIDEO</b>	
<b>TP-L3.1: OBJECTIVE ASSESSMENT OF TONE MAPPING ALGORITHMS</b>	<b>2477</b>
<i>Hojatollah Yeganeh, Zhou Wang, University of Waterloo, Canada</i>	
<b>TP-L3.2: A TWO-STAGE FRAMEWORK FOR BLIND IMAGE QUALITY ASSESSMENT</b>	<b>2481</b>
<i>Anush Moorthy, Alan Bovik, University of Texas at Austin, United States</i>	
<b>TP-L3.3: PRESERVING PERCEIVED BRIGHTNESS OF DISPLAYED IMAGE OVER DIFFERENT ILLUMINATION CONDITIONS</b>	<b>2485</b>
<i>Hisashi Kobiki, Masahiro Baba, Toshiba Corporation, Japan</i>	
<b>TP-L3.4: A ROBUST SIMILARITY MEASURE FOR AUTOMATIC INSPECTION</b>	<b>2489</b>
<i>Omer Barkol, Hadas Kogan, Doron Shaked, Mani Fischer, Hewlett-Packard Labs., Israel</i>	
<b>TP-L3.5: TEMPORAL POOLING OF VIDEO QUALITY ESTIMATES USING PERCEPTUAL MOTION MODELS</b>	<b>2493</b>
<i>Kwanghyun Lee, Jincheol Park, Sanghoon Lee, Yonsei University, Republic of Korea; Alan Bovik, University of Texas at Austin, United States</i>	
<b>TP-L3.6: A NO-REFERENCE BLOCKING ARTIFACTS VISIBILITY ESTIMATOR IN IMAGES</b>	<b>2497</b>
<i>Gilbert Yammine, Eugen Wige, André Kaup, University of Erlangen-Nuremberg, Germany</i>	
<b>TP-L3.7: VIDEO QUALITY ASSESSMENT BASED ON ADAPTIVE BLOCK-SIZE TRANSFORM JUST-NOTICEABLE DIFFERENCE MODEL</b>	<b>2501</b>
<i>Lin Ma, Fan Zhang, Songnan Li, King Ngai Ngan, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>TP-L3.8: A NOVEL TECHNIQUE TO ACQUIRE PERCEIVED UTILITY SCORES FROM TEXTUAL DESCRIPTIONS OF DISTORTED NATURAL IMAGES</b>	<b>2505</b>
<i>David Rouse, Yiran Wang, Fan Zhang, Sheila Hemami, Cornell University, United States</i>	
 <b>TP-L4: IMAGE ENHANCEMENT II</b>	
<b>TP-L4.1: MULTIPLICATIVE UPDATES ALGORITHM TO MINIMIZE THE GENERALIZED TOTAL VARIATION FUNCTIONAL WITH A NON-NEGATIVITY CONSTRAINT</b>	<b>2509</b>
<i>Paul Rodriguez, Pontifical Catholic University of Peru, Peru</i>	

<b>TP-L4.2: ADAPTIVE REGULARIZATION FOR IMAGE RESTORATION USING A VARIATIONAL INEQUALITY APPROACH</b>	<b>2513</b>
<i>Matthew A. Kitchener, Abdesselam Bouzerdoum, Son Lam Phung, University of Wollongong, Australia</i>	
<b>TP-L4.3: A UNIVERSAL FULL REFERENCE IMAGE QUALITY METRIC BASED ON A NEURAL FUSION APPROACH</b>	<b>2517</b>
<i>Aladine Chetouani, Azeddine Beghdadi, L2TI, France; Mohamed Deriche, King Fahd University of Petroleum &amp; Minerals, Saudi Arabia</i>	
<b>TP-L4.4: HDR VIDEO TONE MAPPING BASED ON GAMMA BLENDING</b>	<b>2521</b>
<i>Takao Jinno, University of Kitakyushu, Japan; Kazuya Mouri, Exploitation of Next Generation Company, Ltd., Japan; Okuda Masahiro, University of Kitakyushu, Japan</i>	
<b>TP-L4.5: EXACT DISCRETE MINIMIZATION FOR TV+L0 IMAGE DECOMPOSITION MODELS</b>	<b>2525</b>
<i>Loïc Denis, Observatory of Lyon (CNRS / Université Lyon 1 / ENS de Lyon), France; Florence Tupin, Xavier Rondeau, Institut Télécom, Télécom Paristech, France</i>	
<b>TP-L4.6: FLICKER REDUCTION FOR MOTION JPEG2000 USING WAVELET THRESHOLDING</b>	<b>2529</b>
<i>Xi Zhang, Atsushi Tanaka, University of Electro-Communications, Japan</i>	
<b>TP-L4.7: MOTION BLUR DETECTION BASED ON LOWEST DIRECTIONAL HIGH-FREQUENCY ENERGY</b>	<b>2533</b>
<i>Xiaogang Chen, Jie Yang, Shanghai Jiao Tong University, China; Qiang Wu, University of Technology, Australia; Jiajia Zhao, Shanghai Jiao Tong University, China</i>	
<b>TP-L4.8: ENHANCING LOW LIGHT IMAGES USING NEAR INFRARED FLASH IMAGES</b>	<b>2537</b>
<i>Shaojie Zhuo, Xiaopeng Zhang, National University of Singapore, Singapore; Xiaoping Miao, Sun Yat-Sen University, China; Terence Sim, National University of Singapore, Singapore</i>	
<b>TP-L5: SEGMENTATION AND QUANTITATIVE ANALYSIS II</b>	
<b>TP-L5.1: ROBUST BORDER DETECTION IN DERMOSCOPY IMAGES USING THRESHOLD FUSION</b>	<b>2541</b>
<i>M. Emre Celebi, Louisiana State University in Shreveport, United States; Sae Hwang, University of Illinois at Springfield, United States; Hitoshi Iyatomi, Hosei University, Japan; Gerald Schaefer, Loughborough University, United Kingdom</i>	
<b>TP-L5.2: ERYTHEMA DETECTION IN DIGITAL SKIN IMAGES</b>	<b>2545</b>
<i>Juan Lu, Jonathan Manton, Edmund Kazmierczak, University of Melbourne, Australia; Rodney Sinclair, University of Melbourne / St. Vincent's Hospital Melbourne, Australia</i>	
<b>TP-L5.3: LIVER SEGMENTATION BASED ON DEFORMABLE REGISTRATION AND MULTI-LAYER SEGMENTATION</b>	<b>2549</b>
<i>Hossein Badakhshannoory, Parvaneh Saeedi, Simon Fraser University, Canada; Karim Qayumi, University of British Columbia, Canada</i>	
<b>TP-L5.4: FULLY AUTOMATIC BRAIN TUMOR SEGMENTATION USING A NORMALIZED GAUSSIAN BAYESIAN CLASSIFIER AND 3D FLUID VECTOR FLOW</b>	<b>2553</b>
<i>Tao Wang, Irene Cheng, Anup Basu, University of Alberta, Canada</i>	



<b>TP-L5.5: DUAL-MODALITY 3D BRAIN PET-CT IMAGE SEGMENTATION BASED ON PROBABILISTIC BRAIN ATLAS AND CLASSIFICATION FUSION</b>	<b>2557</b>
<i>Yong Xia, University of Sydney, Australia; Stefan Eberl, Royal Prince Alfred Hospital, Australia; Dagan (David) Feng, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TP-L5.6: WATERSHED SEGMENTATION OF MEDICAL VOLUMES WITH PAINT DROP MARKING</b>	<b>2561</b>
<i>Alberto Signoroni, Gabriele Zanetti, Riccardo Grazioli, Riccardo Leonardi, University of Brescia, Italy</i>	
<b>TP-L5.7: COMPARISON OF MERGING ORDERS AND PRUNING STRATEGIES FOR BINARY PARTITION TREE IN HYPERSPECTRAL DATA</b>	<b>2565</b>
<i>Silvia Valero, GIPSA-Lab, Département des Images et des Signaux, France; Philippe Salembier, Technical University of Catalonia (UPC), France; Jocelyn Chanussot, GIPSA-Lab, Département des Images et des Signaux, France</i>	
<b>TP-L5.8: SNAKE-BASED APPROACH FOR SEGMENTING PEDICLES IN RADIOGRAPHS AND ITS APPLICATION IN THREE-DIMENSIONAL VERTEBRAE RECONSTRUCTION</b>	<b>2569</b>
<i>Junhua Zhang, Xinling Shi, Yunnan University, China; Yuanyuan Wang, Fudan University, China; Liang Lv, The First People's Hospital of Yunnan Province, China; Jun Wu, Yunnan University, China</i>	
<b>TP-L6: CODING AND WATERMARKING BY PERCEPTUAL MODELING</b>	
<b>TP-L6.1: DECODER SIDE JUST NOTICEABLE DISTORTION MODEL ESTIMATION FOR EFFICIENT H.264/AVC BASED PERCEPTUAL VIDEO CODING</b>	<b>2573</b>
<i>Matteo Naccari, Instituto Superior Técnico, Portugal; Fernando Pereira, Instituto Superior Técnico-Instituto de Telecomunicações, Lisboa, Portugal</i>	
<b>TP-L6.2: SPATIAL NOISE SHAPING USING CONVEX OPTIMIZATION FOR PERCEPTUAL IMAGE CODING</b>	<b>2577</b>
<i>Mark Pickering, University of New South Wales, Australia; Junyong You, Norwegian University of Science and Technology (NTNU), Norway; Touradj Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Andrew Perkis, Norwegian University of Science and Technology (NTNU), Norway</i>	
<b>TP-L6.3: MULTI-RESOLUTION VISUALLY LOSSLESS IMAGE CODING USING JPEG2000</b>	<b>2581</b>
<i>Han Oh, Ali Bilgin, Michael Marcellin, University of Arizona, United States</i>	
<b>TP-L6.4: NEAR LOSSLESS REVERSIBLE DATA HIDING BASED ON ADAPTIVE PREDICTION</b>	<b>2585</b>
<i>Valentina Conotter, Giulia Boato, University of Trento, Italy; Marco Carli, University of Roma Tre, Italy; Karen Egiazarian, Tampere University of Technology, Finland</i>	
<b>TP-L6.5: A MULTI-PURPOSE OBJECTIVE QUALITY METRIC FOR IMAGE WATERMARKING</b>	<b>2589</b>
<i>Vinod Pankajakshan, Florent Autrusseau, University of Nantes, France</i>	
<b>TP-L6.6: REGION-BASED TEXTURE MODELLING FOR NEXT GENERATION VIDEO CODECS</b>	<b>2593</b>
<i>Fan Zhang, David R. Bull, Nishan Canagarajah, University of Bristol, United Kingdom</i>	



<b>TP-L6.7: WATERMARKING USING MULTIPLE VISUAL CHANNELS FOR PERCEPTUAL COLOR SPACES</b>	<b>2597</b>
<i>Wadood Abdul, Philippe Carré, University of Poitiers, France; Hakim Saadane, University of Nantes, France; Philippe Gaborit, University of Limoges, France</i>	
<b>TP-L6.8: INVISIBLE PRINT-TYPE CALIBRATION PATTERN BASED ON HUMAN VISUAL PERCEPTION</b>	<b>P IC</b>
<i>Hironori Takimoto, Okayama Prefectural University, Japan; Akira Yoshida, Kyushu University, Japan; Yasue Mitsukura, Tokyo University of Agriculture and Technology, Japan; Minoru Fukumi, University of Tokushima, Japan</i>	
<b>TP-L7: MULTIVIEW CODING AND QUALITY ANALYSIS</b>	
<b>TP-L7.1: CORRELATION HISTOGRAM ANALYSIS OF DEPTH-ENHANCED 3D VIDEO CODING</b>	<b>2605</b>
<i>Philipp Merkle, Jordi Bayo Singla, Karsten Müller, Thomas Wiegand, Fraunhofer HHI, Germany</i>	
<b>TP-L7.2: VITERBI-LIKE JOINT OPTIMIZATION OF STEREO EXTRACTION FOR ON-LINE RATE ADAPTATION IN SCALABLE MULTIVIEW VIDEO CODING</b>	<b>2609</b>
<i>Nükhet Özbek, Yasar University, Turkey; A. Murat Tekalp, Koç University, Turkey</i>	
<b>TP-L7.3: EFFICIENT BIT ALLOCATION FOR MULTIVIEW IMAGE CODING &amp; VIEW SYNTHESIS</b>	<b>2613</b>
<i>Gene Cheung, National Institute of Informatics, Japan; Vladan Velisavljevic, Deutsche Telekom Laboratories, Germany</i>	
<b>TP-L7.4: NEW FRAME TYPE FOR VIEW ACCESS IN MVC</b>	<b>2617</b>
<i>Chang-Hong Fu, Yui-Lam Chan, Ki-Kit Lai, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TP-L7.5: MULTI-VIEW DVC SYSTEM BASED ON ITERATIVE INTER-VIEW PREDICTION</b>	<b>2621</b>
<i>Zhonghua Ma, Ka Ming Leung, Axel Becker-Lakus, Canon Information Systems Research Australia (CiSRA), Australia</i>	
<b>TP-L7.6: PERFORMANCE ANALYSIS ON MULTI-VIEW CODING WITH DEPTH MAP DISTORTION</b>	<b>2625</b>
<i>Keita Takahashi, University of Tokyo, Japan</i>	
<b>TP-L7.7: OBJECTIVE QUALITY ANALYSIS FOR FREE-VIEWPOINT DIBR</b>	<b>2629</b>
<i>Luat Do, Svitlana Zinger, Eindhoven University of Technology, Netherlands; Peter H. N. de With, Cyclomedia Technology B.V, Netherlands</i>	
<b>TP-L7.8: JOINT DECODING OF STEREO JPEG IMAGE PAIRS</b>	<b>2633</b>
<i>Markus B. Schenkel, Chong Luo, Microsoft Research Asia, China; Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Feng Wu, Microsoft Research Asia, China</i>	
<b>TP-L8: SCENE ANALYSIS I</b>	
<b>TP-L8.1: SEMI-SUPERVISED REGRESSION WITH TEMPORAL IMAGE SEQUENCES</b>	<b>2637</b>
<i>Ling Xie, Miguel Carreira-Perpinan, Shawn Newsam, University of California, Merced, United States</i>	

<b>TP-L8.2: OBJECT-DRIVEN IMAGE GROUP ANNOTATION .....</b>	<b>2641</b>
<i>Takayuki Baba, Tsuhan Chen, Cornell University, United States</i>	
<b>TP-L8.3: LANDMARK RECOGNITION: A UNARY APPROACH .....</b>	<b>2645</b>
<i>Henry Shu, Cornell University, United States; Cheng-Yang Chen, Chunghwa Telecom Co., Ltd., Taiwan; Tsuhan Chen, Cornell University, United States</i>	
<b>TP-L8.4: ABUNDANCE GUIDED ENDMEMBER SELECTION: AN ALGORITHM FOR UNMIXING HYPERSPECTRAL DATA .....</b>	<b>2649</b>
<i>Shaun Dowler, Mark Andrews, University of Auckland, New Zealand</i>	
<b>TP-L8.5: SALIENCY DETECTION USING MAXIMUM SYMMETRIC SURROUND .....</b>	<b>2653</b>
<i>Radhakrishna Achanta, Sabine Süsstrunk, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>TP-L8.6: RELEVANT IMAGE PRE-FILTERING IN AUTOMATIC IMAGE ORIENTATION CORRECTION .....</b>	<b>2657</b>
<i>Yusuke Takahashi, Ryoma Oami, NEC Corporation, Japan</i>	
<b>TP-L8.7: COMBINING FREE ENERGY SCORE SPACES WITH INFORMATION THEORETIC KERNELS: APPLICATION TO SCENE CLASSIFICATION .....</b>	<b>2661</b>
<i>Manuele Bicego, Alessandro Perina, Vittorio Murino, University of Verona, Italy; André Martins, Instituto Superior Tecnico, Portugal; Pedro M. Q. Aguiar, Instituto Superior Técnico, Portugal; Mário Figueiredo, Instituto Superior Tecnico, Portugal</i>	
<b>TP-L8.8: AN EFFICIENT DATA-SCALABLE ALGORITHM FOR IMAGE ORIENTATION DETECTION .....</b>	<b>2665</b>
<i>Qiuji Li, Yaobin Mao, Zhiquan Wang, Nanjing University of Science and Technology, China</i>	
<b>TP-L9: OBJECT RECOGNITION AND CLASSIFICATION II</b>	
<b>TP-L9.1: COLOR EXPLOITATION IN HOG-BASED TRAFFIC SIGN DETECTION .....</b>	<b>2669</b>
<i>Ivo Creusen, Cyclomedia Technology BV / Eindhoven University of Technology, Netherlands; Rob Wijnhoven, ViNotion BV / Eindhoven University of Technology, Netherlands; Ernst Herbschleb, Eindhoven University of Technology, Netherlands; Peter H. N. de With, Cyclomedia Technology BV / Eindhoven University of Technology, Netherlands</i>	
<b>TP-L9.2: TOWARDS AUTOMATED CONCEPTUAL SHAPE-BASED CHARACTERIZATION AN APPLICATION TO SYMBOLIC IMAGE RETRIEVAL .....</b>	<b>2673</b>
<i>Radi Jarrar, Monash University, Malaysia; Mohammed Belkhatir, CNRS, France</i>	
<b>TP-L9.3: MONOGENIC-LBP: A NEW APPROACH FOR ROTATION INVARIANT TEXTURE CLASSIFICATION .....</b>	<b>2677</b>
<i>Lin Zhang, Lei Zhang, Zhenhua Guo, David Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TP-L9.4: FACIAL FIDUCIAL POINTS DETECTION USING DISCRIMINATIVE FILTERING ON PRINCIPAL COMPONENTS .....</b>	<b>2681</b>
<i>Waldir S. Sabino Jr., Federal University of Amazonas, Brazil; Gabriel Araujo, Eduardo da Silva, Universidade Federal do Rio de Janeiro, Brazil; Siome Goldenstein, UNICAMP, Brazil</i>	
<b>TP-L9.5: NEW GEOMETRIC FOURIER DESCRIPTORS FOR COLOR IMAGE RECOGNITION .....</b>	<b>2685</b>
<i>José Mennesson, Christophe Saint-Jean, Laurent Mascarilla, Laboratory MIA, France</i>	

<b>TP-L9.6: CURVATURE ANALYSIS OF PATTERN TRANSFORMATION MANIFOLDS .....</b>	<b>2689</b>
<i>Elif Vural, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>TP-L9.7: MATCHING OF INTEREST POINT GROUPS WITH PAIRWISE SPATIAL CONSTRAINTS .....</b>	<b>2693</b>
<i>E.S. Ng, Nick Kingsbury, University of Cambridge, United Kingdom</i>	
<b>TP-L9.8: DISTRIBUTED CLASSIFICATION OF MULTIPLE OBSERVATIONS BY CONSENSUS .....</b>	<b>2697</b>
<i>Effrosyni Kokiopoulou, ETH Zürich, Switzerland; Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
 <b>TP-L10: FACE RECOGNITION AND UNDERSTANDING II</b>	
<b>TP-L10.2: AN INVESTIGATION INTO FEATURES FOR MULTI-VIEW LIPREADING .....</b>	<b>2417</b>
<i>Adrian Pass, Jianguo Zhang, Darryl Stewart, Queens University Belfast, United Kingdom</i>	
<b>TP-L10.3: LEARNING EFFECTIVE FEATURES FOR 3D FACE RECOGNITION.....</b>	<b>2421</b>
<i>Yue Ming, Qiuqi Ruan, Rongrong Ni, Beijing Jiaotong University, China</i>	
<b>TP-L10.4: IMAGE-SET FACE RECOGNITION BASED ON TRANSDUCTIVE LEARNING .....</b>	<b>2425</b>
<i>Mehrtash Harandi, Abbas Bigdeli, Brian Lovell, National ICT Australia (NICTA), Queensland Research Laboratory (QRL), Australia</i>	
<b>TP-L10.5: PROBABILISTIC FACIAL TRAIT CODE FOR FACE RECOGNITION .....</b>	<b>2429</b>
<i>Ping-Han Lee, Szu-Wei Wu, National Taiwan University, Taiwan; Gee-Sern Hsu, National Taiwan University of Science and Technology, Taiwan; Yi-Ping Hung, National Taiwan University, Taiwan</i>	
<b>TP-L10.6: IMPROVED 3-D FACIAL REPRESENTATION THROUGH STATISTICAL SHAPE MODEL .....</b>	<b>2433</b>
<i>Wei Quan, Bogdan Matuszewski, Lik-Kwan Shark, University of Central Lancashire, United Kingdom</i>	
<b>TP-L10.7: RAPID STEREO-VISION ENHANCED FACE RECOGNITION.....</b>	<b>2437</b>
<i>Sergey Kosov, Thorsten Thormaehlen, Hans-Peter Seidel, Max Planck Institut Informatik, Germany</i>	
<b>TP-L10.8: SPARSE REPRESENTATION OF (MULTISCALE) HISTOGRAMS FOR FACE RECOGNITION ROBUST TO REGISTRATION AND ILLUMINATION PROBLEMS .....</b>	<b>2441</b>
<i>Chi Ho Chan, Josef Kittler, University of Surrey, United Kingdom</i>	
 <b>TP-PA: IMAGE AND VIDEO REPRESENTATION II</b>	
<b>TP-PA.1: COLOR AND TEXTURE FEATURE FUSION USING KERNEL PCA WITH APPLICATION TO OBJECT-BASED VEGETATION SPECIES CLASSIFICATION .....</b>	<b>2701</b>
<i>Zhengrong Li, Yuee Liu, Ross Hayward, Queensland University of Technology, Australia; Rodney Walker, Australian Research Centre for Aerospace Automation, Australia</i>	

<b>TP-PA.2: FAST OBJECT DETECTION USING BOOSTED CO-OCCURRENCE</b> .....	<b>2705</b>
<b>HISTOGRAMS OF ORIENTED GRADIENTS</b>	
<i>Haoyu Ren, Joint Research &amp; Development Laboratory for Advanced Computer and Communication Technologies, China; Cher-Keng Heng, Panasonic Singapore Laboratories Pte Ltd, Singapore; Wei Zheng, Luhong Liang, Xilin Chen, Joint Research &amp; Development Laboratory for Advanced Computer and Communication Technologies, China</i>	
<b>TP-PA.3: FUZZY MAXIMAL MARGINAL EMBEDDING AND ITS APPLICATION</b> .....	<b>2709</b>
<i>Cairong Zhao, Zhihui Lai, Nanjing University of Science and Technology, China; Yue Sui, Minjian College, China; Chuancai Liu, Zhong Jin, Nanjing University of Science and Technology, China</i>	
<b>TP-PA.4: A GENERAL TEXTURE MAPPING FRAMEWORK FOR IMAGE-BASED 3D</b> .....	<b>2713</b>
<b>MODELING</b>	
<i>Lin Xu, Eric Li, Jianguo Li, Yurong Chen, Yimin Zhang, Intel Corporation, China</i>	
<b>TP-PA.5: A SPARSITY-DISTORTION-OPTIMIZED MULTISCALE REPRESENTATION</b> .....	<b>2717</b>
<b>OF GEOMETRY</b>	
<i>Osman G. Sezer, Yucel Altunbasak, Georgia Institute of Technology, United States; Onur G. Guleryuz, Docomo USA Labs, United States</i>	
<b>TP-PA.6: PROXIMAL METHOD FOR GEOMETRY AND TEXTURE IMAGE</b> .....	<b>2721</b>
<b>DECOMPOSITION</b>	
<i>Luis Manuel Briceño-Arias, Patrick Louis Combettes, Université Pierre et Marie Curie - Paris 6, France; Jean-Christophe Pesquet, Nelly Pustelnik, Université Paris-Est, France</i>	
<b>TP-PA.7: IMAGE CLASSIFICATION: A NOVEL TEXTURE SIGNATURE APPROACH</b> .....	<b>2725</b>
<i>Wenda He, Reyer Zwiggelaar, Aberystwyth University, United Kingdom</i>	
<b>TP-PA.8: PERFORMANCE EVALUATION OF LOW-DIMENSIONAL SIFTS</b> .....	<b>2729</b>
<i>Duanduan Yang, Andrzej Sluzek, Nanyang Technological University, Singapore</i>	
<b>TP-PA.9: SPARSE REPRESENTATION SHAPE MODEL</b> .....	<b>2733</b>
<i>Yuelong Li, Jufu Feng, Peking University, China</i>	
<b>TP-PA.10: TEXTURE CLASSIFICATION VIA PATCH-BASED SPARSE TEXTON</b> .....	<b>2737</b>
<b>LEARNING</b>	
<i>Jin Xie, Lei Zhang, Jane You, David Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TP-PA.11: MODULATION DOMAIN TEXTURE DECOMPOSITION</b> .....	<b>2741</b>
<i>Chuong Nguyen, Joseph Havlicek, University of Oklahoma, United States</i>	
<b>TP-PA.12: FREE-VIEWPOINT IMAGE SYNTHESIS BASED ON NON-UNIFORMLY</b> .....	<b>2745</b>
<b>RESAMPLED 3D REPRESENTATION</b>	
<i>Huei-Yung Lin, Yu-Hua Xiao, National Chung Cheng University, Taiwan</i>	
<b>TP-PA.13: MULTIMODAL TEMPLATE MATCHING BASED ON GRADIENT AND</b> .....	<b>2749</b>
<b>MUTUAL INFORMATION USING SCALE-SPACE</b>	
<i>Fernando Barrera, Felipe Lumbreras, Angel D. Sappa, Computer Vision Center, Spain</i>	
<b>TP-PA.14: POLYGONAL APPROXIMATION OF DIGITAL CURVES USING ADAPTIVE</b> .....	<b>2753</b>
<b>MCMC SAMPLING</b>	
<i>Xiuzhuang Zhou, Yao Lu, Beijing Institute of Technology, China</i>	

**TP-PA.15: ORTHOGONAL DISCRIMINANT NEIGHBORHOOD PRESERVING EMBEDDING FOR FACIAL EXPRESSION RECOGNITION .....2757**  
*Shuai Liu, Qiuqi Ruan, Rongrong Ni, Beijing Jiaotong University, China*

## **TP-PB: LINEAR AND NONLINEAR IMAGE FILTERING II**

**TP-PB.1: COUPLED PRE-/POST-PROCESSING FILTERS FOR PREDICTIVE VIDEO CODING .....2761**  
*Kiran Misra, Michigan State University, United States; Joel Sole, Xiaoran Lu, Peng Yin, Yunfei Zheng, Qian Xu, Technicolor Research & Innovation, United States*

**TP-PB.2: ISOLATING NEIGHBOR'S CONTRIBUTION TOWARDS IMAGE FILTERING IN THE BLOCK DCT SPACE .....2765**  
*Jayanta Mukhopadhyay, Indian Institute of Technology, Kharagpur, India*

**TP-PB.3: SVD BASED LINEAR FILTERING IN DCT DOMAIN .....2769**  
*Liansheng Zhuang, Rui Zhao, Nenghai Yu, Bin Liu, University of Science and Technology of China, China*

**TP-PB.5: 3D JBU BASED DEPTH VIDEO FILTERING FOR TEMPORAL FLUCTUATION REDUCTION .....2777**  
*Jinwook Choi, Yonsei University, Republic of Korea; Dongbo Min, Advanced Digital Sciences Center, Singapore; Donghyun Kim, Kwanghoon Sohn, Yonsei University, Republic of Korea*

**TP-PB.6: AUTOMATIC TARGET RECOGNITION OF MULTIPLE TARGETS FROM TWO CLASSES WITH VARYING VELOCITIES USING CORRELATION FILTERS .....2781**  
*Andres Rodriguez, B.V.K. Vijiaya Kumar, Carnegie Mellon University, United States*

**TP-PB.7: SALIENCY SELECTION FOR ROBUST VISUAL TRACKING.....2785**  
*Qing Wang, Feng Chen, Wenli Xu, Tsinghua University, China*

## **TP-PC: INTERPOLATION AND SUPERRESOLUTION III**

**TP-PC.1: RESTORATION OF LOW RESOLUTION CAR PLATE IMAGES USING PCA BASED IMAGE SUPER-RESOLUTION .....2789**  
*Xiaoli Yang, Guang-da Su, Jiansheng Chen, Yiu-sang Moon, Tsinghua University, China*

**TP-PC.2: MULTI-RESOLUTION MOTION ESTIMATION FOR MOTION COMPENSATED FRAME INTERPOLATION .....2793**  
*Bertan Günyel, Katholieke Universiteit Leuven, Belgium; A. Aydin Alatan, Middle East Technical University, Turkey*

**TP-PC.3: LEARNING LOCAL PIXEL STRUCTURE FOR FACE HALLUCINATION.....2797**  
*Yu Hu, Beijing Institute of Technology, China; Kin-Man Lam, Hong Kong Polytechnic University, Hong Kong SAR of China; Guoping Qiu, University of Nottingham, United Kingdom; Tingzhi Shen, Hui Tian, Beijing Institute of Technology, China*

**TP-PC.4: CONTOUR TRACKING BASED ON A SYNERGISTIC APPROACH OF GEODESIC ACTIVE CONTOURS AND CONDITIONAL RANDOM FIELDS .....2801**  
*Jiading Gai, Robert L. Stevenson, University of Notre Dame, United States*



<b>TP-PC.5: PIXEL WEIGHTED AVERAGE STRATEGY FOR DEPTH SENSOR DATA FUSION</b>	<b>2805</b>
<i>Frederic Garcia, Bruno Mirbach, IEE S.A., Luxembourg; Bjorn Ottersten, University of Luxembourg, Luxembourg; Frédéric Grandidier, Ángel Cuesta, IEE S.A., Luxembourg</i>	
<b>TP-PC.6: SPATIOTEMPORAL SUPER-RESOLUTION FOR LOW BITRATE H.264 VIDEO</b>	<b>2809</b>
<i>Nantheera Anantrasirichai, Nishan Canagarajah, University of Bristol, United Kingdom</i>	
<b>TP-PC.7: REAL-TIME CONTENT-AWARE IMAGE RESIZING USING REDUCED LINEAR MODEL</b>	<b>2813</b>
<i>Roberto Gallea, Edoardo Ardizzone, Roberto Pirrone, Università degli Studi di Palermo, Italy</i>	
<b>TP-PC.8: WAVELET BASED NONLOCAL-MEANS SUPER-RESOLUTION FOR VIDEO SEQUENCES</b>	<b>2817</b>
<i>Haoheng Zheng, Abdesselam Bouzerdoun, Son Lam Phung, University of Wollongong, Australia</i>	
<b>TP-PC.9: AN ADAPTIVE L1-L2 HYBRID ERROR MODEL TO SUPER-RESOLUTION</b>	<b>2821</b>
<i>Huihui Song, University of Science and Technology of China, China; Lei Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Peikang Wang, University of Science and Technology of China, China; Kaihua Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Xin Li, West Virginia University, United States</i>	
<b>TP-PC.10: GRAY-SCALE SUPER-RESOLUTION FOR FACE RECOGNITION FROM LOW GRAY-SCALE RESOLUTION FACE IMAGES</b>	<b>2825</b>
<i>Hu Han, Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS; Graduate University of Chinese Academy of Sciences, China; Shiguang Shan, Xilin Chen, Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS, China; Wen Gao, Institute of Digital Media, Peking University; Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS, China</i>	
<b>TP-PC.11: PLENOPTIC BASED SUPER-RESOLUTION FOR OMNIDIRECTIONAL IMAGE SEQUENCES</b>	<b>2829</b>
<i>Luigi Bagnato, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Yannick Boursier, Université Aix-Marseille 2, France; Pascal Frossard, Pierre Vanderghenst, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>TP-PC.12: SUPER RESOLUTION RESULTS IN PANOPTES, AN ADAPTIVE MULTI-APERTURE FOLDED ARCHITECTURE</b>	<b>2833</b>
<i>Esmail Faramarzi, Vikrant R. Bhakta, Dinesh Rajan, Marc P. Christensen, Southern Methodist University, United States</i>	
<b>TP-PC.13: EDGE-ADAPTIVE IMAGE INTERPOLATION USING CONSTRAINED LEAST SQUARES</b>	<b>2837</b>
<i>Kazu Mishiba, Taizo Suzuki, Masaaki Ikehara, Keio University, Japan</i>	
<b>TP-PC.14: SUB-PIXEL EDGE DETECTION FOR PHOTOGRAMMETRY USING LAPLACE DIFFERENCE OF GAUSSIAN AND 4TH ORDER ENO INTERPOLATION</b>	<b>2841</b>
<i>Laurence Pap, Ju Jia Zou, University of Western Sydney, Australia</i>	



## **TP-PD: VIDEO COMPRESSION STANDARDS AND TRANSCODING**

### **TP-PD.1: TRANSCODING FROM H.264/AVC TO A WAVELET-BASED SCALABLE VIDEO .....2845 CODEC**

*Eduardo Peixoto, Toni Zgaljic, Ebroul Izquierdo, Queen Mary, University of London, United Kingdom*

### **TP-PD.2: RATE-DISTORTION OPTIMAL DOWNSAMPLING OF H.264 COMPRESSED .....2849 VIDEO USING FULL-RESOLUTION INFORMATION**

*Xun Shi, York University, Canada; Xiang Yu, Da-ke He, Research In Motion / Slip Stream, Canada*

### **TP-PD.3: ANALYSIS OF QUADRATIC R-D MODEL IN H.264/AVC VIDEO CODING .....2853**

*Ling Tian, University of Electronic Science and Technology of China, China; Yu Sun, University of Central Arkansas, United States; Yimin Zhou, Xinhao Xu, University of Electronic Science and Technology of China, China*

### **TP-PD.4: VIDEO RETARGETING: A VISUAL-FRIENDLY DYNAMIC PROGRAMMING .....2857 APPROACH**

*Zheng Yuan, Taoran Lu, University of Florida, United States; Yu Huang, Huawei Research, United States; Dapeng Wu, University of Florida, United States; Heather Yu, Huawei Research, United States*

### **TP-PD.5: DATA HIDING OF INTRA PREDICTION INFORMATION IN CHROMA .....2861 SAMPLES FOR VIDEO COMPRESSION**

*Jean-Marc Thiesse, Orange Labs and I3S Laboratory, University of Nice-Sophia Antipolis/CNRS, France; Joël Jung, Orange Labs, France; Marc Antonini, I3S Laboratory University of Nice-Sophia Antipolis/CNRS, France*

### **TP-PD.6: JOINT MULTIVIEW VIDEO PLUS DEPTH CODING .....2865**

*Jun Zhang, University of Science and Technology of China, China; Miska M. Hannuksela, Nokia Research Center, Finland; Houqiang Li, University of Science and Technology of China, China*

### **TP-PD.7: DISTANCE-BASED WEIGHTED PREDICTION FOR ADAPTIVE INTRA MODE .....2869 BIT SKIP IN H.264/AVC**

*Lai-Man Po, Liping Wang, Kwok-Wai Cheung, Ka-Man Wong, Ka-Ho Ng, Shenyuan Li, Chi-Wang Ting, City University of Hong Kong, Hong Kong SAR of China*

### **TP-PD.8: FAST BLOCK MODE DECISION SCHEME FOR B-PICTURE CODING IN .....2873 H.264/AVC**

*Jong-Ho Kim, Electronics and Telecommunications Research Institute, Republic of Korea; Hyo-Sung Kim, Byung-Gyu Kim, SunMoon University, Republic of Korea; Hui Yong Kim, Se-Yoon Jeong, Jin Soo Choi, Electronics and Telecommunications Research Institute, Republic of Korea*

### **TP-PD.9: POSITION DEPENDENT LINEAR INTRA PREDICTION FOR IMAGE .....2877 CODING**

*Li Zhang, Siwei Ma, Wen Gao, Peking University, China*

### **TP-PD.10: REVERSIBLE COLOR TRANSFORM WITH COMPATIBILITY TO .....2881 IRREVERSIBLE TRANSFORM**

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

### **TP-PD.11: COMPLEXITY-SCALABLE H.264/AVC IN AN IPP-BASED VIDEO ENCODER.....2885**

*Tiago Fonseca, Universidade de Brasilia, Brazil; Debargha Mukherjee, Hewlett Packard Laboratories, United States; Ricardo L. de Queiroz, Universidade de Brasilia, Brazil*

## **TP-PE: VIDEO STREAMING**

### **TP-PE.1: STREAM SWITCHING WITH IN-STREAM TRANSMISSION RATE PROBING .....2889 FOR ADAPTIVE MOBILE MULTIMEDIA STREAMING**

*Kristofer Dovstam, Torbjörn Einarsson, Ericsson Research, Sweden; William Eklöf, Ericsson AB, Sweden;  
Markus Kampmann, Ericsson Research, Germany*

### **TP-PE.2: A NOVEL COORDINATED ADAPTIVE VIDEO STREAMING FRAMEWORK .....2893 FOR SCALABLE VIDEO OVER MOBILE NETWORKS**

*Ktawut Tappayuthpijarn, Thomas Stockhammer, Nomor Research GmbH, Germany; Eckehard Steinbach,  
Technical University Munich, Germany*

### **TP-PE.3: PREDICTOR SELECTION USING QUANTIZATION INTERVALS IN .....2897 JPEG2000-BASED SCALABLE INTERACTIVE VIDEO (JSIV)**

*Aous Naman, David Taubman, University of New South Wales, Australia*

### **TP-PE.4: CONGESTION-RESISTANT SCALABLE MEDIA STREAM MAPPING FOR AN .....2901 IEEE 802.11E SENSOR NETWORK**

*Ismail Ali, Martin Fleury, Mohammed Ghanbari, University of Essex, United Kingdom*

### **TP-PE.5: COLLISION-DETECTION BASED RATE-ADAPTATION FOR VIDEO .....2905 MULTICASTING OVER IEEE 802.11 WIRELESS NETWORKS**

*Chao Zhou, Xinggong Zhang, Lichuan Lu, Zongming Guo, Peking University, China*

### **TP-PE.6: A GAME THEORETIC APPROACH TO VIDEO STREAMING OVER .....2909 PEER-TO-PEER NETWORKS**

*Ehsan Maani, Sony Electronics, United States; Aggelos K. Katsaggelos, Northwestern University, United States*

### **TP-PE.7: ADAPTATION STRATEGIES FOR STREAMING SVC VIDEO .....2913**

*Burak Görkemli, A. Murat Tekalp, Koç University, Turkey*

### **TP-PE.8: OPTIMIZED CHANNEL RATE ALLOCATION FOR H.264/AVC SCALABLE .....2917 VIDEO MULTICAST STREAMING OVER HETEROGENEOUS NETWORKS**

*Bin Zhang, Xiang Li, Mathias Wien, Jens-Rainer Ohm, RWTH Aachen University, Germany*

### **TP-PE.9: A NON-STATIONARY HIDDEN MARKOV MODEL OF MULTIVIEW VIDEO .....2921 TRAFFIC**

*Lorenzo Rossi, Sapienza Università di Roma, Italy; Jacob Chakareski, Pascal Frossard, Ecole Polytechnique  
Fédérale de Lausanne (EPFL), Switzerland; Stefania Colonnese, Sapienza Università di Roma, Italy*

### **TP-PE.10: CROSS-LAYER QOS-OPTIMIZED EDCA ADAPTATION FOR WIRELESS .....2925 VIDEO STREAMING**

*Werayut Saesue, Chun Tung Chou, University of New South Wales, Australia; Jian Zhang, National ICT  
Australia (NICTA), Australia*

### **TP-PE.11: CONGESTION-AWARE TRANSMISSION RATE CONTROL USING MEDIUM .....2929 GRAIN SCALABILITY OF SCALABLE VIDEO CODING**

*Miska M. Hannuksela, Nokia Research Center, Finland; Haibo Zhu, Houqiang Li, University of Science and  
Technology of China, China; Moncef Gabbouj, Tampere University of Technology, Finland*

### **TP-PE.12: ON THE RELATIONSHIP BETWEEN PERCEPTUAL IMPACT OF SOURCE .....2933 AND CHANNEL DISTORTIONS IN VIDEO SEQUENCES**

*Jari Korhonen, Ulrich Reiter, Junyong You, Norwegian University of Science and Technology (NTNU), Norway*

## **TP-PF: 3D MODELING, SYNTHESIS AND PROCESSING**

### **TP-PF.2: IN-LOOP FEATURE TRACKING FOR STRUCTURE AND MOTION WITH .....2937 OUT-OF-CORE OPTIMIZATION**

*Nicolas Herrero, Jose-Luis Landabaso, Telefonica Research, Spain; Guillermo Gallego, Georgia Institute of Technology, United States; Jose-Carlos Pujol-Alcolado, Telefonica Research, Spain*

### **TP-PF.3: 3D OBJECT MATCHING BASED ON SPHERICAL HILBERT SCANNING .....2941**

*Can Tong, Sei-ichiro Kamata, Waseda University, Japan*

### **TP-PF.4: AUTOMATIC PREVIEW VIDEO GENERATION FOR MESH SEQUENCES.....2945**

*Seung-Ryong Han, Samsung Electronics, Republic of Korea; Toshihiko Yamasaki, Kiyoharu Aizawa, University of Tokyo, Japan*

### **TP-PF.5: AN IMPROVED ASIFT ALGORITHM FOR MATCHING REPEATED PATTERNS.....2949**

*Christopher Le Brese, Ju Jia Zou, Brian Uy, University of Western Sydney, Australia*

### **TP-PF.6: PCA-BASED STRUCTURE REFINEMENT FOR RECONSTRUCTION OF .....2953 URBAN SCENE**

*Qinxun Bai, Chinese Academy of Sciences, China; Lixin Fan, Nokia Research Center, Finland; Yihong Wu, Chinese Academy of Sciences, China*

### **TP-PF.7: DISCARDING MOVING OBJECTS IN QUASI-SIMULTANEOUS .....2957 STEREOVISION**

*Neus Sabater, Jean-Michel Morel, Centre de Mathématiques et de Leurs Applications, France; Andrés Almansa, Laboratoire Traitement et Communication de l'Information, France; Gwendoline Blanchet, Centre National d'Etudes Spatiales, France*

### **TP-PF.8: FAST PLANE DETECTION IN DISPARITY MAPS .....2961**

*Eric Bughin, ENS Cachan, France; Andrés Almansa, Télécom ParisTech, CNRS LTCI, France; Rafael Grompone von Gioi, Yohann Tendero, ENS Cachan, France*

### **TP-PF.9: 3D RECONSTRUCTION OF TRANSPARENT OBJECTS EXPLOITING .....2965 SURFACE FLUORESCENCE CAUSED BY UV IRRADIATION**

*Rindra Rantson, Christophe Stolz, David Fofi, Fabrice Meriaudeau, LE2I, France*

### **TP-PF.10: DISPARITY AND NORMAL ESTIMATION THROUGH ALTERNATING .....2969 MAXIMIZATION**

*Ramya Narasimha, INRIA- Rhone Alpes, France; Elise Arnaud, Université Joseph Fourier, LJK, France; Florence Forbes, Radu Horaud, INRIA- Rhone Alpes, France*

### **TP-PF.11: HDR IMAGE CONSTRUCTION FROM MULTI-EXPOSED STEREO LDR .....2973 IMAGES**

*Ning Sun, Hassan Mansour, Rabab Ward, University of British Columbia, Canada*

### **TP-PF.12: EFFICIENT MESSAGE REDUCTION ALGORITHM FOR STEREO .....2977 MATCHING USING BELIEF PROPAGATION**

*Yen-Chieh Lai, Chao-Chung Cheng, Chia-Kai Liang, Liang-Gee Chen, National Taiwan University, Taiwan*

### **TP-PF.13: VISUAL FATIGUE EVALUATION AND ENHANCEMENT FOR .....2981 2D-PLUS-DEPTH VIDEO**

*Jaeseob Choi, Donghyun Kim, Bumsub Ham, Sunghwan Choi, Kwanghoon Sohn, Yonsei University, Republic of Korea*

<b>TP-PF.14: DETECTING ANAGLYPH IMAGES WITH CHANNEL ALIGNMENT FEATURES</b>	<b>2985</b>
<i>Andrew Gallagher, Eastman Kodak Company, United States</i>	
<b>TP-PF.15: STEREO IMAGE CODING BASED ON BINOCULAR ENERGY MODELING</b>	<b>2989</b>
<i>Rafik Bensalma, Mohamed-Chaker Larabi, University of Poitiers, France</i>	
 <b>TP-PG: SEGMENTATION III</b>	
<b>TP-PG.1: AUTOMATIC FOREGROUND EXTRACTION FOR IMAGES AND VIDEOS</b>	<b>2993</b>
<i>Zhen Tang, Zhenjiang Miao, Yanli Wan, Jia Li, Beijing Jiaotong University, China</i>	
<b>TP-PG.3: DYNAMIC VIDEO SEGMENTATION VIA A NOVEL RECURSIVE BAYESIAN LEARNING METHOD</b>	<b>2997</b>
<i>Qingsong Zhu, Zhan Song, CAS/CUHK Shenzhen Institutes of Advanced Technology, China</i>	
<b>TP-PG.4: DYNAMIC WINDOW CONSTRUCTION FOR THE BINARIZATION OF BARCODE IMAGES CAPTURED BY MOBILE PHONES</b>	<b>3001</b>
<i>Huijuan Yang, Alex C. Kot, Xudong Jiang, Nanyang Technological University, Singapore</i>	
<b>TP-PG.5: MULTI-LABEL PROPAGATION FOR COHERENT VIDEO SEGMENTATION AND ARTISTIC STYLIZATION</b>	<b>3005</b>
<i>Tinghuai Wang, Jean-Yves Guillemaut, John Collomosse, University of Surrey, United Kingdom</i>	
<b>TP-PG.6: SEMI-AUTOMATIC MOTION BASED SEGMENTATION USING LONG TERM MOTION TRAJECTORIES</b>	<b>3009</b>
<i>Gary Baugh, Anil Kokaram, Trinity College Dublin, Ireland</i>	
<b>TP-PG.7: EFFICIENT GRAPH-BASED IMAGE SEGMENTATION VIA SPEEDED-UP TURBO PIXELS</b>	<b>3013</b>
<i>Cevahir Cigla, A. Aydin Alatan, Middle East Technical University, Turkey</i>	
<b>TP-PG.8: AN AUTOMATIC INITIAL SNAXEL SELECTION METHOD IN ACTIVE CONTOUR MODEL FOR CONTOUR EXTRACTION</b>	<b>3017</b>
<i>Roy Chaoming Hsu, Din-Yuen Chan, Ping-Wen Kao, Cheng-Ting Liu, National Chiayi University, Taiwan</i>	
<b>TP-PG.9: DETECTION OF SKIN LESIONS USING DIFFUSE POLARISATION</b>	<b>3021</b>
<i>Nitya Subramaniam, Gule Saman, Edwin R. Hancock, University of York, United Kingdom</i>	
<b>TP-PG.10: FAST MESH SEGMENTATION BY USING THE LEXICOGRAPH CUT ALGORITHM</b>	<b>3025</b>
<i>Peer Stelldinger, Christian Baehnisch, University of Hamburg, Germany</i>	
<b>TP-PG.11: ADAPTIVE SHAPE PRIOR IN GRAPH CUT SEGMENTATION</b>	<b>3029</b>
<i>Hui Wang, Hong Zhang, University of Alberta, Canada</i>	
<b>TP-PG.12: PYRAMIDAL SEGMENTATION USING HIGHER-ORDER LOCAL AUTO-CORRELATIONS AND ITS APPLICATIONS TO LANDSAT FORESTRY DATA</b>	<b>3033</b>
<i>Milos Stojmenovic, University of Novi Sad, Yugoslavia; Takumi Kobayashi, Nobuyuki Otsu, Information Technology Research Institute, Japan</i>	

<b>TP-PG.13: HYBRID METHOD FOR WHITE MATTER SEPARATION IN BRAIN IMAGES USING GRANULAR ROUGH SETS AND FUZZY THRESHOLDING</b>	<b>3037</b>
<i>Senthilkumaran N, Rajesh R, Thilagavathy C, Bharathiar University, India</i>	
<b>TP-PG.14: A NON-PARAMETRIC STATISTICS BASED METHOD FOR GENERIC CURVE PARTITION AND CLASSIFICATION</b>	<b>3041</b>
<i>Gang Hu, Qigang Gao, Dalhousie University, Canada</i>	
<b>TP-PG.15: REDUCING GRAPHS IN GRAPH CUT SEGMENTATION</b>	<b>3045</b>
<i>Nicolas Lermé, François Malgouyres, Lucas Létocart, Université Paris 13, France</i>	
<b>TP-PG.16: EDGE-ADAPTIVE IMAGE SEGMENTATION BASED ON SEAM PROCESSING AND K-MEANS CLUSTERING</b>	<b>3049</b>
<i>Tse-Wei Chen, Hsiao-Hang Su, Yi-Ling Chen, Shao-Yi Chien, National Taiwan University, Taiwan</i>	
<b>TP-PG.17: GOP STRUCTURE ADAPTIVE TO THE VIDEO CONTENT FOR EFFICIENT H.264/AVC ENCODING</b>	<b>3053</b>
<i>Bruno Zatt, Marcelo Porto, Jacob Scharcanski, Sergio Bampi, Federal University of Rio Grande do Sul, Brazil</i>	
<b>TP-PG.18: SIMULTANEOUS VARIATIONAL IMAGE SEGMENTATION AND OBJECT RECOGNITION VIA SHAPE SPARSE REPRESENTATION</b>	<b>3057</b>
<i>Fei Chen, Huimin Yu, Roland Hu, Zhejiang University, China</i>	
 <b>TP-PH: FINGERPRINT, PALMPRINT AND HAND ANALYSIS</b>	
<b>TP-PH.1: NEW METHOD FOR INCREASING MATCHING ACCURACY AND REDUCING PROCESS TIME OF FINGERPRINT DATA BY THE FRACTIONAL FOURIER TRANSFORM</b>	<b>3061</b>
<i>Reiko Iwai, Hiroyuki Yoshimura, Chiba University, Japan</i>	
<b>TP-PH.2: A NOVEL FINGERPRINT SMEAR DETECTION METHOD BASED ON INTEGRATED SUB-BAND FEATURE REPRESENTATION</b>	<b>3065</b>
<i>Xiukun Yang, Zhigang Yang, Harbin Engineering University, China</i>	
<b>TP-PH.3: ICP REGISTRATION USING PRINCIPAL LINE AND ORIENTATION FEATURES FOR PALMPRINT ALIGNMENT</b>	<b>3069</b>
<i>Feng Yue, Wangmeng Zuo, David Zhang, Harbin Institute of Technology, China</i>	
<b>TP-PH.4: FINGERPRINT REFERENCE POINT DETERMINATION BASED ON A NOVEL RIDGELINE FEATURE</b>	<b>3073</b>
<i>Shan Juan Xie, Hyouck Min Yoo, Dong Sun Park, Chonbuk National University, Republic of Korea; Sook Yoon, Mokpo National University, Republic of Korea</i>	
<b>TP-PH.5: A NOVEL METHOD OF FINGERPRINT MINUTIAE EXTRACTION BASED ON GABOR PHASE</b>	<b>3077</b>
<i>Xin Gao, Peking University, China; Xiaoguang Chen, North China University of Technology, China; Jia Cao, Zirui Deng, Chongjin Liu, Jufu Feng, Peking University, China</i>	
<b>TP-PH.6: PRINCIPAL AXIS AND CREASE DETECTION FOR SLAP FINGERPRINT SEGMENTATION</b>	<b>3081</b>
<i>Yong-liang Zhang, Zhejiang University of Technology, China; Yan-miao Li, Dalian Jiaotong University, China; Hong-Tao Wu, Hebei University of Technology, China; Ya-ping Huang, Gang Xiao, Fei Gao, Zhejiang University of Technology, China</i>	



<b>TP-PH.7: TOWARDS INTEGRATING LEVEL-3 FEATURES WITH PERSPIRATION PATTERN FOR ROBUST FINGERPRINT RECOGNITION</b>	<b>3085</b>
<i>Aditya Abhyankar, Vishvakarma Institute of Information Technology, India; Stephanie Schuckers, Clarkson University, United States</i>	
<b>TP-PH.8: A COMPARATIVE STUDY ON QUALITY ASSESSMENT OF HIGH RESOLUTION FINGERPRINT IMAGES</b>	<b>3089</b>
<i>Qijun Zhao, Feng Liu, Lei Zhang, David Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>TP-PH.9: A HIERARCHICAL ALGORITHM FOR MULTI-FEATURE BASED FINGERPRINT IDENTIFICATION</b>	<b>3093</b>
<i>Fanglin Chen, Jie Zhou, Tsinghua University, China</i>	
<b>TP-PH.10: A COMPOSITE FINGERPRINT SEGMENTATION BASE ON LOG-GABOR FILTER AND ORIENTATION RELIABILITY</b>	<b>3097</b>
<i>Chunfeng Hu, Jianping Yin, En Zhu, Hui Chen, Yong Li, National University of Defense Technology, China</i>	
<b>TP-PH.11: A HYBRID FUSION METHOD OF FINGERPRINT IDENTIFICATION FOR HIGH SECURITY APPLICATIONS</b>	<b>3101</b>
<i>Yilong Yin, Yanbin Ning, Zhiguo Yang, Shandong University, China</i>	
<b>TP-PH.12: DECISION LEVEL BIOMETRIC FUSION USING ANT COLONY OPTIMIZATION</b>	<b>3105</b>
<i>Amioy Kumar, Madasu Hanmandlu, Harsh Sanghvi, H. M. Gupta, Indian Institute of Technology, Delhi, India</i>	
<b>TP-PH.13: FINGERPRINT COMPRESSION: AN ADAPTIVE AND FAST DCT-BASED APPROACH</b>	<b>3109</b>
<i>Yu-Lin Wang, Industrial Technology Research Institute, Taiwan; Chia-Te Liao, National Tsing Hua University, Taiwan; Alvin W.Y. Su, National Cheng Kung University, Taiwan; Shang-Hong Lai, National Tsing Hua University, Taiwan</i>	
<b>TP-PH.14: EXTRACTING CORNER-CUE FEATURE TO IMPROVE MINUTIAE-MATCHING ACCURACY</b>	<b>3113</b>
<i>Jiajia Lei, Xinge You, Huazhong University of Science and Technology, Wuhan Polytechnic University, China; Long Zhou, Wu Zeng, Wuhan Polytechnic University, China</i>	
<b>TP-PH.15: REAL-TIME MULTI-COLOURSPACE HAND SEGMENTATION</b>	<b>3117</b>
<i>Vincent Spruyt, Alessandro Ledda, Stig Geerts, Artesis University College, Belgium</i>	
<b>TP-PH.16: PALMPRINT RECOGNITION USING RANK LEVEL FUSION</b>	<b>3121</b>
<i>Ajay Kumar, Hong Kong Polytechnic University, China; Sumit Shekhar, University of Maryland, College Park, United States</i>	
<b>TP-PI: RECENT ADVANCES IN HIGH DYNAMIC RANGE IMAGING TECHNOLOGY</b>	
<b>TP-PI.1: RECENT ADVANCES IN HIGH DYNAMIC RANGE IMAGING TECHNOLOGY</b>	<b>3125</b>
<i>Yukihiro Bandoh, NTT, Japan; Guoping Qiu, University of Nottingham, United Kingdom; Masahiro Okuda, University of Kitakyushu, Japan; Scott Daly, Sharp Laboratories of America, United States; Til Aach, RWTH Aachen University, Germany; Oscar Au, Hong Kong University of Science and Technology, China</i>	



<b>TP-PI.2: TONE MAPPING HDR IMAGES USING OPTIMIZATION: A GENERAL FRAMEWORK</b>	<b>3129</b>
<i>Guoping Qiu, Yujie Mei, Kin-Man Lam, University of Nottingham, United Kingdom; Min Qiu, HSBC Software Development Ltd, China</i>	
<b>TP-PI.3: MOVEMENT DETECTION FOR THE SYNTHESIS OF HIGH DYNAMIC RANGE IMAGES</b>	<b>3133</b>
<i>Zhengguo Li, Susanto Rahardja, Zijian Zhu, Shoulie Xie, Shiqian Wu, Institute for Infocomm Research, Singapore</i>	
<b>TP-PI.4: OPTIMAL EXPOSURE CONTROL FOR HIGH DYNAMIC RANGE IMAGING</b>	<b>3137</b>
<i>Keigo Hirakawa, University of Dayton, United States; Patrick J. Wolfe, Harvard University, United States</i>	
<b>TP-PI.5: A CODING METHOD FOR HIGH BIT-DEPTH IMAGES BASED ON OPTIMIZED BIT-DEPTH TRANSFORM</b>	<b>3141</b>
<i>Takeshi Ito, Yukihiro Bandoh, Seishi Takamura, Hirohisa Jozawa, NTT, Japan</i>	
<b>TP-PI.6: FLEXIBLE AND EFFECTIVE HIGH DYNAMIC RANGE IMAGE CODING</b>	<b>3145</b>
<i>Alberto Boschetti, Nicola Adami, Riccardo Leonardi, University of Brescia, Italy; Masahiro Okuda, University of Kitakyushu, Japan</i>	
<b>TP-PI.7: DENOISING THE HIGH DYNAMIC RANGE IMAGING PROCESS: A COMPARATIVE STUDY USING SNR AND DETAIL LOSS CRITERIA</b>	<b>3149</b>
<i>Jens Kaftan, Andre Bell, Til Aach, RWTH Aachen University, Germany</i>	
<b>TP-PI.8: TWO-LEVEL OPTIMIZED TONE MAPPING FOR HIGH DYNAMIC RANGE IMAGES</b>	<b>3153</b>
<i>Oscar Au, Chun Hung Liu, Cheuk Hong Cheng, Ka Yue Yip, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
<b>TP-PJ: SEMANTIC ANALYSIS AND RETRIEVAL</b>	
<b>TP-PJ.1: ON GEOMETRIC AND SOFT SHAPE CONTENT-BASED SEARCH</b>	<b>3157</b>
<i>Vasilios Darlagiannis, Konstantinos Moustakas, Dimitrios Tzovaras, Center of Research and Technology Hellas, Greece</i>	
<b>TP-PJ.2: IMAGE RETRIEVAL ON THE HONEYCOMB IMAGE BROWSER</b>	<b>3161</b>
<i>William Plant, Aston University, United Kingdom; Gerald Schaefer, Loughborough University, United Kingdom</i>	
<b>TP-PJ.3: EXPLOITING COLLECTIVE KNOWLEDGE IN AN IMAGE FOLKSONOMY FOR SEMANTIC-BASED NEAR-DUPLICATE VIDEO DETECTION</b>	<b>3165</b>
<i>Hyun-seok Min, Wesley De Neve, Yong Man Ro, Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>TP-PJ.4: IMPLICIT RETRIEVAL OF SALIENT IMAGES USING BRAIN COMPUTER INTERFACE</b>	<b>3169</b>
<i>Ashkan Yazdani, Jean-Marc Vesin, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Dario Izzo, Christos Ampatzis, European Space and Technology Research Center (ESTEC), Netherlands; Touradj Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	

<b>TP-PJ.5: INTEGRATING VISUAL SALIENCY AND CONSISTENCY FOR RE-RANKING IMAGE SEARCH RESULTS</b>	<b>3173</b>
<i>Jun Huang, Xiaokang Yang, Rui Zhang, Fuxiang Lu, Xiangzhong Fang, Shanghai Jiao Tong University, China</i>	
<b>TP-PJ.6: ORDERING OF STREAM MINING CLASSIFIERS</b>	<b>3177</b>
<i>Raphael Ducasse, University of California, Los Angeles, United States; Deepak Turaga, IBM Research, United States; Mihaela van der Schaar, University of California, Los Angeles, United States</i>	
<b>TP-PJ.7: NON-RIGID 3D SHAPE RETRIEVAL USING MULTIDIMENSIONAL SCALING AND BAG-OF-FEATURES</b>	<b>3181</b>
<i>Zhouhui Lian, Beihang University / National Institute of Standards and Technology, China; Afzal Godil, National Institute of Standards and Technology, United States; Xianfang Sun, Cardiff University / Beihang University, United Kingdom; Hai Zhang, Beihang University, China</i>	
<b>TP-PJ.8: THE ROLE OF IMAGE COMPOSITION IN IMAGE AESTHETICS</b>	<b>3185</b>
<i>Pere Obrador, Ludwig Schmidt-Hackenberg, Nuria Oliver, Telefonica Research, Spain</i>	
<b>TP-PJ.9: ANIMATION PYRAMID FOR EFFICIENT IMAGE DATABASE BROWSING</b>	<b>3189</b>
<i>Lixin Fan, Nokia Research Center, Finland</i>	
<b>TP-PJ.10: HIERARCHICAL VISUAL THESAURUS BUILDING FOR SATELLITE IMAGE RETRIEVAL BASED ON SEMANTIC REGION LABELLING</b>	<b>3193</b>
<i>Sahbi Bahroun, Sup'com, Tunisia; Nozha Boujemaa, INRIA, France; Ziad Belhadj, Sup'Com, Tunisia</i>	
<b>TP-PJ.11: A RETRIEVAL PATTERN-BASED INTER-QUERY LEARNING APPROACH FOR CONTENT-BASED IMAGE RETRIEVAL</b>	<b>3197</b>
<i>Adam Gilbert, Hood College, United States; Ran Chang, Xiaojun Qi, Utah State University, United States</i>	
<b>TP-PJ.12: 3D NEUROLOGICAL IMAGE RETRIEVAL WITH LOCALIZED PATHOLOGY-CENTRIC CMRGLC PATTERNS</b>	<b>3201</b>
<i>Weidong Cai, Sidong Liu, University of Sydney, Australia; Lingfeng Wen, Stefan Eberl, Michael J. Fulham, Royal Prince Alfred Hospital, Australia; Dagan (David) Feng, University of Sydney, Australia</i>	
<b>TP-PJ.14: PROBABILISTIC COMBINATION OF SPATIAL CONTEXT WITH VISUAL AND CO-OCCURRENCE INFORMATION FOR SEMANTIC IMAGE ANALYSIS</b>	<b>3205</b>
<i>Georgios Th. Papadopoulos, Vasileios Mezaris, Ioannis Kompatsiaris, Michael G. Strintzis, Centre for Research and Technology Hellas (C.E.R.T.H.), Greece</i>	
<b>TP-PJ.15: IMAGE RETRIEVAL WITH FEATURE SELECTION AND RELEVANCE FEEDBACK</b>	<b>3209</b>
<i>Yu Sun, Bir Bhanu, University of California, Riverside, United States</i>	
<b>TP-PJ.16: A NOVEL IMAGE RETRIEVAL FRAMEWORK EXPLORING INTER CLUSTER DISTANCE</b>	<b>3213</b>
<i>Xin Xin, Aggelos K. Katsaggelos, Northwestern University, United States</i>	
<b>WA-L1: QUALITY OF EXPERIENCE IN EMERGING MULTIMEDIA SYSTEMS AND APPLICATIONS</b>	
<b>WA-L1.1: HIGH-FIDELITY RECORDING, COMPRESSION, AND REPLAY OF VISUAL-HAPTIC TELEPRESENCE SESSIONS</b>	<b>3217</b>
<i>Julius Kammerl, Eckehard Steinbach, Technische Universität München, Germany</i>	

<b>WA-L1.2: AESTHETIC QUALITY ASSESSMENT OF CONSUMER PHOTOS WITH FACES</b>	<b>3221</b>
<i>Congcong Li, Cornell University, United States; Andrew Gallagher, Alexander C. Loui, Eastman Kodak Company, United States; Tsuhan Chen, Cornell University, United States</i>	
<b>WA-L1.3: MEASUREMENT OF COLOR NOISE PERCEPTION</b>	<b>3225</b>
<i>Makoto Shohara, Kazunori Kotani, Japan Advanced Institute of Science and Technology, Japan</i>	
<b>WA-L1.4: QUALITY-AWARE VIDEO BASED ON ROBUST EMBEDDING OF INTRA- AND INTER-FRAME REDUCED-REFERENCE FEATURES</b>	<b>3229</b>
<i>Kai Zeng, Zhou Wang, University of Waterloo, Canada</i>	
<b>WA-L1.5: QUALITY OF EXPERIENCE OPTIMIZED SCHEDULING IN MULTI-SERVICE WIRELESS MESH NETWORKS</b>	<b>3233</b>
<i>Andre B. Reis, University of Aveiro, Portugal; Jacob Chakareski, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Andreas Kassler, University of Karlstad, Sweden; Susana Sargento, University of Aveiro, Portugal</i>	
<b>WA-L1.6: VIDEO CROSS-TALK REDUCTION AND SYNCHRONIZATION FOR TWO-WAY COLLABORATION</b>	<b>3237</b>
<i>Ramin Samadani, John Apostolopoulos, Ian Robinson, Kar Han Tan, Hewlett-Packard Labs., United States</i>	
<b>WA-L1.7: TEMPORAL SYNCHRONIZATION IN STEREOSCOPIC VIDEO: INFLUENCE ON QUALITY OF EXPERIENCE AND AUTOMATIC ASYNCHRONY DETECTION</b>	<b>3241</b>
<i>Lutz Goldmann, Jong-Seok Lee, Touradj Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>WA-L1.8: ON THE PERCEPTUAL SIMILARITY OF REALISTIC LOOKING TONE MAPPED HIGH DYNAMIC RANGE IMAGES</b>	<b>3245</b>
<i>Marcus Barkowsky, Patrick Le Callet, University of Nantes, France</i>	
 <b>WA-L3: SPACE-VARIANT AND BILATERAL FILTERING</b>	
<b>WA-L3.1: FAST BILATERAL FILTERING BY ADAPTING BLOCK SIZE</b>	<b>3281</b>
<i>Wei Yu, Franz Franchetti, James C. Hoe, Carnegie Mellon University, United States; Yao-Jen Chang, Tsuhan Chen, Cornell University, United States</i>	
<b>WA-L3.2: AN EFFICIENT BAYESIAN FRAMEWORK FOR IMAGE ENHANCEMENT WITH SPATIAL CONSIDERATION</b>	<b>3285</b>
<i>Tzu-Cheng Jen, Sheng-Jyh Wang, National Chiao Tung University, Taiwan</i>	
<b>WA-L3.3: FAST BILATERAL FILTER WITH ARBITRARY RANGE AND DOMAIN KERNELS</b>	<b>3289</b>
<i>Bahadir Gunturk, Louisiana State University, United States</i>	
<b>WA-L3.4: BILATERAL KERNEL PARAMETER OPTIMIZATION BY RISK MINIMIZATION</b>	<b>3293</b>
<i>Honghong Peng, Aptina Imaging, United States; Raghuveer Rao, Army Research Laboratory, United States</i>	
<b>WA-L3.5: IMPROVED IMAGE INTERPOLATION USING BILATERAL FILTER FOR WEIGHTED LEAST SQUARE ESTIMATION</b>	<b>3297</b>
<i>Kwok-Wai Hung, Wan-Chi Siu, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	

<b>WA-L3.6: O(1) BILATERAL FILTERING WITH LOW MEMORY USAGE.....</b>	<b>3301</b>
<i>Masaki Igarashi, Masayuki Ikebe, Sousuke Shimoyama, Kenta Yamano, Junichi Motohisa, Hokkaido University, Japan</i>	
<b>WA-L3.7: FAST NON-UNIFORM FILTERING WITH SYMMETRIC WEIGHTED INTEGRAL IMAGES .....</b>	<b>3305</b>
<i>David Marimon, Telefonica Research, Spain</i>	
<b>WA-L3.8: SUPER-RESOLUTION USING A WAVELET-BASED ADAPTIVE WIENER FILTER .....</b>	<b>3309</b>
<i>Nabil Sadaka, Lina Karam, Arizona State University, United States</i>	
<b>WA-L4: MULTIFRAME IMAGE RESTORATION</b>	
<b>WA-L4.1: MULTIFRAME BLIND DECONVOLUTION, SUPER-RESOLUTION, AND SATURATION CORRECTION VIA INCREMENTAL EM .....</b>	<b>3313</b>
<i>Stefan Harmeling, Suvrit Sra, Michael Hirsch, Bernhard Schölkopf, Max-Planck-Institute for Biological Cybernetics, Germany</i>	
<b>WA-L4.2: ADAPTIVE BLOTCHES DETECTION FOR FILM RESTORATION .....</b>	<b>3317</b>
<i>Antoni Buadès, University Paris Descartes, France; Julie Delon, Yann Gousseau, Télécom ParisTech, France; Simon Masnou, University Lyon 1, France</i>	
<b>WA-L4.3: MOTION-BLUR-FREE EXPOSURE FUSION .....</b>	<b>3321</b>
<i>Marius Tico, Natasha Gelfand, Kari Pulli, Nokia Research Center, United States</i>	
<b>WA-L4.5: VIDEO DEBLURRING IN COMPLEX WAVELET DOMAIN USING LOCAL LAPLACE PRIOR FOR ENHANCEMENT AND ANISOTROPIC SPATIALLY ADAPTIVE DENOISING FOR PSF DETECTION .....</b>	<b>3329</b>
<i>Hossein Rabbani, Isfahan University of Medical Sciences, Iran</i>	
<b>WA-L4.6: A DUAL-THRESHOLD METHOD FOR PHOTON COUNTING IMAGING WITH THE EMCCD .....</b>	<b>3333</b>
<i>Beibei Zhou, Qian Chen, Weiji He, Wenwen Zhang, Nanjing University of Science and Technology, China</i>	
<b>WA-L4.7: DETECTING AND COMPOSING NEAR-IDENTICAL HDR IMAGES WITHOUT EXPOSURE INFORMATION .....</b>	<b>3337</b>
<i>Zijian Zhu, Susanto Rahardja, Zhengguo Li, Institute for Infocomm Research, Singapore; Pasi Franti, University of Eastern Finland, Finland</i>	
<b>WA-L4.8: INFRARED IMAGE ENHANCEMENT BASED ON AN ALIGNED HIGH RESOLUTION VISIBLE IMAGE .....</b>	<b>3341</b>
<i>Kyuha Choi, Changhyun Kim, Jong Beom Ra, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	

## **WA-L5: COMPRESSIVE SENSING**

### **WA-L5.1: COMPRESSED SENSING OF MULTIVIEW IMAGES USING DISPARITY .....3345 COMPENSATION**

*Maria Trocan, Institut Supérieur d'Electronique de Paris, France; Thomas Maugey, Télécom ParisTech, France; Eric W. Tramel, James E. Fowler, Mississippi State University, United States; Béatrice Pesquet-Popescu, Télécom ParisTech, France*

### **WA-L5.2: SECTIONAL IMAGE RECONSTRUCTION IN OPTICAL SCANNING .....3349 HOLOGRAPHY USING COMPRESSED SENSING**

*Xin Zhang, Edmund Lam, University of Hong Kong, Hong Kong SAR of China*

### **WA-L5.3: FAST DIMENSION REDUCTION THROUGH RANDOM PERMUTATION .....3353**

*Lu Gan, Brunel University, United Kingdom; Thong T. Do, Thomson Corporate Research, United States; Trac D. Tran, The Johns Hopkins University, United States*

### **WA-L5.4: NEW IMAGE QUALITY METRIC USING DERIVATIVE FILTERS AND .....3357 COMPRESSIVE SENSING**

*Dong-O Kim, Rae-Hong Park, Ji Won Lee, Sogang University, Republic of Korea*

### **WA-L5.5: GRADIENT PROJECTION FOR LINEARLY CONSTRAINED CONVEX .....3361 OPTIMIZATION IN SPARSE SIGNAL RECOVERY**

*Zachary Harmany, Duke University, United States; Daniel Thompson, University of California, Merced, United States; Rebecca Willett, Duke University, United States; Roummel Marcia, University of California, Merced, United States*

### **WA-L5.6: COMPRESSED SENSING USING A GAUSSIAN SCALE MIXTURES MODEL .....3365 IN WAVELET DOMAIN**

*Yookyung Kim, University of Arizona, United States; Mariappan Nadar, Siemens Corporation, Corporate Research, United States; Ali Bilgin, University of Arizona, United States*

### **WA-L5.7: MEDICAL IMAGE RECONSTRUCTION FROM SPARSE SAMPLES USING .....3369 SIMULTANEOUS PERTURBATION STOCHASTIC OPTIMIZATION**

*Y. V. Venkatesh, Ashraf A. Kassim, Dornoosh Zonoobi, National University of Singapore, Singapore*

### **WA-L5.8: STREAMING COMPRESSIVE SENSING FOR HIGH-SPEED PERIODIC .....3373 VIDEOS**

*M. Salman Asif, Georgia Institute of Technology, United States; Dikpal Reddy, University of Maryland, United States; Petros Boufounos, Ashok Veeraraghavan, Mitsubishi Electric Research Laboratories, United States*

## **WA-L6: VIDEO COMPRESSION STANDARDS**

### **WA-L6.1: COMPRESSIVE SENSING WITH ADAPTIVE PIXEL DOMAIN .....3377 RECONSTRUCTION FOR BLOCK-BASED VIDEO CODING**

*Thong T. Do, Xiaoan Lu, Joel Sole, Technicolor Corporate Research, United States*

### **WA-L6.2: ENHANCED INTRA PREDICTION AND TRANSFORM FOR VIDEO CODING.....3381**

*Kai Zhang, Institute of Computing Technology, Chinese Academy of Sciences, China; Shawmin Lei, MediaTek (Beijing) Inc., China; Wen Gao, Institute of Computing Technology, Chinese Academy of Sciences, China*



<b>WA-L6.3: SPARSE SHIFT-DCT SPATIAL PREDICTION .....</b>	<b>3385</b>
<i>Dominique Thoreau, Aurélie Martin, Edouard François, Jérôme Viéron, Technicolor, France; Quan Huynh-Thu, technicolor, France</i>	
<b>WA-L6.4: PROBABILITY-BASED CODING MODE PREDICTION FOR H.264/AVC .....</b>	<b>3389</b>
<i>Tiesong Zhao, City University of Hong Kong, Hong Kong SAR of China; Hanli Wang, Tongji University, China; Sam Kwong, Sudeng Hu, City University of Hong Kong, Hong Kong SAR of China</i>	
<b>WA-L6.5: EDGE-AWARE INTRA PREDICTION FOR DEPTH-MAP CODING.....</b>	<b>3393</b>
<i>Godwin Shen, Woo-shik Kim, Antonio Ortega, University of Southern California, United States; Jaejoon Lee, HoCheon Wey, Samsung Electronics Co., Ltd., Republic of Korea</i>	
<b>WA-L6.6: REPLACING PICTURE REGIONS IN H.264/AVC BITSTREAM BY UTILIZING INDEPENDENT SLICES .....</b>	<b>3397</b>
<i>Janne Vehkaperä, Seppo Tomperi, VTT Technical Research Centre of Finland, Finland</i>	
<b>WA-L6.7: A SINGLE-PASS BASED ADAPTIVE INTERPOLATION FILTERING ALGORITHM FOR VIDEO CODING .....</b>	<b>3401</b>
<i>Kai Zhang, Institute of Computing Technology, Chinese Academy of Sciences, China; Xun Guo, MediaTek (Beijing) Inc., China; Yu-wen Huang, MediaTek (Beijing) Inc, China; Shawmin Lei, MediaTek (Beijing) Inc., China; Wen Gao, Institute of Computing Technology, Chinese Academy of Sciences, China</i>	
<b>WA-L6.8: MODE-CORRELATION-BASED EARLY TERMINATION MODE DECISION FOR MULTI-VIEW VIDEO CODING .....</b>	<b>3405</b>
<i>Huanqiang Zeng, Kai-Kuang Ma, Nanyang Technological University, Singapore; Canhui Cai, Huaqiao University, China</i>	
<b>WA-L7: STEREOSCOPIC, MULTIVIEW AND 3D CODING</b>	
<b>WA-L7.2: MULTI-VIEW PREDICTION STRUCTURE FOR FREE VIEWPOINT VIDEO .....</b>	<b>3409</b>
<i>Seok Lee, HoCheon Wey, Du-Sik Park, Changyeong Kim, Samsung Electronics Co., Ltd., Republic of Korea</i>	
<b>WA-L7.3: IMPROVED PREDICTION FOR LAYERED PREDICTIVE ANIMATED MESH COMPRESSION .....</b>	<b>3413</b>
<i>M. Oguz Bici, Gozde B. Akar, Middle East Technical University, Turkey</i>	
<b>WA-L7.4: PROGRESSIVE COMPRESSION OF 3D TRIANGULAR MESHES USING TOPOLOGY-BASED KARHUNEN-LOËVE TRANSFORM .....</b>	<b>3417</b>
<i>Jae-Kyun Ahn, Dae-Youn Lee, Korea University, Republic of Korea; Minsu Ahn, James Do Kyoon Kim, Changyeong Kim, Samsung Advanced Institute of Technology, Republic of Korea; Chang-Su Kim, Korea University, Republic of Korea</i>	
<b>WA-L7.5: SPARSE DYADIC MODE FOR DEPTH MAP COMPRESSION .....</b>	<b>3421</b>
<i>Shujie Liu, State University of New York at Buffalo, United States; PoLin Lai, Dong Tian, Cristina Gomila, Technicolor Research &amp; Innovation, United States; Chang Wen Chen, State University of New York at Buffalo, United States</i>	
<b>WA-L7.6: SHAPE APPROXIMATION FOR EFFICIENT PROGRESSIVE MESH COMPRESSION .....</b>	<b>3425</b>
<i>Khaled Mamou, Christophe Dehais, FittingBox, France; Faten Chaieb, Faouzi Ghorbel, University of Manouba/ENSI, Tunisia</i>	



**WA-L7.7: FAST MODE DECISION FOR MULTIVIEW VIDEO CODING BASED ON .....3429  
SCENE GEOMETRY**

*Gianluca Cernigliaro, Fernando Jaureguizar Nuñez, Julián Cabrera Quesada, Narciso García, Universidad Politécnica de Madrid, Spain*

**WA-L7.8: PATCH-BASED COMPRESSION FOR TIME-VARYING MESHES.....3433**

*Toshihiko Yamasaki, Kiyoharu Aizawa, University of Tokyo, Japan*

**WA-L8: FOREGROUND/BACKGROUND SEGREGATION**

**WA-L8.2: HIERARCHICAL METHOD FOR FOREGROUND DETECTION USING .....3441  
CODEBOOK MODEL**

*Jing-Ming Guo, Chih-Cheng Hsu, National Taiwan University of Science and Technology, Taiwan*

**WA-L8.3: USING DIRECTIONAL STATISTICS TO LEARN CAST SHADOWS FROM A .....3445  
MULTI-SPECTRAL LIGHT SOURCES PHYSICAL MODEL**

*Rui Caseiro, João F. Henriques, Jorge Batista, University of Coimbra, Portugal*

**WA-L8.4: ENHANCED BAYESIAN FOREGROUND SEGMENTATION USING .....3449  
BRIGHTNESS AND COLOR DISTORTION REGION-BASED MODEL FOR SHADOW  
REMOVAL**

*Jaime Gallego, Montse Pardas, Technical University of Catalonia (UPC), Spain*

**WA-L8.5: A NEW TECHNIQUE FOR BACKGROUND MODELING AND SUBTRACTION .....3453  
FOR MOTION DETECTION IN REAL-TIME VIDEOS**

*Maha Mohamed Azab, Howida Abdelfattah Shedeed, Ashraf Saad Hussein, Ain Shams University, Egypt*

**WA-L8.6: A STATISTICAL APPROACH FOR SHADOW DETECTION USING .....3457  
SPATIO-TEMPORAL CONTEXTS**

*Yiyang Liu, Don Adjero, West Virginia University, United States*

**WA-L8.7: A ROBUST FRAMEWORK FOR REGION BASED VIDEO OBJECT .....3461  
SEGMENTATION**

*Marcos Escudero-Viñolo, Jesús Bescós, Universidad Autónoma de Madrid, Spain*

**WA-L8.8: BACKGROUND SUBTRACTION BASED ON PHASE AND DISTANCE .....3465  
TRANSFORM UNDER SUDDEN ILLUMINATION CHANGE**

*Gengjian Xue, Jun Sun, Li Song, Shanghai Jiao Tong University, China*

**WA-L9: HUMAN DETECTION AND TRACKING**

**WA-L9.1: PART-BASED HUMAN DETECTION ON RIEMANNIAN MANIFOLDS.....3469**

*Diego Tosato, Michela Farenzena, Marco Cristani, Vittorio Murino, University of Verona, Italy*

**WA-L9.2: EXTENDED HISTOGRAM OF GRADIENTS FEATURE FOR HUMAN .....3473  
DETECTION**

*Amit Satpathy, Xudong Jiang, Nanyang Technological University, Singapore; How-Lung Eng, Agency for Science, Technology and Research, Singapore*

<b>WA-L9.3: IMPROVING PERSON DETECTION USING SYNTHETIC TRAINING DATA.....</b>	<b>3477</b>
<i>Jie Yu, Dirk Farin, Christof Krueger, Robert Bosch GmbH, Germany; Bernt Schiele, Technische Universität Darmstadt, Germany</i>	
<b>WA-L9.4: CLASSIFICATION OF COMPLEX PEDESTRIAN ACTIVITIES FROM TRAJECTORIES .....</b>	<b>3481</b>
<i>Jacinto Nascimento, Jorge Marques, Instituto de Sistemas e Robótica, Portugal; Mário Figueiredo, Instituto de Telecomunicações, Portugal</i>	
<b>WA-L9.5: A HYBRID HUMAN FALL DETECTION SCHEME.....</b>	<b>3485</b>
<i>Yie-Tarng Chen, Yu-Ching Lin, Wen-Hsien Fang, National Taiwan University of Science and Technology, Taiwan</i>	
<b>WA-L9.6: AN ADAPTIVE APPROACH FOR OVERLAPPING PEOPLE TRACKING BASED ON FOREGROUND SILHOUETTES .....</b>	<b>3489</b>
<i>Hsin-Ho Yeh, Jiun-Yu Chen, Chun-Rong Huang, Chu-Song Chen, Academic Sinica, Taiwan</i>	
<b>WA-L9.7: MULTI SCALE BLOCK HISTOGRAM OF TEMPLATE FEATURE FOR PEDESTRIAN DETECTION .....</b>	<b>3493</b>
<i>Shaopeng Tang, Satoshi Goto, Waseda University, Japan</i>	
<b>WA-L10: POSE ESTIMATION</b>	
<b>WA-L10.1: DETECTION AND ANALYSIS OF SYMMETRICAL PARTS ON FACE FOR HEAD POSE ESTIMATION .....</b>	<b>3249</b>
<i>Afffa Dahmane, Slimane Larabi, USTHB University, Algeria; Chabane Djeraba, USTL University, France</i>	
<b>WA-L10.2: MULTIPLE NONOVERLAPPING CAMERA POSE ESTIMATION .....</b>	<b>3253</b>
<i>Mohammad Ehab Ragab, The Electronics Research Institute, Egypt; Kin Hong Wong, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
<b>WA-L10.3: PART-BASED INITIALIZATION FOR HAND TRACKING .....</b>	<b>3257</b>
<i>Jiang Xu, Ying Wu, Aggelos K. Katsaggelos, Northwestern University, United States</i>	
<b>WA-L10.4: POSE ESTIMATION USING FACIAL FEATURE POINTS AND MANIFOLD LEARNING .....</b>	<b>3261</b>
<i>Raymond Ptucha, Andreas Savakis, Rochester Institute of Technology, United States</i>	
<b>WA-L10.5: MODEL-BASED 3D HUMAN MOTION TRACKING AND VOXEL RECONSTRUCTION FROM SPARSE VIEWS .....</b>	<b>3265</b>
<i>Junchi Yan, Jian Song, Liwei Wang, Yuncai Liu, Shanghai Jiao Tong University, China</i>	
<b>WA-L10.6: HUMAN ARM ESTIMATION USING CONVEX FEATURES IN DEPTH IMAGES .....</b>	<b>3269</b>
<i>Zhilan Hu, Maolin Chen, Rufeng Chu, Hwasup Lim, Samsung Advanced Institute of Technology, China</i>	

**WA-L10.7: ARTICULATED HUMAN BODY POSE TRACKING BY SUPPRESSION BASED .....3273  
IMMUNE PARTICLE FILTER**

*Min Jiang, Jinshan Tang, Li Chen, Tao Shang, Zhaohui Gan, Xiaoming Liu, Qin Xu, Wuhan University of Science and Technology, China*

**WA-L10.8: MULTI-MANIFOLD MODELING FOR HEAD POSE ESTIMATION .....3277**

*Xiangyang Liu, Hongtao Lu, Shanghai Jiao Tong University, China; Wenbin Li, Shanghai Sixth Hospital, China*

**WA-PA: IMAGE AND VIDEO SENSING AND ACQUISITION**

**WA-PA.1: VIDEO STABILIZATION AND ROLLING SHUTTER DISTORTION .....3501  
REDUCTION**

*Wei Hong, Texas Instruments, Inc., United States; Dennis Wei, Massachusetts Institute of Technology, United States; Aziz Umit Batur, Texas Instruments, Inc., United States*

**WA-PA.2: OMNISIFT: SCALE INVARIANT FEATURES IN OMNIDIRECTIONAL IMAGES.....3505**

*Zafer Arican, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

**WA-PA.3: SAMPLING-AWARE POLAR DESCRIPTORS ON THE SPHERE.....3509**

*Zafer Arican, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland*

**WA-PA.5: VIDEO STABILIZATION FOR VEHICULAR APPLICATIONS USING .....3517  
SURF-LIKE DESCRIPTOR AND KD-TREE**

*Keng-Yen Huang, Yi-Min Tsai, Chih-Chung Tsai, Liang-Gee Chen, National Taiwan University, Taiwan*

**WA-PA.6: A BAYESIAN APPROACH TO SHAPE FROM CODED APERTURE.....3521**

*Manuel Martinello, Tom E. Bishop, Paolo Favaro, Heriot-Watt University, United Kingdom*

**WA-PA.8: GEOMETRIC AVERAGING OF X-RAY SIGNALS IN AUTOMATIC EXPOSURE .....3525  
CONTROL**

*Rudolph Snoeren, Peter H. N. de With, University of Technology Eindhoven, Netherlands*

**WA-PA.10: FREE SPACE DETECTION USING ACTIVE CONTOURS IN .....3533  
OMNIDIRECTIONAL IMAGES.**

*Pauline Merveilleux, Ouiddad Labbani-Igbida, El Mustapha Mouaddib, Université de Picardie Jules Verne, France*

**WA-PA.11: AN UNCOMPRESSED BENCHMARK IMAGE DATASET FOR COLOUR .....3537  
IMAGING**

*Gerald Schaefer, Loughborough University, United Kingdom*

## **WA-PB: IMAGE ENHANCEMENT III**

**WA-PB.2: EFFECTIVE SINGLE IMAGE DEHAZING BY FUSION .....3541**  
*Codruta Ancuti, Cosmin Ancuti, Philippe Bekaert, Hasselt University, Belgium*

**WA-PB.3: REGION-BASED BACKLIGHT COMPENSATION ALGORITHM FOR IMAGES .....3545 AND VIDEOS**  
*Dae-Young Hyun, Seoul National University, Republic of Korea; Jun-Hee Heu, Georgia Institute of Technology, United States; Chang-Su Kim, Korea University, Republic of Korea; Sang-Uk Lee, Seoul National University, Republic of Korea*

**WA-PB.5: FRAME-BASED DECONVOLUTION OF POISSONIAN IMAGES USING .....3549 ALTERNATING DIRECTION OPTIMIZATION**  
*Mário Figueiredo, José Bioucas-Dias, Instituto de Telecomunicações, Portugal*

**WA-PB.6: AUTOMATIC CONTRAST ENHANCEMENT OF LOW-LIGHT IMAGES BASED .....3553 ON LOCAL STATISTICS OF WAVELET COEFFICIENTS**  
*Artur Loza, David R. Bull, Alin M. Achim, University of Bristol, United Kingdom*

**WA-PB.7: BARCODE-BASED CALIBRATION OF A 1-D BLUR RESTORATION PIPELINE .....3557**  
*Matthew Gaubatz, Steven Simske, Hewlett-Packard, United States*

**WA-PB.8: RESTORATION OF HIGH ISO-SENSITIVITY COLOR IMAGES .....3561**  
*Takahiro Saito, Daisuke Yamada, Takashi Komatsu, Kanagawa University, Japan*

**WA-PB.9: STRUCTURE-PRESERVING MULTISCALE VESSEL ENHANCING .....3565 DIFFUSION FILTER**  
*Yipping Chen, National University of Defense Technology, Hong Kong SAR of China; Liansheng Wang, Lin Shi, Defeng Wang, Pheng Ann Heng, Tien-Tsin Wong, Chinese University of Hong Kong, Hong Kong SAR of China; Xiang Li, National University of Defense Technology, China*

**WA-PB.10: IMAGE DECONVOLUTION USING MULTIGRID NATURAL IMAGE PRIOR .....3569 AND ITS APPLICATIONS**  
*Tingbo Hou, Stony Brook University, United States; Sen Wang, Eastman Kodak Company, United States; Hong Qin, Stony Brook University, United States; Rodney Miller, Eastman Kodak Company, United States*

**WA-PB.11: A NOVEL METHOD FOR BINARIZATION OF BADLY ILLUMINATED .....3573 DOCUMENT IMAGES**  
*Seyed Amin Tabatabaei, University of Tehran, Iran; Mehdy Bohlool, Florida Institute of Technology, United States*

**WA-PB.12: SPARSE BAYESIAN IMAGE RESTORATION .....3577**  
*S. Derin Babacan, Northwestern University, United States; Rafael Molina, Universidad de Granada, Spain; Aggelos K. Katsaggelos, Northwestern University, United States*

**WA-PB.13: MAXIMUM LIKELIHOOD BLIND IMAGE RESTORATION VIA .....3581 ALTERNATING MINIMIZATION**  
*Abd-Krim Seghouane, National ICT Australia, Australia*

**WA-PB.14: DETECTION AND RESTORATION OF COLOR-TIMING ECHO ARTIFACT .....3585 FOR HD DIGITAL CINEMA FILMS**  
*Quoc Bao Do, Marie Luong, Azeddine Beghdadi, L2TI, Universite Paris 13, France*

<b>WA-PB.15: IMPROVED SINGLE IMAGE DEHAZING USING SEGMENTATION .....</b>	<b>3589</b>
<i>Shuai Fang, Jiqing Zhan, Hefei University of Technology, China; Yang Cao, University of Science and Technology of China, China; RuiZhong Rao, Chinese Academy of Sciences, China</i>	
<b>WA-PB.16: SINGLE COLOR IMAGE DEHAZING USING SPARSE PRIORS .....</b>	<b>3593</b>
<i>Xue-Mei Dong, Zhejiang Gongshang University, China; Xi-Yuan Hu, Si-Long Peng, Chinese Academy of Sciences, China; Duo-Chao Wang, Beijing ViSystem Co. Ltd., China</i>	
<b>WA-PB.17: GAMUT-ADAPTIVE CORRECTION IN COLOR IMAGE PROCESSING.....</b>	<b>3597</b>
<i>Yoonsung Bae, Jae Ho Jang, Jong Beom Ra, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
<b>WA-PB.18: CONSTRUCTING A SPARSE CONVOLUTION MATRIX FOR SHIFT .....</b>	<b>3601</b>
<b>VARYING IMAGE RESTORATION PROBLEMS</b>	
<i>Stanley Chan, University of California, San Diego, United States</i>	
<b>WA-PC: SEGMENTATION AND QUANTITATIVE ANALYSIS III</b>	
<b>WA-PC.2: INTERACTIVE IMAGE SEGMENTATION BASED ON OBJECT CONTOUR .....</b>	<b>3605</b>
<b>FEATURE IMAGE</b>	
<i>Qiang Chen, Benben Xue, Quansen Sun, Dshen Xia, Nanjing University of Science and Technology, China</i>	
<b>WA-PC.3: TEETH SEGMENTATION IN 3D DENTITION MODELS FOR THE VIRTUAL .....</b>	<b>3609</b>
<b>ARTICULATOR</b>	
<i>Marcin Grzegorzek, Dietrich Paulus, University of Koblenz-Landau, Germany; Marina Trierscheid, Dimitri Papoutsis, RV Realtime Visions GmbH, Germany</i>	
<b>WA-PC.4: AN IMAGE PROCESSING ALGORITHM FOR ACCURATE EXTRACTION OF .....</b>	<b>3613</b>
<b>THE CENTERLINE FROM HUMAN METAPHASE CHROMOSOMES</b>	
<i>Akila Subasinghe Arachchige, Jagath Samarabandu, Joan Knoll, Wahab Khan, Peter Rogan, University of Western Ontario, Canada</i>	
<b>WA-PC.5: PATTERN ANALYSIS OF STEM CELL GROWTH DYNAMICS IN THE .....</b>	<b>3617</b>
<b>SHOOT APEX OF ARABIDOPSIS.</b>	
<i>Oben Tataw, Min Liu, Amit Roy-Chowdhury, Ram Yadav, Venugopala Reddy, University of California, Riverside, United States</i>	
<b>WA-PC.6: ENTROPIES AND CROSS-ENTROPIES OF EXPONENTIAL FAMILIES .....</b>	<b>3621</b>
<i>Frank Nielsen, Ecole Polytechnique/Sony CSL, France; Richard Nock, CEREGMIA, France</i>	
<b>WA-PC.7: INTERACTIVE GRAPH CUT SEGMENTATION OF TOUCHING NEURONAL .....</b>	<b>3625</b>
<b>STRUCTURES FROM ELECTRON MICROGRAPHS</b>	
<i>Vignesh Jagadeesh, B. S. Manjunath, University of California, Santa Barbara, United States</i>	
<b>WA-PC.8: MEAN SHIFT BASED ALGORITHM FOR MAMMOGRAPHIC BREAST MASS .....</b>	<b>3629</b>
<b>DETECTION</b>	
<i>Farhang Sahba, Anastasios Venetsanopoulos, Ryerson University, Canada</i>	
<b>WA-PC.9: IMPROVING HISTOLOGY IMAGES SEGMENTATION THROUGH SPATIAL .....</b>	<b>3633</b>
<b>CONSTRAINTS AND SUPERVISION</b>	
<i>Nicolas Hervé, Institut Pasteur, France; Aude Servais, Eric Thervet, Necker Hospital, France; Jean-Christophe Olivo-Marin, Vannary Meas-Yedid, Institut Pasteur, France</i>	

**WA-PC.10: NEURAL STEM CELL SEGMENTATION USING LOCAL COMPLEX PHASE .....3637  
INFORMATION**

*Taoyi Chen, Harbin Institute of Technology, China; Yong Zhang, IBM Almaden Research Center, United States; Changhong Wang, Zhenshen Qu, Harbin Institute of Technology, China; Stephen Wong, Methodist Hospital, China*

**WA-PC.11: MULTI-SPECTRAL IMAGE ANALYSIS FOR SKIN PIGMENTATION .....3641  
CLASSIFICATION**

*Sylvain Prigent, Xavier Descombes, INRIA, France; Didier Zugaj, Philippe Martel, Galderma, France; Josiane Zerubia, INRIA, France*

**WA-PC.12: GAUSSIAN MIXTURE MODELS FOR SPOTS IN MICROSCOPY USING A .....3645  
NEW SPLIT/MERGE EM ALGORITHM**

*Kangyu Pan, Anil Kokaram, Jens Hillebrand, Mani Ramaswami, Trinity College Dublin, Ireland*

**WA-PC.13: CEREBRAL WHITE MATTER SEGMENTATION FROM MRI USING .....3649  
PROBABILISTIC GRAPH CUTS AND GEOMETRIC SHAPE PRIORS**

*Ananda Chowdhury, Ashish Rudra, Mainak Sen, Jadavpur University, India; Ahmed Elnakib, Ayman El-Baz, University of Louisville, United States*

**WA-PC.14: 3D AUTOMATIC ANATOMY SEGMENTATION BASED ON GRAPH .....3653  
CUT-ORIENTED ACTIVE APPEARANCE MODELS**

*Xinjian Chen, Jianhua Yao, Ying Zhuge, National Institutes of Health, United States; Ulas Bagci, University of Nottingham, Jubilee Campus, United Kingdom*

**WA-PC.15: CURVELET ANALYSIS OF KYMOGRAPH FOR TRACKING .....3657  
BI-DIRECTIONAL PARTICLES IN FLUORESCENCE MICROSCOPY IMAGES**

*Nicolas Chenouard, Johanna Buisson, Institut Pasteur, CNRS, France; Isabelle Bloch, Télécom ParisTech, France; Philippe Bastin, Jean-Christophe Olivo-Marin, Institut Pasteur, CNRS, France*

**WA-PC.17: EDGE DETECTION OF THREE-DIMENSIONAL OBJECTS BY .....3661  
MANIPULATING PUPIL FUNCTIONS IN AN OPTICAL SCANNING HOLOGRAPHY  
SYSTEM**

*Xin Zhang, Edmund Lam, University of Hong Kong, Hong Kong SAR of China*

**WA-PD: IMAGE PROCESSING FOR WATERMARKING II**

**WA-PD.1: VARIABLE BLOCK-SIZE IMAGE AUTHENTICATION WITH LOCALIZATION .....3665  
AND SELF-RECOVERY**

*A. M. Hassan, A. Al-Hamadi, Otto-von-Guericke University, Germany; Y. M. Y. Hasan, Assiut University, Taibah University, Germany; M. A. A. Wahab, Minia University, Germany; Axel Panning, Bernd Michaelis, Otto-von-Guericke University, Germany*

**WA-PD.2: A GEOMETRICALLY-RESILIENT SURF-BASED IMAGE FINGERPRINTING .....3669  
SCHEME**

*Guillaume Gigaud, Pierre Moulin, University of Illinois at Urbana-Champaign, United States*

**WA-PD.3: EFFICIENT REVERSIBLE IMAGE WATERMARKING BY USING .....3673  
DYNAMICAL PREDICTION-ERROR EXPANSION**

*Chao Wang, Xiaolong Li, Bin Yang, Institute of Computer Science and Technology, Peking University, China*



<b>WA-PD.5: A GEOMETRICALLY RESILIENT ROBUST IMAGE WATERMARKING SCHEME USING DEFORMABLE MULTI-SCALE TRANSFORM</b>	<b>3677</b>
<i>Chuntao Wang, Jiangqun Ni, Huashuo Zhuo, Jiwu Huang, Sun Yat-sen University, China</i>	
<b>WA-PD.6: PRECISE LOCALIZATION OF KEY-POINTS TO IDENTIFY LOCAL REGIONS FOR ROBUST DATA HIDING</b>	<b>3681</b>
<i>Lakshmanan Nataraj, Anindya Sarkar, B. S. Manjunath, University of California, Santa Barbara, United States</i>	
<b>WA-PD.7: ITERATIVE EMBEDDING-BASED REVERSIBLE WATERMARKING FOR 2D-VECTOR MAPS</b>	<b>3685</b>
<i>Liujuan Cao, Chaoguang Men, Xiang Li, Harbin Engineering University, China</i>	
<b>WA-PD.8: BLIND INVISIBLE WATERMARKING FOR 3D MESHES WITH TEXTURES</b>	<b>3689</b>
<i>Yang Liu, Balakrishnan Prabhakaran, Xiaohu Guo, University of Texas at Dallas, United States</i>	
<b>WA-PD.9: A BLIND VIDEO WATERMARK DETECTION METHOD BASED ON 3D-DWT TRANSFORM</b>	<b>3693</b>
<i>Ce Wang, Chao Zhang, Pengwei Hao, Peking University, China</i>	
<b>WA-PD.10: WATERMARK SURVIVAL CHANCE (WSC) CONCEPT FOR IMPROVING WATERMARK ROBUSTNESS AGAINST JPEG COMPRESSION</b>	<b>3697</b>
<i>Ehsan Nezhadarya, Z. Jane Wang, Rabab K. Ward, University of British Columbia, Canada</i>	
<b>WA-PD.11: A FAST PERFORMANCE ESTIMATION SCHEME FOR HISTOGRAM SHIFTING BASED MULTI-LAYER EMBEDDING</b>	<b>3701</b>
<i>Junxiang Wang, Sun Yat-Sen University / Jingdezhen Ceramic Institute, China; Jiangqun Ni, Sun Yat-sen University, China</i>	
<b>WA-PD.12: INCORPORATING WATSON'S PERCEPTUAL MODEL INTO PATCHWORK WATERMARKING FOR DIGITAL IMAGES</b>	<b>3705</b>
<i>Roland Hu, Zhejiang University, China; Fei Chen, Jimei University, China; Huimin Yu, Zhejiang University, China</i>	
 <b>WA-PE: DISTRIBUTED CODING</b>	
<b>WA-PE.2: HIDDEN MARKOV MODEL FOR DISTRIBUTED VIDEO CODING</b>	<b>3709</b>
<i>Velotiaray Toto-Zaraso, Aline Roumy, Christine Guillemot, INRIA, France</i>	
<b>WA-PE.3: DISTRIBUTED SOURCE CODING BASED ON PUNCTURED CONDITIONAL ARITHMETIC CODES</b>	<b>3713</b>
<i>Xi Chen, David Taubman, University of New South Wales, Australia</i>	
<b>WA-PE.4: DISTRIBUTED JOINT SOURCE-CHANNEL ARITHMETIC CODING</b>	<b>3717</b>
<i>Marco Grangetto, Università di Torino, Italy; Enrico Magli, Gabriella Olmo, Politecnico di Torino, Italy</i>	
<b>WA-PE.5: RATE-DISTORTION BASED RECONSTRUCTION OPTIMIZATION IN DISTRIBUTED SOURCE CODING FOR INTERACTIVE MULTIVIEW VIDEO STREAMING</b>	<b>3721</b>
<i>Ngai-Man Cheung, Stanford University, United States; Antonio Ortega, University of Southern California, United States; Gene Cheung, National Institute of Informatics, Japan</i>	

<b>WA-PE.6: MIXED-RESOLUTION DISTRIBUTED VIDEO CODEC WITHOUT MOTION ESTIMATION AT THE ENCODER</b>	<b>3725</b>
<i>Bruno Macchiavello, Edson M. Hung, Universidade de Brasilia, Brazil; Ricardo L. de Queiroz, Universidade de Brasilia, Brazil; Debargha Mukherjee, Hewlett-Packard Labs, United States</i>	
<b>WA-PE.7: SIDE-INFORMATION-ADAPTIVE DISTRIBUTED SOURCE CODING</b>	<b>3729</b>
<i>David Varodayan, Bernd Girod, Stanford University, United States</i>	
<b>WA-PE.8: BITPLANE INTRA CODING WITH DECODER-SIDE MODE DECISION IN DISTRIBUTED VIDEO CODING</b>	<b>3733</b>
<i>Jürgen Slowack, Stefaan Mys, Jozef Skorupa, Ghent University - IBBT, Belgium; Nikos Deligiannis, Vrije Universiteit Brussel - IBBT, Belgium; Peter Lambert, Ghent University - IBBT, Belgium; Adrian Munteanu, Vrije Universiteit Brussel - IBBT, Belgium; Rik Van de Walle, Ghent University - IBBT, Belgium</i>	
<b>WA-PE.9: PROBABILITY UPDATING FOR DECODER AND ENCODER RATE CONTROL TURBO BASED WYNER-ZIV VIDEO CODING</b>	<b>3737</b>
<i>Catarina Brites, IST - IT, Portugal; Fernando Pereira, Instituto Superior Técnico-Instituto de Telecomunicações, Lisboa, Portugal</i>	
<b>WA-PF: HARDWARE AND SOFTWARE SYSTEMS FOR IMAGE AND VIDEO PROCESSING</b>	
<b>WA-PF.1: BIT-PLANE STACK FILTER ALGORITHM FOR FOCAL PLANE PROCESSORS</b>	<b>3741</b>
<i>Andres Frias-Velazquez, Wilfried Philips, Ghent University, Belgium</i>	
<b>WA-PF.2: HIGH-PERFORMANCE MEMORY INTERFACE ARCHITECTURE FOR HIGH-DEFINITION VIDEO CODING APPLICATION</b>	<b>3745</b>
<i>Joon-Ho Song, Doo Hyun Kim, DoHyung Kim, Shi Hwa Lee, Samsung Advanced Institute of Technology, Republic of Korea</i>	
<b>WA-PF.3: H.264 DECODER ON EMBEDDED DUAL CORE WITH DYNAMICALLY LOAD-BALANCED FUNCTIONAL PARTITIONING</b>	<b>3749</b>
<i>Minsoo Kim, Joonho Song, DoHyung Kim, Shihwa Lee, Samsung Advanced Institute of Technology, Republic of Korea</i>	
<b>WA-PF.4: A SCALABLE PARALLEL HARDWARE ARCHITECTURE FOR CONNECTED COMPONENT LABELING</b>	<b>3753</b>
<i>Chung-Yuan Lin, Sz-Yan Li, Tsung-Han Tsai, National Central University, Taiwan</i>	
<b>WA-PF.5: K-NEAREST NEIGHBOR SEARCH: FAST GPU-BASED IMPLEMENTATIONS AND APPLICATION TO HIGH-DIMENSIONAL FEATURE MATCHING</b>	<b>3757</b>
<i>Vincent Garcia, Laboratoire LIX - Ecole Polytechnique, France; Eric Debreuve, Laboratoire I3S - Universite de Nice-Sophia Antipolis/CNRS, France; Frank Nielsen, Laboratoire LIX - Ecole Polytechnique, France; Michel Barlaud, Laboratoire I3S - Universite de Nice-Sophia Antipolis/CNRS, France</i>	
<b>WA-PF.6: 2000-FPS MULTI-OBJECT EXTRACTION BASED ON CELL-BASED LABELING</b>	<b>3761</b>
<i>Qingyi Gu, Takeshi Takaki, Idaku Ishii, Hiroshima University, Japan</i>	

<b>WA-PF.7: PIPELINE ARCHITECTURE FOR COMPOUND MORPHOLOGICAL OPERATORS</b> .....	<b>3765</b>
<i>Jan Bartovsky, Eva Dokladalova, University Paris-Est, France; Petr Dokladal, Ecole Nationale Supérieure des Mines de Paris, France; Vjaceslav Georgiev, University of West Bohemia, Czech Republic</i>	
<b>WA-PF.8: EFFICIENT FAST MULTIPLICATION-FREE INTEGER TRANSFORMATION FOR THE 2-D DCT H.265 STANDARD</b> .....	<b>3769</b>
<i>Mohamed Haggag, German University in Cairo, Egypt; Mohamed El-Sharkawy, Indiana University-Purdue University Indianapolis, United States; Gamal Fahmy, German University in Cairo, Egypt</i>	
<b>WA-PF.9: EFFICIENT IMPLEMENTATION OF A 3-D MEDICAL IMAGING COMPRESSION SYSTEM USING CAVLC</b> .....	<b>3773</b>
<i>Afandi Ahmad, Abbas Amira, Brunel University, United Kingdom; Michael Guarisco, Hassan Rabah, Yves Berviller, Nancy University, France</i>	
<b>WA-PF.10: PARALLEL IMPLEMENTATION OF AN ERROR DIFFUSION HALFTONING ALGORITHM WITH A GENERAL PURPOSE GRAPHICS PROCESSING UNIT</b> .....	<b>3777</b>
<i>Becksang Seong, Jaewoo Ahn, Wonyong Sung, Seoul National University, Republic of Korea</i>	
<b>WA-PG: FACE RECOGNITION AND UNDERSTANDING III</b>	
<b>WA-PG.1: CONSTRUCTING EFFICIENT CASCADE CLASSIFIERS FOR OBJECT DETECTION</b> .....	<b>3781</b>
<i>Matthew Day, John Robinson, University of York, United Kingdom</i>	
<b>WA-PG.2: A DISSIMILARITY KERNEL WITH LOCAL FEATURES FOR ROBUST FACIAL RECOGNITION</b> .....	<b>3785</b>
<i>Weilin Huang, Hujun Yin, University of Manchester, United Kingdom</i>	
<b>WA-PG.3: FACE-TLD: TRACKING-LEARNING-DETECTION APPLIED TO FACES</b> .....	<b>3789</b>
<i>Zdenek Kalal, Krystian Mikolajczyk, University of Surrey, United Kingdom; Jiri Matas, Czech Technical University in Prague, Czech Republic</i>	
<b>WA-PG.4: TANGENT SPACE DISCRIMINANT ANALYSIS FOR FEATURE EXTRACTION</b> .....	<b>3793</b>
<i>Zhihui Lai, Zhong Jin, Nanjing University of Science and Technology, China; W.K. Wong, Hong Kong Polytechnic University, China</i>	
<b>WA-PG.5: GLOBAL AND LOCAL FEATURE BASED MULTI-CLASSIFIER A-STACK MODEL FOR AGING FACE IDENTIFICATION</b> .....	<b>3797</b>
<i>Weifeng Li, Andrzej Drygajlo, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland</i>	
<b>WA-PG.6: FUSION OF VISIBLE AND SYNTHESISED NEAR INFRARED INFORMATION FOR FACE AUTHENTICATION</b> .....	<b>3801</b>
<i>Seyed Mohammad Mavadati, Mohammad Taghi Sadeghi, Yazd University, Iran; Josef Kittler, University of Surrey, United Kingdom</i>	
<b>WA-PG.7: COMPACT VISUAL CODEBOOK FOR ACTION RECOGNITION</b> .....	<b>3805</b>
<i>Qingdi Wei, Xiaoqin Zhang, Institute of Automation, Chinese Academy of Sciences, China; Yu Kong, Beijing Institute of Technology, China; Weiming Hu, Institute of Automation, Chinese Academy of Sciences, China; Haibin Ling, Temple University, China</i>	

<b>WA-PG.8: FRONTAL FACE DETECTION FOR SURVEILLANCE PURPOSES USING DUAL LOCAL BINARY PATTERNS FEATURES</b>	<b>3809</b>
<i>Wael Louis, Konstantinos N. Plataniotis, University of Toronto, Canada</i>	
<b>WA-PG.9: FEATURE EXTRACTION BASED ON THE EMBEDDED ZERO-TREE DCT FOR FACE RECOGNITION</b>	<b>3813</b>
<i>Amany Farag, Randa Atta, Suez Canal University, Egypt; Hani Mahdi, Ain Shams University, Egypt</i>	
<b>WA-PG.10: EFFICIENT SEARCH METHODS AND DEEP BELIEF NETWORKS WITH PARTICLE FILTERING FOR NON-RIGID TRACKING: APPLICATION TO LIP TRACKING</b>	<b>3817</b>
<i>Jacinto Nascimento, Gustavo Carneiro, ISR-IST, Portugal</i>	
<b>WA-PG.11: BENCHMARK FACE DETECTION USING A FACE RECOGNITION DATABASE</b>	<b>3821</b>
<i>Gee-Sern Hsu, Thu Ha Tran, Sheng-Lun Chung, National Taiwan University of Science and Technology, Taiwan</i>	
<b>WA-PG.12: LOCAL AND HOLISTIC TEXTURE ANALYSIS APPROACH FOR FACE RECOGNITION</b>	<b>3825</b>
<i>Sanun Srisuk, Amnart Petchpon, Mahanakorn University of Technology, Thailand</i>	
<b>WA-PG.13: ROBUST TRACKING OF FACIAL FEATURE POINTS WITH 3D ACTIVE SHAPE MODELS</b>	<b>3829</b>
<i>Moritz Kaiser, Dejan Arsic, Shamik Sural, Gerhard Rigoll, Technische Universität München, Germany</i>	
<b>WA-PG.14: MAXIMIZING INTRA-INDIVIDUAL CORRELATIONS FOR ILLUMINATION-INSENSITIVE FACE RECOGNITION</b>	<b>3833</b>
<i>Hu Han, Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS; Graduate University of Chinese Academy of Sciences, China; Shiguang Shan, Xilin Chen, Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS, China; Wen Gao, Institute of Digital Media, Peking University; Key Lab of Intelligent Information Processing of Chinese Academy of Sciences (CAS), Institute of Computing Technology, CAS, China</i>	
<b>WA-PG.15: POSE INVARIANT ROBUST FACIAL EXPRESSION ANALYSIS</b>	<b>3837</b>
<i>Khin Thu Zar Win, Fan Chen, Junko Izawa, Kazunori Kotani, Japan Advanced Institute of Science and Technology, Japan</i>	
<b>WA-PG.16: HOLISTIC ORTHOGONAL ANALYSIS OF DISCRIMINANT TRANSFORMS FOR COLOR FACE RECOGNITION</b>	<b>3841</b>
<i>Xiaoyuan Jing, Qian Liu, Chao Lan, Jiangyue Man, Sheng Li, Nanjing University of Posts and Telecommunications, China; David Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>WA-PH: OBJECT RECOGNITION AND CLASSIFICATION III</b>	
<b>WA-PH.1: FAST HUMAN DETECTION USING MI-SVM AND A CASCADE OF HOG-LBP FEATURES</b>	<b>3845</b>
<i>Chengbin Zeng, Huadong Ma, Anlong Ming, Beijing University of Posts and Telecommunications, China</i>	

<b>WA-PH.2: SHRINKING LARGE VISUAL VOCABULARIES USING MULTI-LABEL AGGLOMERATIVE INFORMATION BOTTLENECK</b>	<b>3849</b>
<i>Wojciech Wojcikiewicz, Alexander Binder, Technical University Berlin, Germany; Motoaki Kawanabe, Fraunhofer Institute FIRST, Germany</i>	
<b>WA-PH.3: CONE-RESTRICTED KERNEL SUBSPACE METHODS</b>	<b>3853</b>
<i>Takumi Kobayashi, Fumito Yoshikawa, Nobuyuki Otsu, National Institute of Advanced Industrial Science and Technology, Japan</i>	
<b>WA-PH.4: A SECOND ORDER POLYNOMIAL BASED SUBSPACE PROJECTION METHOD FOR DIMENSIONALITY REDUCTION</b>	<b>3857</b>
<i>Praveen Sankaran, Old Dominion University, Vision Lab, United States; Vijayan Asari, University of Dayton, United States</i>	
<b>WA-PH.5: SNOOPERTEXT: A MULTIREOLUTION SYSTEM FOR TEXT DETECTION IN COMPLEX VISUAL SCENES</b>	<b>3861</b>
<i>Rodrigo Minetto, Nicolas Thome, Matthieu Cord, Universite Pierre et Marie Curie (UPMC), Paris 6, France; Jonathan Fabrizio, EPITA - Ecole d'Ingénieurs en Informatique, France; Beatriz Marcotegui, Ecole des Mines de Paris, France</i>	
<b>WA-PH.6: ENHANCED VISUAL CATEGORIZATION PERFORMANCES BY INCORPORATION OF SIMPLE FEATURES INTO BIM FEATURES</b>	<b>3865</b>
<i>Shuangping Huang, South China University of Technology, South China Agricultural University, China; Lianwen Jin, South China University of Technology, Key Laboratory of Wireless Communication Networks and Terminals of Guangdong Higher Education Institutes, China</i>	
<b>WA-PH.8: STTK-BASED VIDEO OBJECT RECOGNITION</b>	<b>3873</b>
<i>Shuji Zhao, Frederic Precioso, ETIS Lab, CNRS UMR8051/ENSEA/Univ. Cergy-Pontoise, France; Matthieu Cord, LIP6, UPMC - PARIS VI, France</i>	
<b>WA-PH.10: AN EFFICIENT SYSTEM FOR COMBINING COMPLEMENTARY KERNELS IN COMPLEX VISUAL CATEGORIZATION TASKS</b>	<b>3877</b>
<i>David Picard, Nicolas Thome, Matthieu Cord, LIP6 UPMC, France</i>	
<b>WA-PH.11: IMPROVED MACHINE LEARNING FOR IMAGE CATEGORY RECOGNITION BY LOCAL COLOR CONSTANCY</b>	<b>3881</b>
<i>Hamid Reza Vaezi Joze, Mark S. Drew, Simon Fraser University, Canada</i>	
<b>WA-PH.12: COMPARISON OF LOCAL FEATURE DESCRIPTORS FOR MOBILE VISUAL SEARCH</b>	<b>3885</b>
<i>Vijay Chandrasekhar, David M. Chen, Andy Lai Lin, Gabriel Takacs, Sam S. Tsai, Ngai Man Cheung, Stanford University, United States; Yuriy Reznik, Qualcomm Inc., United States; Radek Grzeszczuk, Nokia Research Center, United States; Bernd Girod, Stanford University, United States</i>	
<b>WA-PH.13: 3D AUGMENTED MARKOV RANDOM FIELD FOR OBJECT RECOGNITION</b>	<b>3889</b>
<i>Wei Yu, Ahmed Bilal Ashraf, Carnegie Mellon University, United States; Yao-Jen Chang, Congcong Li, Tsuhan Chen, Cornell University, United States</i>	



<b>WA-PH.14: IDENTIFYING AND LEARNING VISUAL ATTRIBUTES FOR OBJECT RECOGNITION</b>	<b>3893</b>
<i>Kong-Wah Wan, Sujoy Roy, Institute for Infocomm Research, Singapore</i>	
<b>WA-PH.15: ACCURATE LOCALIZATION OF FOUR EXTREME CORNERS FOR BARCODE IMAGES CAPTURED BY MOBILE PHONES</b>	<b>3897</b>
<i>Huijuan Yang, Xudong Jiang, Alex C. Kot, Nanyang Technological University, Singapore</i>	
<b>WA-PH.16: EARTH DOCUMENTATION: OVERPASS DETECTION USING MOBILE LIDAR</b>	<b>3901</b>
<i>Cheng Qian, Bill Gale, Jeff Bach, Navteq Inc, United States</i>	
<b>WA-PH.17: HOW CONTEXT HELPS: A DISCRIMINATIVE CODEWORD SELECTION METHOD FOR OBJECT DETECTION</b>	<b>3905</b>
<i>Renzhong Wei, Hong Lu, Yingbin Zheng, Lei Cen, Cheng Jin, Xiangyang Xue, Fudan University, China; Weiguo Wu, Sony China Research Laboratory, China</i>	
 <b>WA-PI: DETECTION, TRACKING, AND RECOGNITION OF OBJECTS III</b>	
<b>WA-PI.1: SIFT IN PERCEPTION-BASED COLOR SPACE</b>	<b>3909</b>
<i>Yan Cui, Alain Pagani, Didier Stricker, Deutsche Forschungszentrum für Künstliche Intelligenz, Germany</i>	
<b>WA-PI.2: DETECTOR-LESS BALL LOCALIZATION USING CONTEXT AND MOTION FLOW ANALYSIS</b>	<b>3913</b>
<i>Fabio Poiesi, Fahad Daniyal, Andrea Cavallaro, Queen Mary, University of London, United Kingdom</i>	
<b>WA-PI.3: ROBUST TRACKING BASED ON BOOSTED COLOR SOFT SEGMENTATION AND ICA-R</b>	<b>3917</b>
<i>Fan Yang, Huchuan Lu, Dalian University of Technology, China; Yen-Wei Chen, Ritsumeikan University, Japan</i>	
<b>WA-PI.4: A FEATURE-BASED OBJECT TRACKING APPROACH FOR REALTIME IMAGE PROCESSING ON MOBILE DEVICES</b>	<b>3921</b>
<i>Lixin Fan, Nokia Research Center, Finland; Mikko Riihimaki, Iivari Kunttu, Nokia, Finland</i>	
<b>WA-PI.5: A STATISTICAL METHOD FOR OBJECT LOCALIZATION IN MULTI-CAMERA TRACKING</b>	<b>3925</b>
<i>László Havasi, Zoltán Szlavik, Computer and Automation Research Institute of the Hungarian Academy of Sciences, Hungary</i>	
<b>WA-PI.6: SCALE AND ROTATION INVARIANT FEATURE-BASED OBJECT TRACKING VIA MODIFIED ON-LINE BOOSTING</b>	<b>3929</b>
<i>Quan Miao, Guijin Wang, Xinggang Lin, Tsinghua University, China; Yongming Wang, Advanced Information Technology Institute, China; Chenbo Shi, Chao Liao, Tsinghua University, China</i>	
<b>WA-PI.7: OBJECT DETECTION AND SEGMENTATION ON A HIERARCHICAL REGION-BASED IMAGE REPRESENTATION</b>	<b>3933</b>
<i>Veronica Vilaplana, Ferran Marques, Miriam Leon, Antoni Gasull, Technical University of Catalonia (UPC), Spain</i>	
<b>WA-PI.8: AN EXPLORATION OF ON-ROAD VEHICLE DETECTION USING HIERARCHICAL SCALING SCHEMES</b>	<b>3937</b>
<i>Yi-Min Tsai, Keng-Yen Huang, Chih-Chung Tsai, Liang-Gee Chen, National Taiwan University, Taiwan</i>	



<b>WA-PI.9: REMOVAL OF FALSE POSITIVE IN OBJECT DETECTION WITH CONTOUR-BASED CLASSIFIERS</b>	<b>3941</b>
<i>Hongyu Li, Lei Chen, Tongji University, China</i>	
<b>WA-PI.10: ROBUST LICENSE PLATE DETECTION USING IMAGE SALIENCY</b>	<b>3945</b>
<i>Kai-Hsiang Lin, Hao Tang, Thomas S. Huang, University of Illinois at Urbana-Champaign, United States</i>	
<b>WA-PI.11: ROBUST MULTI-CAMERA TRACKING FROM SCHEMATIC DESCRIPTIONS</b>	<b>3949</b>
<i>Raúl Mohedano, Narciso García, Universidad Politécnica de Madrid, Spain</i>	
<b>WA-PI.12: DISCRIMINATIVE MODEL SELECTION FOR OBJECT MOTION RECOGNITION</b>	<b>3953</b>
<i>Jacinto Nascimento, Instituto de Sistemas e Robótica, Portugal; Jorge Marques, Mário Figueiredo, Instituto Superior Técnico, Portugal</i>	
<b>WA-PI.13: OBJECT TRACKING BY MULTI-CUES SPATIAL PYRAMID MATCHING</b>	<b>3957</b>
<i>Dong Wang, Huchuan Lu, Dalian University of Technology, China; Yen-Wei Chen, Ritsumeikan University, Japan</i>	
<b>WA-PI.14: TRACKING USING BAYESIAN INFERENCE WITH A TWO-LAYER GRAPHICAL MODEL</b>	<b>3961</b>
<i>Tobias Rehrl, Nikolaus Theißing, Alexander Bannat, Jürgen Gast, Dejan Arsic, Frank Wallhoff, Gerhard Rigoll, Technische Universität München, Germany</i>	
<b>WA-PJ: RENDERING II</b>	
<b>WA-PJ.1: A CLOSED-FORM EXPRESSION FOR THE BANDWIDTH OF THE PLENOPTIC FUNCTION UNDER FINITE FIELD OF VIEW CONSTRAINTS</b>	<b>3965</b>
<i>Christopher Gilliam, Pier Luigi Dragotti, Mike Brookes, Imperial College London, United Kingdom</i>	
<b>WA-PJ.2: A VIEW-DEPENDENT ADAPTIVITY METRIC FOR REAL TIME MESH TESSELLATION</b>	<b>3969</b>
<i>Tamy Boubekeur, Telecom ParisTech - CNRS, France</i>	
<b>WA-PJ.3: FACIAL EXPRESSION SYNTHESIS BASED ON MOTION PATTERNS LEARNED FROM FACE DATABASE</b>	<b>3973</b>
<i>Jia Jia, Shen Zhang, Lianhong Cai, Tsinghua University, China</i>	
<b>WA-PJ.4: SOLVING THE OUT-OF-GAMUT PROBLEM IN IMAGE COMPOSITION</b>	<b>3977</b>
<i>Wenxian Yang, Jianfei Cai, Jianmin Zheng, Nanyang Technological University, Singapore</i>	
<b>WA-PJ.5: REAL-TIME 3D RECONSTRUCTION AND POSE ESTIMATION FOR HUMAN MOTION ANALYSIS</b>	<b>3981</b>
<i>Holger Graf, Fraunhofer IGD, Germany; Sang Min Yoon, Technische Universität Darmstadt, Germany; Cornelius Malerczyk, Fraunhofer IGD, Germany</i>	
<b>WA-PJ.6: INTERMEDIATE CUBIC-PANORAMA SYNTHESIS BASED ON TRIANGULAR RE-PROJECTION</b>	<b>3985</b>
<i>Chunxiao Zhang, Beihang University, China; Eric Dubois, University of Ottawa, Canada; Yan Zhao, Beihang University, China</i>	

<b>WA-PJ.7: ROBUST RECONSTRUCTION OF ARBITRARILY DEFORMED BOKEH FROM ORDINARY MULTIPLE DIFFERENTLY FOCUSED IMAGES</b>	<b>3989</b>
<i>Kazuya Kodama, Ippeita Izawa, Research Organization of Information and Systems, Japan; Akira Kubota, Chuo University, Japan</i>	
<b>WA-PJ.8: VIDEO STYLIZATION BY SINGLE IMAGE EXAMPLE</b>	<b>3993</b>
<i>Ning Ye, Terence Sim, National University of Singapore, Singapore; Xiaoping Miao, Sun Yat-sen University, China</i>	
<b>WA-PJ.9: IMAGE SYNTHESIS USING CONDITIONAL RANDOM FIELDS</b>	<b>3997</b>
<i>Ehsan Ahmadi, Zohreh Azimifar, Shiraz University, Iran; Paul Fieguth, University of Waterloo, Canada; Shahabedin Ayatollahi, Shiraz University, Iran</i>	
<b>WA-PJ.10: TEXTURE MAPPING BASED VIDEO COMPRESSION SCHEME</b>	<b>4001</b>
<i>Aditya Khandelia, Santanu Chaudhury, Indian Institute of Technology, Delhi, India</i>	
<b>WA-PJ.11: INVISIBLE LIGHT : USING INFRARED FOR VIDEO CONFERENCE RELIGHTING</b>	<b>4005</b>
<i>Prabath Gunawardane, University of California, Santa Cruz, United States; Tom Malzbender, Ramin Samadani, Alan McReynolds, Dan Gelb, Hewlett Packard Labs, United States; James Davis, University of California, Santa Cruz, United States</i>	
<b>WP-L1: 3D VIDEO QUALITY ASSESSMENT</b>	
<b>WP-L1.1: QUALITY ASSESSMENT OF ASYMMETRIC STEREO VIDEO CODING</b>	<b>4009</b>
<i>Gorkem Saygili, Goktug Gurler, A. Murat Tekalp, Koç University, Turkey</i>	
<b>WP-L1.2: 3D VIDEO ASSESSMENT WITH JUST NOTICEABLE DIFFERENCE IN DEPTH EVALUATION</b>	<b>4013</b>
<i>Demuni De Silva, Anil Fernando, Gokce Nur, Erhan Ekemekcioglu, Stewart Worrall, University of Surrey, United Kingdom</i>	
<b>WP-L1.3: REDUCED-REFERENCE QUALITY EVALUATION FOR COMPRESSED DEPTH MAPS ASSOCIATED WITH COLOUR PLUS DEPTH 3D VIDEO</b>	<b>4017</b>
<i>Chaminda Thushara Eeriwarawe Ranasinghe Hewage, Maria G. Martini, University of Kingston, United Kingdom</i>	
<b>WP-L1.4: SUBJECTIVE STUDY ON COMPRESSED ASYMMETRIC STEREOSCOPIC VIDEO</b>	<b>4021</b>
<i>Payman Aflaki, Tampere University of Technology, Finland; Miska M. Hannuksela, Nokia Research Center, Finland; Jukka Häkkinen, Aalto University School of Science and Technology, Finland; Paul Lindroos, University of Helsinki, Finland; Moncef Gabbouj, Tampere University of Technology, Finland</i>	
<b>WP-L1.5: VIDEO QUALITY ASSESSMENT: FROM 2D TO 3D - CHALLENGES AND FUTURE TRENDS</b>	<b>4025</b>
<i>Quan Huynh-Thu, Technicolor, France; Patrick Le Callet, Marcus Barkowsky, University of Nantes, France</i>	
<b>WP-L1.6: THE STEREOSCOPIC ANALYZER – AN IMAGE-BASED ASSISTANCE TOOL FOR STEREO SHOOTING AND 3D PRODUCTION</b>	<b>4029</b>
<i>Frederik Zilly, Marcus Müller, Peter Eisert, Peter Kauff, Fraunhofer Heinrich-Hertz-Institute, Germany</i>	

<b>WP-L1.7: A PERCEPTUAL QUALITY METRIC FOR STEREOSCOPIC CROSSTALK PERCEPTION</b>	<b>4033</b>
<i>Liyuan Xing, Junyong You, Norwegian University of Science and Technology (NTNU), Norway; Touradj Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Andrew Perkis, Norwegian University of Science and Technology (NTNU), Norway</i>	
<b>WP-L1.8: TOWARDS A PERCEPTUAL QUALITY METRIC FOR COLOR STEREO IMAGES</b>	<b>4037</b>
<i>Rafik Bensalma, Mohamed-Chaker Larabi, University of Poitiers, France</i>	
<b>WP-L2: IRIS AND RETINAL ANALYSIS</b>	
<b>WP-L2.1: AUTOMATIC MACULA DETECTION FROM RETINAL IMAGES BY A LINE OPERATOR</b>	<b>4073</b>
<i>Shijian Lu, Joo Hwee Lim, Institute for Infocomm Research, A*STAR, Singapore</i>	
<b>WP-L2.2: ADAPTIVE BIOMETRIC AUTHENTICATION USING NONLINEAR MAPPINGS ON QUALITY MEASURES AND VERIFICATION SCORES</b>	<b>4077</b>
<i>Jinyu Zuo, Francesco Nicolo, Natalia A. Schmid, West Virginia University, United States; Harry Wechsler, George Mason University, United States</i>	
<b>WP-L2.3: A PROBABILISTIC BASED METHOD FOR TRACKING VESSELS IN RETINAL IMAGES</b>	<b>4081</b>
<i>Yi Yin, Ecole Centrale de Marseille, France; Mouloud Adel, Université Paul Cézanne, France; Mireille Guillaume, Salah Bourennane, Ecole Centrale de Marseille, France</i>	
<b>WP-L2.4: GABOR DESCRIPTOR BASED CANCELABLE IRIS RECOGNITION METHOD</b>	<b>4085</b>
<i>Kai Yang, Yingzi Du, Zhi Zhou, Craig Belcher, Indiana University-Purdue University Indianapolis, United States</i>	
<b>WP-L2.5: IDENTITY VERIFICATION BASED ON VESSEL MATCHING FROM FUNDUS IMAGES</b>	<b>4089</b>
<i>Hannu Oinonen, Heikki Forsvik, Pekka Ruusuvaori, Olli Yli-Harja, Ville Voipio, Heikki Huttunen, Tampere University of Technology, Finland</i>	
<b>WP-L2.6: A NEW CURVELET TRANSFORM BASED METHOD FOR EXTRACTION OF RED LESIONS IN DIGITAL COLOR RETINAL IMAGES</b>	<b>4093</b>
<i>Mahdad Esmaeili, Hossein Rabbani, Alireza Mehri Dehnavi, Alireza Dehghani, Isfahan University of Medical Sciences, Iran</i>	
<b>WP-L2.7: STATISTICS OF LOCAL SURFACE CURVATURES FOR MIS-LOCALIZED IRIS DETECTION</b>	<b>4097</b>
<i>Hui Zhang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China; Zhenan Sun, Tieniu Tan, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China</i>	
<b>WP-L2.8: IRIS RECOGNITION BASED ON A NOVEL MULTIREOLUTION ANALYSIS FRAMEWORK</b>	<b>4101</b>
<i>Mingyan Li, Mingyan Jiang, Min Han, Mingqiang Yang, Shandong University, China</i>	

## **WP-L3: LEVEL SET METHODS**

### **WP-L3.1: A VARIATIONAL MULTIPHASE LEVEL SET APPROACH TO SIMULTANEOUS .....4105 SEGMENTATION AND BIAS CORRECTION**

*Kaihua Zhang, Lei Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Su Zhang, Shanghai Jiao Tong University, China*

### **WP-L3.2: FAST 3D CENTERLINE COMPUTATION FOR TUBULAR STRUCTURES BY .....4109 FRONT COLLAPSING AND FAST MARCHING**

*Ruben Cardenas, Hrvoje Bogunovic, Alejandro Frangi, Universitat Pompeu Fabra, Spain*

### **WP-L3.3: INTERACTIVE SEGMENTATION OF MEDICAL IMAGES USING BELIEF .....4113 PROPAGATION WITH LEVEL SETS**

*Yingxuan Zhu, Syracuse University, United States; Samuel Cheng, University of Oklahoma-Tulsa, United States; Amrit Goel, Syracuse University, United States*

### **WP-L3.4: VARIATIONAL FRONTS TRACKING IN SEA SURFACE TEMPERATURE .....4117 IMAGES**

*Silève Ba, Ronan Fablet, Université Européenne de Bretagne, France*

### **WP-L3.5: SEGMENTATION OF 3D OBJECT IN VOLUME DATASET USING ACTIVE .....4121 DEFORMABLE MODEL**

*Jonghyun Park, Wanhyun Cho, Chonnam National University, Republic of Korea; Soonyoung Park, Mokpo National University, Republic of Korea; Sunworl Kim, Soohyung Kim, Gukdong Ahn, Myungeun Lee, Guesang Lee, Chonnam National University, Republic of Korea*

### **WP-L3.6: REAL-TIME LEVEL SET BASED TRACKING WITH APPEARANCE MODEL .....4125 USING RAO-BLACKWELLIZED PARTICLE FILTER**

*Du Yong Kim, Ehwa Yang, Moongu Jeon, Vladimir Shin, Gwangju Institute of Science and Technology, Republic of Korea*

### **WP-L3.7: LEVEL LINES SHORTENING YIELDS AN IMAGE CURVATURE .....4129 MICROSCOPE**

*Adina Ciomaga, CMLA, ENS Cachan, France; Pascal Monasse, IMAGINE, France; Jean-Michel Morel, CMLA, ENS Cachan, France*

## **WP-L4: ANISOTROPIC DIFFUSION**

### **WP-L4.1: A FOURTH ORDER DUAL METHOD FOR STAIRCASE REDUCTION IN .....4137 TEXTURE EXTRACTION AND IMAGE RESTORATION PROBLEMS**

*Tony Chan, Hong Kong University of Science and Technology, Hong Kong SAR of China; Selim Esedoglu, University of Michigan Ann Arbor, United States; Frederick Park, University of California, Irvine, United States*

**WP-L4.2: TENSOR-BASED IMAGE DIFFUSIONS DERIVED FROM .....4141  
GENERALIZATIONS OF THE TOTAL VARIATION AND BELTRAMI  
FUNCTIONALS**

*Anastasios Roussos, Petros Maragos, National Technical University of Athens, Greece*

**WP-L4.3: ANISOTROPIC DIFFUSION-BASED DETAIL-PRESERVING SMOOTHING .....4145  
FOR IMAGE RESTORATION**

*Shin-Min Chao, Utechzone Co. Ltd., Taiwan; Du-Ming Tsai, Wei-Yao Chiu, Wei-Chen Li, Yuan-Ze University, Taiwan*

**WP-L4.4: REAL-TIME DEPTH DIFFUSION FOR 3D SURFACE RECONSTRUCTION .....4149**

*Karthik Mahesh Varadarajan, Technical University of Vienna, Austria; Markus Vincze, Technische Universität Wien, Austria*

**WP-L4.5: ANISOTROPIC DIFFUSION USING POWER WATERSHEDS.....4153**

*Camille Couprie, Université Paris Est, France; Leo Grady, Siemens Corporate Research, United States; Laurent Najman, Hugues Talbot, Université Paris Est, France*

**WP-L4.7: A NOVEL SPECKLE REDUCTION AND CONTRAST ENHANCEMENT .....4161  
METHOD BASED ON FUZZY ANISOTROPIC DIFFUSION**

*Yingtao Zhang, Harbin Institute of Technology, China; Heng-Da Cheng, Utah State University, United States; Jiawei Tian, Second Affiliated Hospital of Harbin Medical University, China; Jianhua Huang, Harbin Institute of Technology, China*

**WP-L4.8: AN IMAGE RESTORATION METHOD BASED ON PDES AND A NEW .....4165  
GRADIENT MODEL**

*Lei Xu, Xiaoling Zhang, Xiamen University, China; Kin-Man Lam, Hong Kong Polytechnic University, Hong Kong SAR of China*

**WP-L5: INVERSE METHODS AND RECONSTRUCTION**

**WP-L5.1: AN AUGMENTED LAGRANGIAN APPROACH TO LINEAR INVERSE .....4169  
PROBLEMS WITH COMPOUND REGULARIZATION**

*Manya Afonso, Instituto Superior Técnico, Portugal; José Bioucas-Dias, Mário Figueiredo, Instituto de Telecomunicações, Portugal*

**WP-L5.2: STOCHASTIC GRADIENT DESCENT FOR ROBUST INVERSE PHOTOMASK .....4173  
SYNTHESIS IN OPTICAL LITHOGRAPHY**

*Ningning Jia, Edmund Lam, University of Hong Kong, Hong Kong SAR of China*

**WP-L5.3: POISSON IMAGE RECONSTRUCTION WITH TOTAL VARIATION .....4177  
REGULARIZATION**

*Rebecca Willett, Zachary Harmany, Duke University, United States; Roummel Marcia, University of California, Merced, United States*

<b>WP-L5.4: SPARSE RECOVERY FOR DISCRETE TOMOGRAPHY.....</b>	<b>4181</b>
<i>Yenting Lin, Antonio Ortega, Alexandros G. Dimakis, University of Southern California, United States</i>	
<b>WP-L5.5: RECONSTRUCTING DIFFUSION KURTOSIS TENSORS FROM SPARSE NOISY MEASUREMENTS .....</b>	<b>4185</b>
<i>Yugang Liu, University of Electronic Science and Technology of China, China; Siming Wei, Zhejiang University, China; Quan Jiang, Henry Ford Hospital, United States; Yizhou Yu, University of Illinois at Urbana-Champaign, United States</i>	
<b>WP-L5.6: RANGE UNFOLDING FOR TIME-OF-FLIGHT DEPTH CAMERAS .....</b>	<b>4189</b>
<i>Ouk Choi, Hwasup Lim, Byongmin Kang, Yong Sun Kim, Keechang Lee, James Do Kyoon Kim, Changyeong Kim, Samsung Advanced Institute of Technology, Republic of Korea</i>	
<b>WP-L5.7: SURGICAL NEEDLE RECONSTRUCTION USING SMALL-ANGLE MULTI-VIEW X-RAY .....</b>	<b>4193</b>
<i>Chrysi Papalazarou, University of Technology Eindhoven, Netherlands; Peter Rongen, Philips Healthcare, Netherlands; Peter H. N. de With, University of Technology Eindhoven / Cyclomedia Technology, Netherlands</i>	
<b>WP-L5.8: NUMERICAL RECONSTRUCTION OF HOLOGRAPHIC MICROSCOPY IMAGES BASED ON MATCHING PURSUITS ON A PAIR OF DOMAINS .....</b>	<b>4197</b>
<i>Andriyan Bayu Suksmono, Institut Teknologi Bandung, Indonesia; Akira Hirose, University of Tokyo, Japan</i>	
<b>WP-L6: SCALABLE CODING</b>	
<b>WP-L6.1: EFFECTS OF MGS FRAGMENTATION, SLICE MODE AND EXTRACTION STRATEGIES ON THE PERFORMANCE OF SVC WITH MEDIUM-GRAINED SCALABILITY .....</b>	<b>4201</b>
<i>Burak Görkemli, Yalçın Sadi, A. Murat Tekalp, Koç University, Turkey</i>	
<b>WP-L6.2: IMPROVEMENT OF H.264 SVC BY MODEL-BASED ADAPTIVE RESOLUTION UPCONVERSION .....</b>	<b>4205</b>
<i>Xiaolin Wu, Mingkai Shao, Xiangjun Zhang, McMaster University, Canada</i>	
<b>WP-L6.3: PERFORMANCE ANALYSIS OF THE PYRAMID MOTION COMPENSATION BASED ON QUANTIZATION NOISE MODELING .....</b>	<b>4209</b>
<i>Rong Zhang, Mary Comer, Purdue University, United States</i>	
<b>WP-L6.4: MOTION BASED LOW COMPLEXITY ALGORITHM FOR SPATIAL SCALABILITY OF H.264/SVC .....</b>	<b>4213</b>
<i>Takafumi Katayama, Takaaki Hamamoto, Tian Song, Takashi Shimamoto, Tokushima University, Japan</i>	
<b>WP-L6.5: A TWO-LEVEL SLIDING-WINDOW VBR CONTROLLER FOR REAL-TIME HIERARCHICAL VIDEO CODING .....</b>	<b>4217</b>
<i>Manuel de Frutos Lopez, Oscar del Ama Esteban, Sergio Sanz Rodriguez-Escalona, Fernando Diaz de Maria, Universidad Carlos III, Spain</i>	
<b>WP-L6.6: FAST INTER-LAYER MODE DECISION IN SCALABLE VIDEO CODING.....</b>	<b>4221</b>
<i>Tiesong Zhao, City University of Hong Kong, Hong Kong SAR of China; Hanli Wang, Tongji University, China; Sam Kwong, City University of Hong Kong, Hong Kong SAR of China</i>	



**WP-L6.7: NON-LINEAR WARPING AND WARP CODING FOR CONTENT-ADAPTIVE PREDICTION IN ADVANCED VIDEO CODING APPLICATIONS .....4225**

*Aljoscha Smolic, Yongzhe Wang, Nikolce Stefanoski, Manuel Lang, Alexander Hornung, Markus Gross, Disney Research Zurich, Switzerland*

**WP-L6.8: AN ADAPTIVE EARLY TERMINATION OF MODE DECISION USING INTER-LAYER CORRELATION IN SCALABLE VIDEO CODING .....4229**

*Liquan Shen, Zhi Liu, Ping An, Ran Ma, Zhaoyang Zhang, Shanghai University, China*

**WP-L7: CAMERA AND PROJECTOR CALIBRATION**

**WP-L7.1: ROBUST ESTIMATION OF THE FUNDAMENTAL MATRIX .....4233**

*Huiyu Zhou, Queens University Belfast, United Kingdom; Gerald Schaefer, Loughborough University, United Kingdom*

**WP-L7.2: TOWARDS HIGH-PRECISION LENS DISTORTION CORRECTION .....4237**

*Rafael Grompone von Gioi, Ecole Normale Supérieure de Cachan, France; Pascal Monasse, LIGM-Université Paris Est, France; Jean-Michel Morel, Zhongwei Tang, Ecole Normale Supérieure de Cachan, France*

**WP-L7.3: FLEXIBLE PROJECTOR CALIBRATION FOR ACTIVE STEREOSCOPIC SYSTEMS .....4241**

*Achraf Ben-Hamadou, Charles Soussen, Christian Daul, Walter Blondel, Didier Wolf, CRAN, France*

**WP-L7.4: ROTATING SENSOR-MATRIX CAMERA CALIBRATION .....4245**

*Fay Huang, National Ilan University, Taiwan; Reinhard Klette, University of Auckland, New Zealand; Ju-Chi Tien, Yin-Wei Chang, National Ilan University, Taiwan*

**WP-L7.5: AFFINE CAMERA CALIBRATION FROM HOMOGRAPHIES OF PARALLEL PLANES .....4249**

*Adlane Habed, Université de Bourgogne, France; Amir Amintabar, Boubakeur Boufama, University of Windsor, Canada*

**WP-L7.7: DECODING POSITIONAL AND COLOR INFORMATION FROM A CODED PATTERN .....4257**

*Nelson L. Chang, Suk Hwan Lim, Feng Tang, Hewlett-Packard Labs, United States*

**WP-L7.8: A ROBUST AND ACCURATE SELF-CALIBRATION APPROACH FROM UNORDERED WIDE-BASELINE IMAGES .....4261**

*Yanli Wan, Zhenjiang Miao, Beijing Jiaotong University, China; Mingxing Hu, University College London, United Kingdom; Jing Chen, Zhen Tang, Beijing Jiaotong University, China*

**WP-L9: SHAPE MODELS AND METRICS**

**WP-L9.1: AN ACCURATE AND EFFICIENT RECONSTRUCTION OF 3D FACES FROM STEREO IMAGES .....4265**

*Vuong Le, Hao Tang, Liangliang Cao, Thomas S. Huang, University of Illinois at Urbana-Champaign, United States*

<b>WP-L9.2: AN EMPIRICAL METHOD FOR COMPARING THE SHAPE OF TWO GAUSSIAN MIXTURES</b>	<b>4269</b>
<i>Hector J. Santos-Villalobos, Mireille Boutin, Purdue University, United States</i>	
<b>WP-L9.3: SYMMETRY CONSTRAINED SHAPE EVOLUTION IN SHAPE MANIFOLDS FOR SHAPE BASED RETRIEVAL</b>	<b>4273</b>
<i>Saurav Basu, Scott T. Acton, University of Virginia, United States</i>	
<b>WP-L9.4: RELIABILITY / PRECISION UNCERTAINTY IN SHAPE FITTING PROBLEMS</b>	<b>4277</b>
<i>Dilip K. Prasad, Maylor K. H. Leung, Nanyang Technological University, Singapore</i>	
<b>WP-L9.5: STATISTICAL MODELING OF THE LUNG NODULES IN LOW DOSE COMPUTED TOMOGRAPHY SCANS OF THE CHEST</b>	<b>4281</b>
<i>Amal Farag, James Graham, Salwa Elshazly, Aly Farag, University of Louisville, United States</i>	
<b>WP-L9.6: APPROXIMATION OF DIGITIZED CURVES WITH CUBIC BEZIER SPLINES</b>	<b>4285</b>
<i>Alexander Kolesnikov, University of Eastern Finland, Finland</i>	
<b>WP-L9.7: FAST DYNAMIC QUANTIZATION ALGORITHM FOR VECTOR MAP COMPRESSION</b>	<b>4289</b>
<i>Minjie Chen, University of Eastern Finland, Finland; Mantao Xu, Shanghai Dianji University, China; Pasi Franti, University of Eastern Finland, Finland</i>	
<b>WP-L9.8: HEIGHT ESTIMATION FOR BUILDINGS WITH COMPLEX CONTOURS IN MONOCULAR SATELLITE/AIRBORNE IMAGES BASED ON FUZZY REASONING</b>	<b>4293</b>
<i>Mohammad Izadi, Parvaneh Saeedi, Simon Fraser University, Canada</i>	
 <b>WP-L10: SHAPE-FROM-X</b>	
<b>WP-L10.1: 3D FACE RECOVERY FROM INTENSITIES OF GENERAL AND UNKNOWN LIGHTING USING PARTIAL LEAST SQUARES</b>	<b>4041</b>
<i>Ham Rara, Shireen Elhabian, Thomas Starr, Aly Farag, University of Louisville, United States</i>	
<b>WP-L10.2: PHOTO-CONSISTENT SURFACES FROM A SPARSE SET OF VIEWPOINTS</b>	<b>4045</b>
<i>Jordi Salvador, Josep R. Casas, Technical University of Catalonia (UPC), Spain</i>	
<b>WP-L10.3: SHAPE FROM SHADING FOR HYBRID SURFACES AS APPLIED TO TOOTH RECONSTRUCTION</b>	<b>4049</b>
<i>Cambren Carter, Rosario Pusateri, Dongqing Chen, Abdelreheim Ahmed, Aly Farag, University of Louisville, United States</i>	
<b>WP-L10.4: ENHANCING VOXEL CARVING BY CAPTURE VOLUME CALCULATIONS</b>	<b>4053</b>
<i>Tobias Feldmann, Karsten Brand, Annika Wörner, Karlsruhe Institute of Technology, Germany</i>	
<b>WP-L10.5: PHOTOMETRIC STEREO UNDER UNKNOWN LIGHT SOURCES USING ROBUST SVD WITH MISSING DATA</b>	<b>4057</b>
<i>Daisuke Miyazaki, Hiroshima City University, Japan; Katsushi Ikeuchi, University of Tokyo, Japan</i>	

<b>WP-L10.6: PDE-BASED DISPARITY ESTIMATION WITH OCCLUSION AND TEXTURE HANDLING FOR ACCURATE DEPTH RECOVERY FROM A STEREO IMAGE PAIR</b>	<b>4061</b>
<i>Hansung Kim, Adrian Hilton, University of Surrey, United Kingdom</i>	
<b>WP-L10.7: 3D SHAPE RECOVERY BY IMAGE FOCUS USING LORENTZIAN-CAUCHY FUNCTION</b>	<b>4065</b>
<i>Mannan Saeed Muhammad, Tae-Sun Choi, Gwangju Institute of Science and Technology, Republic of Korea</i>	
<b>WP-L10.8: JOINT ESTIMATION OF SHAPE AND MOTION FROM SILHOUETTES</b>	<b>4069</b>
<i>Jordi Salvador, Josep R. Casas, Technical University of Catalonia (UPC), Spain</i>	
<b>WP-PA: SCANNING, SAMPLING AND QUANTIZATION</b>	
<b>WP-PA.1: IMAGE QUANTIZATION UNDER SPATIAL SMOOTHNESS CONSTRAINTS</b>	<b>4297</b>
<i>Anna Jezierska, Caroline Chauv, Hugues Talbot, Jean-Christophe Pesquet, University Paris-Est, France</i>	
<b>WP-PA.2: THE SIMPLEST MEASUREMENT MATRIX FOR COMPRESSED SENSING OF NATURAL IMAGES</b>	<b>4301</b>
<i>Zaixing He, Takahiro Ogawa, Miki Haseyama, Hokkaido University, Japan</i>	
<b>WP-PA.3: DIMENSIONING OF OPTICAL BIREFRINGENT ANTI-ALIAS FILTERS FOR DIGITAL CAMERAS</b>	<b>4305</b>
<i>Michael Schöberl, University of Erlangen-Nuremberg, Germany; Wolfgang Schnurrer, Alexander Oberdörster, Siegfried Föbel, Fraunhofer IIS, Germany; André Kaup, University of Erlangen-Nuremberg, Germany</i>	
<b>WP-PA.4: A TWO-PHASE HYBRID CODEBOOK GENERATION TECHNIQUE FOR VECTOR QUANTIZATION</b>	<b>4309</b>
<i>Chia-Chen Yen, Chih-Ya Shen, Ming-Syan Chen, National Taiwan University, Taiwan</i>	
<b>WP-PA.5: ITERATIVE TOMOGRAPHIC IMAGE RECONSTRUCTION BY COMPRESSIVE SAMPLING</b>	<b>4313</b>
<i>Adnan Hanif, Atif Mansoor, National University of Sciences and Technology, Pakistan; Tahira Ejaz, National Engineering and Scientific Commission, Pakistan</i>	
<b>WP-PA.6: LINEAR PRODUCTION GAME SOLUTION TO A PTZ CAMERA NETWORK</b>	<b>4317</b>
<i>Yu-Chun Lai, National Chiao Tung University, Taiwan; Yu-Ming Liang, Aletheia University, Taiwan; Sheng-Wen Shih, National Chi Nan University, Taiwan; Hong-Yuan Mark Liao, Academia Sinica, Taiwan; Cheng-Chung Lin, National Chiao Tung University, Taiwan</i>	
<b>WP-PA.7: ROBUST RANGE IMAGE REGISTRATION USING 3D LINES</b>	<b>4321</b>
<i>Jian Yao, Mauro Ruggeri, Pierluigi Taddei, Vitor Sequeira, European Commission - Joint Research Centre (JRC), Italy</i>	
<b>WP-PA.8: AUCTION PROTOCOL FOR CAMERA ACTIVE CONTROL</b>	<b>4325</b>
<i>Yiming Li, Bir Bhanu, Wei Lin, University of California, Riverside, United States</i>	
<b>WP-PA.9: RANDOMLY DRIVEN FUZZY KEY EXTRACTION OF UNCLONABLE IMAGES</b>	<b>4329</b>
<i>Saloomeh Shariati, Laurent Jacques, Francois-Xavier Standaert, Benoit Macq, Mohamed Amin Salhi, Philippe Antoine, Université catholique de Louvain (UCL), Belgium</i>	

## **WP-PB: COMPUTER ASSISTED SCREENING AND DIAGNOSIS**

### **WP-PB.1: CASE-ADAPTIVE CLASSIFICATION BASED ON IMAGE RETRIEVAL FOR .....4333 COMPUTER-AIDED DIAGNOSIS**

*Hao Jing, Yongyi Yang, Illinois Institute of Technology, United States*

### **WP-PB.2: IMAGE-BASED DETECTION OF CORPUS CALLOSUM VARIABILITY FOR .....4337 MORE ACCURATE DISCRIMINATION BETWEEN AUTISTIC AND NORMAL BRAINS**

*Ahmed Elnakib, Ayman El-Baz, BioImaging Laboratory, University of Louisville, United States; Manuel Casanova, University of Louisville, United States; Georgy Gimel'farb, University of Auckland, New Zealand; Andrew Switala, University of Louisville, United States*

### **WP-PB.3: A FULLY AUTOMATED METHOD OF ASSOCIATING AXIAL SLICES WITH A .....4341 DISC BASED ON LABELING OF MULTI-PROTOCOL LUMBAR MRI**

*Jaehan Koh, Vipin Chaudhary, University at Buffalo (SUNY), United States; Gurmeet Dhillon, Proscan Imaging of Buffalo, United States*

### **WP-PB.4: A SUPERVISED MICRO-CALCIFICATION DETECTION APPROACH IN .....4345 DIGITISED MAMMOGRAMS**

*Albert Torrent, Arnau Oliver, Xavier Lladó, Robert Martí, Jordi Freixenet, University of Girona, Spain*

### **WP-PB.5: AUTOMATIC CELL CLASSIFICATION AND POPULATION ESTIMATION IN .....4349 BLASTOCYSTIS AUTOPHAGY IMAGES**

*Wei Xiong, Joo Hwee Lim, Institute for Infocomm Research, Singapore; Sim Heng Ong, National University of Singapore, Singapore; Jiang Liu, Institute for Infocomm Research, Singapore; Yin Jing, Kevin S. W. Tan, National University of Singapore, Singapore*

### **WP-PB.6: COMPUTER-AIDED DETECTION OF PULMONARY NODULES USING .....4353 GENETIC PROGRAMMING**

*Wook-Jin Choi, Tae-Sun Choi, Gwangju Institute of Science and Technology, Republic of Korea*

### **WP-PB.7: AUTOMATED COLOR NORMALIZATION FOR DERMOSCOPY IMAGES .....4357**

*Hitoshi Iyatomi, Hosei University, Japan; M. Emre Celebi, Louisiana State University in Shreveport, United States; Gerald Schaefer, Loughborough University, United Kingdom; Masaru Tanaka, Tokyo Women's Medical University, Japan*

### **WP-PB.8: SPATIAL AND SPECTRAL DEPENDANCE CO-OCCURRENCE METHOD FOR .....4361 MULTI-SPECTRAL IMAGE TEXTURE CLASSIFICATION**

*Riad Khelifi, Mouloud Adel, Salah Bourennane, D.U. de Saint Jerome, France*

### **WP-PB.9: IMPROVED METHOD FOR PREDICTING POLYP LOCATION FROM CT .....4365 COLONOGRAPHY FOR OPTICAL COLONOSCOPY**

*Kevin Chang, Jiamin Liu, Jianhua Yao, Ronald Summers, National Institutes of Health Clinical Center, United States*

<b>WP-PB.11: SNAKULES: SNAKES THAT SEEK SPICULES ON MAMMOGRAPHY .....</b>	<b>4373</b>
<i>Gautam Muralidhar, Alan Bovik, Mia Markey, University of Texas at Austin, United States</i>	
<b>WP-PB.12: FAST TRAUMATIC BRAIN INJURY CT SLICE INDEXING VIA ANATOMICAL FEATURE CLASSIFICATION .....</b>	<b>4377</b>
<i>Ruizhe Liu, Shimiao Li, Chew Lim Tan, National University of Singapore, Singapore; Boon Chuan Pang, C.C. Tchoyoson Lim, Cheng Kiang Lee, National Neuroscience Institute, Tan Tock Seng Hospital, Singapore; Qi Tian, Zhuo Zhang, Institute for Infocomm Research, Singapore</i>	
<b>WP-PB.13: A NEW VALIDATION APPROACH FOR THE GROWTH RATE MEASUREMENT USING ELASTIC PHANTOMS GENERATED BY STATE-OF-THE-ART MICROFLUIDICS TECHNOLOGY .....</b>	<b>4381</b>
<i>Ayman El-Baz, BioImaging Laboratory, University of Louisville, United States; Palaniappan Sethu, University of Louisville, United States; Georgy Gimel'farb, University of Auckland, New Zealand; Fahmi Khalifa, Ahmed Elnakib, University of Louisville, United States; Robert Falk, Medical Imaging Division, Jewish Hospital, United States; Mohamed El-Ghar, University of Mansoura, United States</i>	
<b>WP-PC: BIOMEDICAL IMAGE REGISTRATION AND FUSION</b>	
<b>WP-PC.1: MULTIMODAL IMAGE REGISTRATION USING STOCHASTIC DIFFERENTIAL EQUATION OPTIMIZATION .....</b>	<b>4385</b>
<i>Viktor Vegh, Zhengyi Yang, Quang Tieng, David Reutens, University of Queensland, Australia</i>	
<b>WP-PC.2: AUTOMATIC AND ROBUST 3D FACE REGISTRATION USING MULTIREOLUTION SPHERICAL DEPTH MAP .....</b>	<b>4389</b>
<i>Peijiang Liu, Yunhong Wang, Zhaoxiang Zhang, Beihang University, China; Yiding Wang, North China University of Technology, China</i>	
<b>WP-PC.3: ACTIVATION DETECTION IN EVENT-RELATED FMRI THROUGH CLUSTERING OF WAVELET DISTRIBUTIONS .....</b>	<b>4393</b>
<i>Geert Verdoolaege, Yves Rosseel, Ghent University, Belgium</i>	
<b>WP-PC.4: IMAGE FUSION USING BLUR ESTIMATION .....</b>	<b>4397</b>
<i>Seyfollah Soleimani, Filip Rooms, Wilfried Philips, Linda Tessens, Ghent University, Belgium</i>	
<b>WP-PC.6: A BAYESIAN MODEL SELECTION APPROACH TO FMRI ACTIVATION DETECTION .....</b>	<b>4401</b>
<i>Abd-Krim Seghouane, Ju Lynn Ong, National ICT Australia, Australia</i>	
<b>WP-PC.7: FILTER BASED SPATIAL COMPOUNDING FOR STRAIN IMAGING.....</b>	<b>4405</b>
<i>Wen Liu, Yangjie Cheng, Sichuan University, China; Paul Liu, Saset Healthcare (Chengdu) Inc., China; Dong C. Liu, Sichuan University, China</i>	
<b>WP-PC.8: MULTISCALE DEFORMABLE REGISTRATION USING EDGE PRESERVING SCALE SPACE FOR ADAPTIVE RADIATION THERAPY .....</b>	<b>4409</b>
<i>Dengwang Li, Shandong University, China; Xiuying Wang, University of Sydney, Australia; Hongjun Wang, Shandong University, China; Yong Yin, Shandong Tumor Hospital, Shandong University, China; Dagan (David) Feng, University of Sydney, Australia / Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>WP-PC.9: SPATIAL NORMALIZATION OF CARDIAC DIFFUSION TENSOR IMAGING FOR MODELING THE MUSCULAR STRUCTURE OF THE MYOCARDIUM .....</b>	<b>4413</b>
<i>Emma Muñoz-Moreno, Alejandro Frangi, Pompeu-Fabra Universitat, Spain</i>	



<b>WP-PC.10: COMPUTATIONAL COMPLEXITY REDUCTION VIA MODE SUPERPOSITION: APPLICATION TO BIOMECHANICS-BASED NONLINEAR CARDIAC DEFORMATION RECOVERY</b>	<b>4417</b>
<i>Ken C. L. Wong, INRIA Sophia Antipolis, France; Linwei Wang, Rochester Institute of Technology, United States; Heye Zhang, University of Auckland, New Zealand; Pengcheng Shi, Rochester Institute of Technology, United States</i>	
<b>WP-PC.11: COMPARISON OF REGISTRATION METHODS USING MAMOGRAPHIC IMAGES</b>	<b>4421</b>
<i>Yago Díez, Arnau Oliver, Xavier Lladó, Robert Martí, University of Girona, Spain</i>	
<b>WP-PC.12: A NOVEL 3D SURFACE CONSTRUCTION APPROACH: APPLICATION TO THREE-DIMENSIONAL ENDOSCOPIC DATA</b>	<b>4425</b>
<i>Achraf Ben-Hamadou, Christian Daul, Charles Soussen, Ahmed Rekik, Walter Blondel, CRAN, France</i>	
<b>WP-PC.13: NON-RIGID IMAGE REGISTRATION BY USING GRAPH-CUTS WITH MUTUAL INFORMATION</b>	<b>4429</b>
<i>Ronald W. K. So, Albert C. S. Chung, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
<b>WP-PD: MULTIMEDIA CODING AND TRANSMISSION</b>	
<b>WP-PD.1: HIGH DEFINITION WIRELESS VIDEO TRANSMISSION USING PYRAMID VECTOR QUANTISATION</b>	<b>4433</b>
<i>S.M.M Bokhari, David R. Bull, Andrew Nix, University of Bristol, United Kingdom</i>	
<b>WP-PD.2: REAL-TIME VIDEO STREAMING WITH INTERACTIVE REGION-OF-INTEREST</b>	<b>4437</b>
<i>Mina Makar, Aditya Mavlankar, Piyush Agrawal, Bernd Girod, Stanford University, United States</i>	
<b>WP-PD.3: A NOVEL ENCODING METHOD FOR THE I-SLICE OF H.264/AVC</b>	<b>4441</b>
<i>Hyung Suk Oh, Wonha Kim, Kyung Hee University, Republic of Korea</i>	
<b>WP-PD.4: P2P GROUP COMMUNICATION USING SCALABLE VIDEO CODING</b>	<b>4445</b>
<i>Yago Sanchez de la Fuente, Technische Universität Berlin, Germany; Thomas Schierl, Hellge Cornelius, Thomas Wiegand, Fraunhofer, Germany</i>	
<b>WP-PD.5: MULTI-STREAM PARTITIONING AND PARITY RATE ALLOCATION FOR SCALABLE IPTV DELIVERY</b>	<b>4449</b>
<i>Jacob Chakareski, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
<b>WP-PD.6: EVOLUTIONARY GAMES FOR COOPERATIVE P2P VIDEO STREAMING</b>	<b>4453</b>
<i>Yan Chen, Beibei Wang, W. Sabrina Lin, Yongle Wu, K. J. Ray Liu, University of Maryland, College Park, United States</i>	
<b>WP-PD.8: A WIRELESS VIDEO TRANSMISSION CONTROL APPROACH THROUGH STOCHASTIC DYNAMIC PROGRAMMING</b>	<b>4457</b>
<i>Victor Miguel Barbero, Julián Cabrera Quesada, Fernando Jaureguizar Nuñez, Narciso García, Universidad Politécnica de Madrid, Spain</i>	
<b>WP-PD.9: HILBERT TRANSFORM BASED WORKLOAD ESTIMATION FOR LOW POWER SURVEILLANCE VIDEO COMPRESSION</b>	<b>4461</b>
<i>Xin Jin, Information Technology Research Organization, Japan; Satoshi Goto, Waseda University, Japan</i>	



<b>WP-PD.10: AN EFFICIENT MULTICAST ALGORITHM FOR THE SCALABLE EXTENSION OF H.264/AVC OVER IEEE 802.11 WLANS</b>	<b>4465</b>
<i>Seong-Ping Chuah, Zhenzhong Chen, Yap-Peng Tan, Nanyang Technological University, Singapore</i>	
<b>WP-PD.11: EXTRINSIC DISTORTION BASED SOURCE-CHANNEL ALLOCATION FOR WIRELESS JPEG2000 TRANSCODING SYSTEMS</b>	<b>4469</b>
<i>Cyril Bergeron, Benjamin Gadat, THALES, France; Charly Poulliat, ETIS-ENSEA, France; Didier Nicholson, THALES, France</i>	
<b>WP-PD.12: DETERMINISTIC STRUCTURED NETWORK CODING FOR WWAN VIDEO BROADCAST WITH COOPERATIVE PEER-TO-PEER REPAIR</b>	<b>4473</b>
<i>Xin Liu, University of California, Davis, United States; Gene Cheung, National Institute of Informatics, Japan; Chen-Nee Chuah, University of California, Davis, United States</i>	
<b>WP-PF: IMAGE HARDWARE SYSTEMS</b>	
<b>WP-PF.1: OBJECT ORIENTED FRAMEWORK FOR REAL-TIME IMAGE PROCESSING ON GPU</b>	<b>4477</b>
<i>Nicolas Seiller, Inha University, Republic of Korea; Nitin Singhal, Samsung Electronics, Republic of Korea; In Kyu Park, Inha University, Republic of Korea</i>	
<b>WP-PF.2: IMPLEMENTATION AND OPTIMIZATION OF IMAGE PROCESSING ALGORITHMS ON HANDHELD GPU</b>	<b>4481</b>
<i>Nitin Singhal, Samsung Electronics Co., Ltd., Republic of Korea; In Kyu Park, Inha University, Republic of Korea; Sungdae Cho, Samsung Electronics Co., Ltd., Republic of Korea</i>	
<b>WP-PF.3: GAME-THEORY-BASED CROSS-LAYER OPTIMIZATION FOR WIRELESS DS-CDMA VISUAL SENSOR NETWORKS</b>	<b>4485</b>
<i>Lisimachos P. Kondi, University of Ioannina, Greece; Elizabeth S. Bentley, Air Force Research Laboratory, United States</i>	
<b>WP-PF.4: PARALLEL BFS GRAPH TRAVERSAL ON IMAGES USING STRUCTURED GRID</b>	<b>4489</b>
<i>Bor-Yiing Su, University of California, Berkeley, United States; Tasneem Brutch, Samsung Electronics, United States; Kurt Keutzer, University of California, Berkeley, United States</i>	
<b>WP-PF.5: A PARALLELIZATION METHOD FOR MULTI-STEREO 3D SHAPE RECONSTRUCTION</b>	<b>4493</b>
<i>Naoki Sekiguchi, Masaru Fukushi, Toru Abe, Tetsuo Kinoshita, Tohoku University, Japan</i>	
<b>WP-PF.7: EFFICIENT HARDWARE ARCHITECTURE FOR PARTICLE FILTER BASED OBJECT TRACKING</b>	<b>4497</b>
<i>Howida A. Abd El-Halym, Imbaby I. Mahmoud, Atomic Energy Authority, Egypt; Serag E.-D. Habib, Cairo University, Egypt</i>	
<b>WP-PF.9: RESEARCH ON PARALLEL CONE-BEAM CT IMAGE RECONSTRUCTION ON CUDA-ENABLED GPU</b>	<b>4501</b>
<i>Yigang Sun, Xiuyu Sun, Hongying Zhang, Civil Aviation University of China, China</i>	

## **WP-PG: FACE RECOGNITION AND UNDERSTANDING IV**

### **WP-PG.2: TOWARDS COMPLETELY ROTATED SIMPLIFIED GABOR WAVELETS .....4509 FOR FAST FACIAL FEATURE POINT DETECTION**

*Axel Panning, Ayoub Al-Hamadi, Bernd Michaelis, University of Magdeburg, Germany*

### **WP-PG.3: A MODIFIED NLDA ALGORITHM.....4513**

*Jun Yin, Zhong Jin, Nanjing University of Science and Technology, China*

### **WP-PG.5: HIERARCHICAL MULTISCALE LBP FOR FACE AND PALMPRINT .....4521 RECOGNITION**

*Zhenhua Guo, Lei Zhang, David Zhang, Hong Kong Polytechnic University, China; Xuanqin Mou, Xi'an Jiaotong University, China*

### **WP-PG.6: FACE RECOGNITION UNDER POSE VARIATIONS USING SHAPE-ADAPTED .....4525 TEXTURE FEATURES**

*Thorsten Gernoth, André Gooßen, Rolf-Rainer Grigat, Hamburg University of Technology, Germany*

### **WP-PG.7: CPGL: A CLASSIFICATION METHOD COMBINING PCA AND THE GROUP .....4529 LASSO METHOD**

*Jing Wang, Guang-da Su, Jiansheng Chen, Tsinghua University, China; Yiu-sang Moon, Chinese University of Hong Kong, Hong Kong SAR of China*

### **WP-PG.8: LEARNING TO RECOGNIZE GENDER USING EXPERIENCE.....4533**

*Modesto Castrillón, Javier Lorenzo, David Freire, University of Las Palmas de Gran Canaria, Spain; Oscar Déniz, University of Castilla-La Mancha, Spain*

### **WP-PG.9: NPDA/CS: IMPROVED NON-PARAMETRIC DISCRIMINANT ANALYSIS .....4537 WITH CS DECOMPOSITION AND ITS APPLICATION TO FACE RECOGNITION**

*Qingsong Zeng, Changdong Wang, Sun Yat-sen University, China*

### **WP-PG.10: USING COLOUR LOCAL BINARY PATTERN FEATURES FOR FACE .....4541 RECOGNITION**

*Jae Young Choi, Korea Advanced Institute of Science and Technology, Democratic People's Republic of Korea; Konstantinos N. Plataniotis, University of Toronto, Canada; Yong Man Ro, Korea Advanced Institute of Science and Technology, Democratic People's Republic of Korea*

### **WP-PG.11: TOWARDS GENERIC FITTING USING MULTIPLE FEATURES .....4545 DISCRIMINATIVE ACTIVE APPEARANCE MODELS**

*Pedro Martins, Jorge Batista, University of Coimbra, Portugal*

### **WP-PG.12: FACIAL EXPRESSION RECOGNITION BASED ON DFFEOMORPHIC .....4549 MATCHING**

*Siamak Yousefi, Minh Phuoc Nguyen, Nasser Kehtarnavaz, Yan Cao, University of Texas at Dallas, United States*

<b>WP-PG.13: IMAGE DESCRIPTION WITH 1D LOCAL PATTERNS BY MULTI-SCANS: .....4553</b> <b>AN APPLICATION TO FACE RECOGNITION</b>	
<i>Wei Zhou, Alireza Ahrary, Sei-ichiro Kamata, Waseda University, Japan</i>	
<b>WP-PG.14: LEARNING THE NATURE OF GENERALISATION ERRORS IN A 3D .....4557</b> <b>MORPHABLE MODEL</b>	
<i>Oswald Aldrian, William A. P. Smith, University of York, United Kingdom</i>	
<b>WP-PG.16: AUDIO-VISUAL SPEAKER IDENTIFIATION WITH MULTI-VIEW .....4561</b> <b>DISTANCE METRIC LEARNING</b>	
<i>Haomian Zheng, Hong Kong Polytechnic University, Hong Kong SAR of China; Meng Wang, Microsoft Research Asia, China; Zhu Li, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
<b>WP-PH: OBJECT RECOGNITION AND CLASSIFICATION IV</b>	
<b>WP-PH.1: SEMANTIC ANALYSIS OF HUMAN VISUAL ATTENTION IN MOBILE EYE .....4565</b> <b>TRACKING APPLICATIONS</b>	
<i>Gerald Fritz, Lucas Paletta, JOANNEUM RESEARCH Forschungsgesellschaft mbH, Austria</i>	
<b>WP-PH.2: VIDEO CATEGORIZATION USING OBJECT OF INTEREST DETECTION.....4569</b>	
<i>Adarsh Kowdle, Cornell University, United States; Kuo-Wei Chang, Chunghwa Telecom Co. Ltd., Taiwan; Tsuhan Chen, Cornell University, United States</i>	
<b>WP-PH.3: OBJECT RIGIDITY AND REFLECTIVITY IDENTIFICATION BASED ON .....4573</b> <b>MOTION ANALYSIS</b>	
<i>Di Zang, Tongji University, China; Paul R. Schrater, University of Minnesota, United States; Katja Doerschner, Bilkent University, Turkey</i>	
<b>WP-PH.4: MEL-CEPSTRAL METHODS FOR IMAGE FEATURE EXTRACTION.....4577</b>	
<i>Serdar Çakir, A. Enis Çetin, Bilkent University, Turkey</i>	
<b>WP-PH.5: SALIENCY BASED JOINT TOPIC DISCOVERY FOR OBJECT .....4581</b> <b>CATEGORIZATION</b>	
<i>Zhidong Li, Yang Wang, Glenn Geers, National ICT Australia (NICTA), Australia; Jing Chen, University of New South Wales, Australia; Jun Yang, John Laird, National ICT Australia (NICTA), Australia</i>	
<b>WP-PH.6: RECOGNIZING OFFENSIVE STRATEGIES FROM FOOTBALL VIDEOS .....4585</b>	
<i>Ruonan Li, Rama Chellappa, University of Maryland, United States</i>	
<b>WP-PH.7: A NEW SUBSPACE LEARNING METHOD IN FOURIER DOMAIN FOR .....4589</b> <b>TEXTURE CLASSIFICATION</b>	
<i>Shu Liao, Albert C. S. Chung, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
<b>WP-PH.8: CLOTHING-BASED PERSON CLUSTERING IN FAMILY PHOTOS .....4593</b>	
<i>Wei Zhang, Like.com, United States; Tong Zhang, Daniel Treter, Hewlett-Packard Labs, United States</i>	
<b>WP-PI: DETECTION, TRACKING, AND RECOGNITION OF OBJECTS IV</b>	
<b>WP-PI.1: EARTH MOVER DISTANCE ON SUPERPIXELS.....4597</b>	
<i>Sylvain Boltz, Ecole Polytechnique, France; Frank Nielsen, Ecole Polytechnique/Sony CSL, France; Stefano Soatto, University of California, Los Angeles, United States</i>	

<b>WP-PI.2: TARGET DETECTION BASED ON GRANULARITY COMPUTING OF QUOTIENT SPACE THEORY USING SAR IMAGE</b>	<b>4601</b>
<i>Bin Zou, Qingchao Jia, Lamei Zhang, Ye Zhang, Harbin Institute of Technology, China</i>	
<b>WP-PI.3: AFFINE-INVARIANT SHAPE MATCHING AND RECOGNITION UNDER PARTIAL OCCLUSION</b>	<b>4605</b>
<i>Fei Mai, Chunqi Chang, Yeung Sam Hung, University of Hong Kong, Hong Kong SAR of China</i>	
<b>WP-PI.4: OBJECT DETECTION USING NON-REDUNDANT LOCAL BINARY PATTERNS</b>	<b>4609</b>
<i>Duc Thanh Nguyen, Zhimin Zong, Philip Ogunbona, Wanqing Li, University of Wollongong, Australia</i>	
<b>WP-PI.5: SKIN DETECTION: A RANDOM FOREST APPROACH</b>	<b>4613</b>
<i>Rehanullah Khan, Technical University of Vienna, Austria; Allan Hanbury, Information Retrieval Facility Vienna, Austria; Julian Stettinger, Technical University of Vienna, Austria</i>	
<b>WP-PI.6: PROJECTION-HISTOGRAMS FOR MEAN-SHIFT TRACKING</b>	<b>4617</b>
<i>Michèle Gouiffès, Florence Laguzet, Lionel Lacassagne, IEF University Paris Sud 11, France</i>	
<b>WP-PI.7: EXPLORE MULTIPLE CLUES FOR URBAN IMAGES MATCHING</b>	<b>4621</b>
<i>Quan Wang, Suya You, University of Southern California, United States</i>	
<b>WP-PI.8: MULTIPLE OBJECT TRACKING ON STATIC SURVEILLANCE VIDEO USING FIELD-BASED PREDICTION INFORMATION IN MPEG-2 VIDEO</b>	<b>4625</b>
<i>I Gusti Bagus Baskara Nugraha, Suwen Weng, Hiroyoshi Morita, University of Electro-Communications, Japan</i>	
<b>WP-PI.9: A CASCADED HIERARCHICAL FRAMEWORK FOR MOVING OBJECT DETECTION AND TRACKING</b>	<b>4629</b>
<i>Ching-Chun Huang, Sheng-Jyh Wang, National Chiao Tung University, Taiwan</i>	
<b>WP-PI.10: OBJECT DETECTION IN GRAY SCALE IMAGES BASED ON INVARIANT POLYNOMIAL FEATURES</b>	<b>4633</b>
<i>Andreas Schindler, Georg Maier, University of Passau, Germany</i>	
<b>WP-PI.11: TRACKING MULTIPLE ARTICULATED OBJECTS USING PHYSICS ENGINES: IMPROVEMENT USING MULTI SCALE DECOMPOSITION AND QUADTREES</b>	<b>4637</b>
<i>Fabrice de Chaumont, Stephane Dallongeville, Nicolas Chenouard, Jean-Christophe Olivo-Marin, Institut Pasteur, France</i>	
<b>WP-PI.12: RANGE BASED OBJECT TRACKING AND SEGMENTATION</b>	<b>4641</b>
<i>Jehoon Lee, Peter Karasev, Allen Tannenbaum, Georgia Institute of Technology, United States</i>	
<b>WP-PI.13: MODEL-BASED TRACKING: TEMPORAL CONDITIONAL RANDOM FIELDS</b>	<b>4645</b>
<i>Mohammad Javad Shafiee, Zohreh Azimifar, Shiraz University, Iran; Paul Fieguth, University of Waterloo, Canada</i>	
<b>WP-PI.14: AN AUTOMATIC VEHICLE DETECTION METHOD BASED ON TRAFFIC VIDEOS</b>	<b>4649</b>
<i>Qiong Cao, Rujie Liu, Fei Li, Yuehong Wang, Fujitsu R&amp;D Co. Ltd., China</i>	
<b>WP-PI.15: IMAGE BASED SMOKE DETECTION WITH LOCAL HURST EXPONENT</b>	<b>4653</b>
<i>Hidenori Maruta, Akihiro Nakamura, Takeshi Yamamichi, Fujio Kurokawa, Nagasaki University, Japan</i>	

## **WP-PJ: SCENE ANALYSIS II**

### **WP-PJ.1: STATIONARY FOREGROUND DETECTION USING BACKGROUND SUBTRACTION AND TEMPORAL DIFFERENCE IN VIDEO SURVEILLANCE .....4657**

*Alvaro Bayona, Juan C. San Miguel, Jose M. Martinez, University Autonoma of Madrid, Spain*

### **WP-PJ.2: QUICK MATTING: A MATTING METHOD BASED ON PIXEL SPREAD AND PROPAGATION .....4661**

*Yiyang Gu, Cheng Jin, Xiangyang Xue, Fudan University, China*

### **WP-PJ.3: L1 MATTING.....4665**

*Philip Gregory Lee, Ying Wu, Northwestern University, United States*

### **WP-PJ.4: MOVING OBJECT DETECTION UNDER FREE-MOVING CAMERA .....4669**

*Jiman Kim, Guensu Ye, Daijin Kim, Pohang University of Science and Technology, Republic of Korea*

### **WP-PJ.5: A VIDEO OBJECT SEGMENTATION ALGORITHM BASED ON THE FEATURE LEARNING AND SHAPE TRACKING .....4673**

*Sang Hak Lee, Hyung Il Koo, Nam Ik Cho, Seoul National University, Republic of Korea*

### **WP-PJ.6: MAKING FULL USE OF SPATIAL-TEMPORAL INTEREST POINTS: AN ADABOOST APPROACH FOR ACTION RECOGNITION .....4677**

*Xunshi Yan, Yupin Luo, Tsinghua University, China*

### **WP-PJ.7: LEARNING AND MATCHING HUMAN ACTIVITIES USING REGULAR EXPRESSIONS .....4681**

*Mattia Daldoss, Nicola Piotta, Nicola Conci, Francesco G. B. De Natale, University of Trento, Italy*

### **WP-PJ.8: A NOVEL METHOD FOR GENERATION OF MOTION SALIENCY.....4685**

*Yang Xia, Ruimin Hu, Zhenkun Huang, Yin Su, Wuhan University, China*

### **WP-PJ.9: BEYOND THE NEUTRAL INTERFACE REFLECTION ASSUMPTION IN ILLUMINANT COLOR ESTIMATION .....4689**

*Eva Eibenberger, Elli Angelopoulou, University of Erlangen-Nuremberg, Germany*

### **WP-PJ.10: VIDEO-BASED TRAFFIC ACCIDENT ANALYSIS AT INTERSECTIONS USING PARTIAL VEHICLE TRAJECTORIES .....4693**

*Omer Akoz, M. Elif Karsligil, Yildiz Technical University, Turkey*

### **WP-PJ.11: ON THE USE OF FEATURE TRACKS FOR DYNAMIC CONCEPT DETECTION IN VIDEO .....4697**

*Vasileios Mezaris, Anastasios Dimou, Ioannis Kompatsiaris, Centre for Research and Technology Hellas, Greece*

### **WP-PJ.12: SCENE RECOGNITION USING QUANTITATIVE MEASUREMENT OF INTENSITY FLICKER .....4701**

*Yi-Chong Zeng, Academia Sinica, Taiwan*

### **WP-PJ.13: CAPABILITIES AND LIMITATIONS OF MONO-CAMERA PEDESTRIAN-BASED AUTOCALIBRATION ...4705**

*Raúl Mohedano, Narciso García, Universidad Politécnica de Madrid, Spain*