

2008 IEEE International Conference on Multimedia and Expo

**Hannover, Germany
23-26 June 2008**

Pages 1-404



IEEE Catalog Number:
ISBN 13:

CFP08ICM-PRT
978-1-4244-2570-9

TABLE OF CONTENTS

TU-AM1-L1: MULTIMEDIA SIGNAL PROCESSING ON MULTICORE GRAPHICS PROCESSORS

TU-AM1-L1.1: PERFORMANCE OPTIMIZATION FOR PATTERN RECOGNITION USING ASSOCIATIVE NEURAL MEMORY1

Qing Wu, Prakash Mukre, Binghamton University, United States; Richard Linderman, Thomas Renz, Daniel Burns, Air Force Research Laboratory, United States; Michael Moore, ITT Advanced Engineering & Sciences, United States; Qinru Qiu, Binghamton University, United States

TU-AM1-L1.2: FAST COMPUTATION OF GENERAL FOURIER TRANSFORMS ON GPUS5

D. Brandon Lloyd, Chas Boyd, Naga K. Govindaraju, Microsoft Corp., United States

TU-AM1-L1.3: USING GRAPHICS DEVICES IN REVERSE: GPU-BASED IMAGE PROCESSING AND COMPUTER VISION9

James Fung, NVIDIA, United States; Steve Mann, University of Toronto, Canada

TU-AM1-L2: QUALITY OF SERVICE

TU-AM1-L2.1: A JOINT ECC BASED MEDIA ERROR AND AUTHENTICATION PROTECTION SCHEME13

Xinglei Zhu, Qibin Sun, Zhishou Zhang, Institute for Infocomm Research, Singapore; Chang Wen Chen, State University of New York at Buffalo, United States

TU-AM1-L2.2: ERROR CONCEALMENT FOR WHOLE-FRAME LOSSES BASED ON MOTION STABILITY ESTIMATION17

Yi Liu, Jiajun Bu, Chun Chen, Xiaoyu Deng, Chaoqun Hong, Zhejiang University, China

TU-AM1-L2.3: NOISES REMOVAL FOR IMAGES IN NAKAGAMI FADING CHANNELS BY WAVELET-BASED BAYESIAN ESTIMATOR21

Xu Huang, University of Canberra, Australia

TU-AM1-L2.4: REDUNDANT MOTION VECTORS FOR IMPROVED ERROR RESILIENCE IN H.264/AVC CODED VIDEO25

Maheshi B. Dissanayake, Chaminda T.E.R Hewage, Stewart T. Worrall, Anil C. Fernando, Ahmet M. Kondo, University of Surrey, United Kingdom

TU-AM1-L2.5: COMMUNICATION QUALITY OF VOICE OVER TCP USED FOR FIREWALL TRAVERSAL29

Hae-Yong Yang, Kyung-Hoon Lee, The Attached Institute of ETRI, Republic of Korea; Sung-Jea Ko, Korea University, Republic of Korea

TU-AM1-L2.6: AN INTEGRATED SMOOTH TRANSMISSION CONTROL AND TEMPORAL SCALING SCHEME FOR MPEG-4 STREAMING VIDEO33

Panagiotis Papadimitriou, Democritus University of Thrace, Greece

TU-AM1-L3: FACE IMAGE/VIDEO ANALYSIS AND SYNTHESIS

TU-AM1-L3.1: RECOGNITION OF BLUE MOVIES BY FUSION OF AUDIO37 AND VIDEO

*Haiqiang Zuo, Institute of Automation, Chinese Academy of Sciences, China; Ou Wu, Weiming Hu, Bo Xu,
Institute of Automation, Chinese Academy of Sciences, China*

TU-AM1-L3.2: 3D FACE RECOGNITION BASED ON FACIAL STRUCTURAL41 ANGLE AND LOCAL REGION MAP

Peng Guan, Liming Zhang, Fudan University, China

TU-AM1-L3.3: NOVEL METHODS FOR HIGH-RESOLUTION FACIAL IMAGE45 CAPTURE USING CALIBRATED PTZ AND STATIC CAMERAS

Richard Y D Xu, Jun B Gao, Michael Antolovich, Charles Sturt University, Australia

TU-AM1-L3.4: SUPERVISED LOCAL LINEAR EMBEDDING (SLLE) FOR49 FACIAL PARALYSIS IMAGE SEQUENCE ANALYSIS

*Shu He, John Soraghan, Institute of Communication and Signal Processing, United Kingdom; Brian O'Reilly,
Institute of Neurological Sciences, United Kingdom*

TU-AM1-L3.5: VISUAL FOCUS OF ATTENTION ESTIMATION FROM HEAD53 POSE POSTERIOR PROBABILITY DISTRIBUTIONS

Sileye Oumar Ba, Jean-Marc Odobez, IDIAP Research Institute, Switzerland

TU-AM1-L4: H.264/SCALABLE VIDEO CODING

TU-AM1-L4.1: FAST MOTION ESTIMATION FOR H.264/AVC USING IMAGE57 EDGE FEATURES

Zhenyu Liu, Satoshi Goto, Takeshi Ikenaga, Waseda University, Japan

TU-AM1-L4.2: SATD-BASED INTRA MODE DECISION FOR H.264/AVC61 VIDEO CODING

Yu Ting Sun, Yinyi Lin, National Central University, Taiwan

TU-AM1-L4.3: EFFICIENT MEMORY ARCHITECTURE FOR FAST65 TOTAL_ZEROS DECODING IN H.264/AVC CAVLC DECODER

*Yong Ho Moon, Gyeongsang National University, Republic of Korea; Il Ku Eom, Pusan National University,
Republic of Korea; Suk Woon Ha, Gyeongsang National University, Republic of Korea*

TU-AM1-L4.4: SIMD OPTIMIZATION OF THE H.264/SVC DECODER WITH69 EFFICIENT DATA STRUCTURE

*Joohyun Lee, Gwanggil Jeon, Sangjun Park, Taeyoung Jung, Jechang Jeong, Hanyang University, Republic of
Korea*

TU-AM1-L4.5: ON SOT COEFFICIENT ORDERING OF A SPIHT CODER73 AND ITS FAST ANALYSIS METHOD

*Yu-Lin Wang, Jin-Xin Wang, SCREAM Lab. CSIE. National Cheng Kung University, Taiwan; Alvin W.Y Su,
National Cheng Kung University, Taiwan*

TU-AM1-L4.6: EXPANDING WINDOW FOUNTAIN CODES FOR SCALABLE VIDEO MULTICAST	77
<i>Dejan Vukobratovic, University of Novi Sad, Yugoslavia; Vladimir Stankovic, University of Strathclyde, United Kingdom; Dino Sejdinovic, University of Bristol, United Kingdom; Lina Stankovic, University of Strathclyde, United Kingdom; Zixiang Xiong, Texas A&M University, United Kingdom</i>	
TU-AM1-L5: SPEECH/AUDIO CODING AND PROCESSING	
TU-AM1-L5.1: PERCEPTUAL-MVDR BASED ANALYSIS-SYNTHESIS OF PITCH SYNCHRONOUS FRAMES FOR PITCH MODIFICATION	81
<i>Muralishankar Rangarao, PES Institute of Technology, India; Ravi Shanker Mamindapalli, BITS, India; Ramakrishnan A. G., Indian Institute of Science, India</i>	
TU-AM1-L5.2: SCALABLE SPEECH CODING AT RATES BELOW 900 BPS	85
<i>Ehsan Jahangiri, Shahrokh Ghaemmaghami, Sharif University of Technology, Iran</i>	
TU-AM1-L5.3: HYPERACOUSTIC INSTRUMENTS: COMPUTER-CONTROLLED INSTRUMENTS THAT ARE NOT ELECTROPHONES	89
<i>Steve Mann, Ryan Janzen, Raymond Lo, University of Toronto, Canada</i>	
TU-PM1-L1: 3D FACE ANALYSIS AND RECOGNITION	
TU-PM1-L1.1: FACE RECOGNITION BY SVMs CLASSIFICATION OF 2D AND 3D RADIAL GEODESICS	93
<i>Stefano Berretti, Alberto Del Bimbo, Pietro Pala, University of Firenze, Italy; Francisco Jose' Silva Mata, Centro de Aplicaciones de Tecnologias de Avanzada, Italy</i>	
TU-PM1-L1.2: THREE-DIMENSIONAL FACE RECOGNITION USING ELASTIC DEFORMATIONS OF FACIAL SURFACES	97
<i>Mohamed Daoudi, TELECOM Lille1, LIFL UMR (USTL/CNRS 8022), France; Anuj Srivastava, Florida State University, United States; Chafik Samir, Lahoucine Ballihi, TELECOM Lille1, LIFL UMR (USTL/CNRS 8022), France</i>	
TU-PM1-L1.3: TOWARD A REGION-BASED 3D FACE RECOGNITION APPROACH	101
<i>Boulbaba Ben Amor, TELECOM Lille1, France; Mohsen Ardabilian, Liming Chen, Ecole Centrale de Lyon, France</i>	
TU-PM1-L2: INDEXING AND SEARCHING	
TU-PM1-L2.1: USING SEMANTIC GRAPHS FOR IMAGE SEARCH	105
<i>Jyh-Ren Shieh, Yang-Ting Yeh, Chih-Hung Lin, National Taiwan University, Taiwan; Ching-Yung Lin, IBM T. J. Watson Research Center, United States; Ja-Ling Wu, National Taiwan University, Taiwan</i>	
TU-PM1-L2.2: TAGRANK- MEASURING TAG IMPORTANCE FOR IMAGE ANNOTATION	109
<i>Xiao Ling, Shanghai Jiao Tong University, China; Jimin Jia, Nenghai Yu, University of Science and Technology of China, China; Mingjing Li, Microsoft Research Asia, China</i>	

TU-PM1-L2.3: SOCIALRANK: A RANKING MODEL FOR WEB IMAGE RETRIEVAL IN WEB 2.0	113
<i>Xiaoguang Rui, Nenghai Yu, Jimin Jia, University of Science and Technology of China, China; Mingjing Li, Microsoft Research Asia, China</i>	
 TU-PM1-L3: VIDEO UNDERSTANDING I	
TU-PM1-L3.1: FUZZY MINING OF MULTIMEDIA GENRE APPLIED TO TELEVISION ARCHIVES	117
<i>Alberto Messina, RAI - Centre for Research and Technological Innovation, Italy; Maurizio Montagnuolo, University of Turin, Italy</i>	
TU-PM1-L3.2: AUTOMATIC SEMANTIC ANNOTATION FOR VIDEO BLOGS	121
<i>Xiaoyu Zhang, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China; Changsheng Xu, Institute for Infocomm Research, Singapore; Jian Cheng, Hanqing Lu, Songde Ma, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China</i>	
TU-PM1-L3.3: ONTOLOGY-BASED VISUAL WORD MATCHING FOR NEAR-DUPLICATE RETRIEVAL	125
<i>Yu-Gang Jiang, Chong-Wah Ngo, City University of Hong Kong, Hong Kong SAR of China</i>	
TU-PM1-L3.4: MULTIPLE VIDEO TRAJECTORIES REPRESENTATION USING DOUBLE-LAYER ISOMETRIC FEATURE MAPPING	129
<i>Yang Liu, Yan Liu, Keith C. C. Chan, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
 TU-PM1-L4: ARCHITECTURE	
TU-PM1-L4.1: A HIGH PERFORMANCE THREE-ENGINE ARCHITECTURE FOR H.264/AVC FRACTIONAL MOTION ESTIMATION	133
<i>Cheng Long Wu, Chao Yang Kao, Youn Long Lin, National Tsing Hua University, Taiwan</i>	
TU-PM1-L4.2: LOW COST ARCHITECTURE FOR JPEG2000 ENCODER WITHOUT CODE-BLOCK MEMORY	137
<i>Tsung-Ta Lin, Jen-Shiun Chiang Chiang, Tamkang University, Taiwan</i>	
TU-PM1-L4.3: A HIGH-PERFORMANCE AND MEMORY-EFFICIENT ARCHITECTURE FOR H.264/AVC MOTION ESTIMATION	141
<i>Chao-Yang Kao, Youn-Long Lin, National Tsing Hua University, Taiwan</i>	
TU-PM1-L4.4: ANALYSIS AND ARCHITECTURE DESIGN OF MULTI-TRANSFORM ARCHITECTURE FOR H.264/AVC INTRA FRAME CODER	145
<i>Lien-Fei Chen, Kun-Hsing Li, Chong-Yu Huang, Yeong-Kang Lai, National Chung Hsing University, Taiwan</i>	
 TU-PM1-P1: MEDIA PROCESSING, CONVERSION AND TRANSCODING II	
TU-PM1-P1.1: EFFECTIVE POST-PROCESSING FOR SINGLE-CHANNEL FREQUENCY-DOMAIN SPEECH ENHANCEMENT	149
<i>Weifeng Li, IDIAP research institute, Switzerland</i>	

TU-PM1-P1.2: MULTIPLE DESCRIPTION CODING OF AUDIO USING PHASE SCRAMBLING	153
<i>Seyed-Parsa Hojjat, Kaveh F. Sadri, Shahram Shirani, McMaster University, Canada</i>	
TU-PM1-P1.3: FAST IMAGE SUPER-RESOLUTION USING CONNECTED COMPONENT ENHANCEMENT	157
<i>Jinjun Wang, Yihong Gong, NEC Laboratories America, Inc., United States</i>	
TU-PM1-P1.4: FRAME RATE UP-CONVERSION WITH GLOBAL-TO-LOCAL ITERATIVE MOTION COMPENSATED INTERPOLATION	161
<i>Kung-Yen Hsu, Shao-Yi Chien, National Taiwan University, Taiwan</i>	
TU-PM1-P1.5: REAL-TIME SOFTWARE MPEG-2 TO H.264 VIDEO TRANSCODING	165
<i>Kwong Huang Goh, Dajun Wu, Jo Yew Tham, Tuan Kiang Chiew, Wei Siong Lee, Institute for Infocomm Research, Singapore</i>	
TU-PM1-P1.6: A VISUAL ATTENTION APPROACH TO IMAGE INTERPOLATION	169
<i>Hsuan-Ying Chen, Jin-Jang Leou, National Chung Cheng University, Taiwan</i>	
TU-PM1-P1.7: WEIGHTED FUZZY FILTER ON INTERLACED-TO-PROGRESSIVE CONVERSION	173
<i>Gwanggil Jeon, Rokkyu Lee, Hanyang University, Republic of Korea; Donghyung Kim, ETRI, Republic of Korea; Joohyun Lee, Jechang Jeong, Hanyang University, Republic of Korea</i>	
TU-PM1-P1.8: VARIABLE BLOCK SIZE SELECTION FOR A TRANSCODER BASED ON MB MOVEMENT INFORMATION	177
<i>Xiangwen Wang, Jun Sun, Rong Xie, Shibao Zheng, Songyu Yu, Shanghai Jiao Tong University, China</i>	
TU-PM1-P1.9: SUPER-RESOLUTION FOR LOW QUALITY THUMBNAIL IMAGES	181
<i>Zhiwei Xiong, University of Science and Technology of China, China; Xiaoyan Sun, Feng Wu, Microsoft Research Asia, China</i>	
TU-PM1-P1.10: SCALABLE LOSSLESS AND LOSSY IMAGE CODING BASED ON THE RWHAT+P PYRAMID AND THE INTER-COEFFICIENT CLASSIFICATION METHOD	185
<i>Olivier Deforges, Marie Babel, Laurent Bedat, Véronique Coat, IETR/INSA Rennes, France</i>	
TU-PM1-P1.11: COMP-DENOISER ADAPTED TO CORONARY X-RAY IMAGES	189
<i>Azza Ouled Zaid, Ammar Bouallegue, 6'com laboratory, Tunisia; Christian Olivier, UMR 6172 XLIM, France; Amine Nait Ali, LISSI Laboratory, France</i>	
TU-PM1-P1.12: CODING OF ARBITRARILY-SHAPED IMAGE BLOCKS BASED ON A CONSTRAINED QUANTIZATION	193
<i>Shuyuan Zhu, Bing Zeng, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
TU-PM1-P1.13: MANIPULATING IMAGE PATCHES FOR COMPRESSION	197
<i>Dong Liu, University of Science and Technology of China, China; Xiaoyan Sun, Feng Wu, Microsoft Research Asia, China</i>	

TU-PM1-P2: DIGITAL WATERMARKING I

TU-PM1-P2.1: JND MASK ADAPTATION FOR WAVELET DOMAIN WATERMARKING	201
<i>Mohamed Bouchakour, Guillaume Jeannic, Florent Autrusseau, Polytech, IRCCyN Lab., France</i>	
TU-PM1-P2.2: OPTIMIZING THE CAPACITY OF DISTORTION-FREE WATERMARKING ON PALETTE IMAGES	205
<i>Yongdong Wu, Qiming Li, Feng Bao, Institute for Infocomm Research, Singapore</i>	
TU-PM1-P2.3: IMPROVEMENT OF THE EMBEDDING EFFICIENCY OF LSB MATCHING BY SUM AND DIFFERENCE COVERING SET	209
<i>Xiaolong Li, Peking University, China; Tiejong Zeng, ENS de Cachan, France; Bin Yang, Peking University, China</i>	
TU-PM1-P2.4: MULTIPLE RE-WATERMARKING USING VARYING WAVELET PACKETS	213
<i>Jutta Hämmerle-Uhl, Michael Liedlgruber, Andreas Uhl, Hartmut Wernisch, University of Salzburg, Austria</i>	
TU-PM1-P2.5: SCALABLE DATA HIDING FOR ONLINE TEXTURED 3D TERRAIN VISUALIZATION	217
<i>Khizar Hayat, William Puech, University of Montpellier, France; Gilles Gesquiere, University of Marseille, France</i>	
TU-PM1-P2.6: A MULTIPURPOSE AUDIO WATERMARKING SCHEME FOR COPYRIGHT PROTECTION AND CONTENT AUTHENTICATION	221
<i>Ning Chen, Jie Zhu, Shanghai Jiao Tong University, China</i>	
TU-PM1-P2.7: A UNIVERSALLY OPTIMUM DECODER FOR MULTIPLICATIVE AUDIO WATERMARKING	225
<i>Nima Khademi Kalantari, Seyed Mohammad Ahadi, Hamidreza Amindavar, Amirkabir University of Technology, Iran</i>	
TU-PM1-P2.8: FEATURE BASED WATERMARKING SCHEME FOR IMAGE AUTHENTICATION	229
<i>Hongmei Liu, Junhui Rao, Xinzhi Yao, Sun Yat-sen University, China</i>	
TU-PM1-P2.9: COLOR IMAGE WATERMARKING USING LOCAL QUATERNION FOURIER SPECTRAL ANALYSIS	233
<i>Xiaojun Ma, Yi Xu, Song Li, Xiaokang Yang, Shanghai Jiao Tong University, China; Hans Burkhardt, Institute for Computer Science, University of Freiburg, Germany</i>	
TU-PM1-P2.10: IMPROVED QUANTIZATION INDEX MODULATION WATERMARKING ROBUST AGAINST AMPLITUDE SCALING DISTORTIONS	237
<i>Xinshan Zhu, Information Engineering College of Yangzhou University, China; Zhi Tang, Institute of Computer Science & Technology of Peking University, China</i>	
TU-PM1-P2.11: DWT-SVD BASED IMAGE WATERMARKING USING PARTICLE SWARM OPTIMIZER	241
<i>Veysel Aslantas, A. Latif Dogan, Serkan Ozturk, Erciyes University, Turkey</i>	

TU-PM1-P3: DIGITAL WATERMARKING II

TU-PM1-P3.1: SECURE LEMPEL-ZIV-WELCH (LZW) ALGORITHM WITH245 RANDOM DICTIONARY INSERTION AND PERMUTATION

Jiantao Zhou, Oscar Au, Xiaopeng Fan, Peter Wong, Hong Kong University of Science and Technology, Hong Kong SAR of China

TU-PM1-P3.2: IMAGE-IN-IMAGE HIDING USING COMPLETE249 COMPLEMENTARY SEQUENCES

Qiwen Liu, Lancaster University, United Kingdom; Chadi Khirallah, Lina Stankovic, Vladimir Stankovic, University of Strathclyde, United Kingdom

TU-PM1-P3.3: DOCTORED JPEG IMAGE DETECTION253

Weihai Li, Nenghai Yu, University of Science and Technology of China, China; Yuan Yuan, Aston University, United Kingdom

TU-PM1-P3.4: DIGITAL WATERMARKING TECHNIQUE USING257 BRIGHTNESS-MODULATED LIGHT

Kazutake Uehira, Masahiro Suzuki, Kanagawa Institute of Technology, Japan

TU-PM1-P3.5: ON THE JOINT AUDIO FINGERPRINTING AND261 DECRYPTION SCHEME

Shiguo Lian, Zhongxuan Liu, Yuan Dong, Haila Wang, France Telecom R&D Beijing, China

TU-PM1-P3.6: WEIGHTED STEGO-IMAGE BASED STEGANALYSIS IN265 MULTIPLE LEAST SIGNIFICANT BITS

Xiaoyi Yu, Noboru Babaguchi, Osaka University, Japan

TU-PM1-P3.7: A NOVEL FRAGILE WATERMARKING BASED ON PARTICLE269 SWARM OPTIMIZATION

Veysel Aslantas, Saban Ozer, Serkan Ozturk, Erciyes University, Turkey

TU-PM1-P3.8: COMPRESSION INDEPENDENT OBJECT ENCRYPTION273 FOR ENSURING PRIVACY IN VIDEO SURVEILLANCE

Paula Carrillo, Hari Kalva, Spyros Magliveras, Florida Atlantic University, United States

TU-PM1-P3.9: A NEW DATA HIDING SCHEME FOR SCENE CHANGE277 DETECTION IN H.264 ENCODED VIDEO SEQUENCES

Spyridon Kapotas, Athanassios Skodras, Hellenic Open University, Greece

TU-PM1-P3.10: A PERCEPTUAL PYRAMIDAL WATERMARKING TECHNIQUE.....281

Quoc Bao Do, Azeddine Beghdadi, Marie Luong, Phi Bang Nguyen, L2TI, France

TU-PM2-L1: VIDEO SEARCH

TU-PM2-L1.1: VIDEO SEARCH RERANKING VIA ONLINE ORDINAL285 RERANKING

Yi-Hsuan Yang, Winston Hsu, National Taiwan University, Taiwan

TU-PM2-L1.2: EXPLOITING STORY-LEVEL CONTEXT TO IMPROVE289 VIDEO SEARCH

Kongwah Wan, Institute for Infocomm Research, Singapore

TU-PM2-L1.3: FAST AND ROBUST DETECTION OF NEAR-DUPLICATES IN WEB VIDEO DATABASE	293
<i>Hui Xu, Tsinghua Univeristy, China; Lu Liu, Lifeng Sun, Shiqiang Yang, Tsinghua University, China</i>	
TU-PM2-L1.4: LEARNING TO VIDEO SEARCH RERANK VIA PSEUDO PREFERENCE FEEDBACK	297
<i>Yuan Liu, University of Science and Technology of China, China; Tao Mei, Xian-Sheng Hua, Microsoft Research Asia, China; Jinhui Tang, Xiuqing Wu, University of Science and Technology of China, China; Shipeng Li, Microsoft Research Asia, China</i>	
TU-PM2-L2: VIDEO UNDERSTANDING II	
TU-PM2-L2.1: OPTIMIZED VIDEO SCENE SEGMENTATION	301
<i>Jingdong Wang, Microsoft Research Asia, China; Xinmei Tian, University of Science and Technology of China, China; Linjun Yang, Microsoft Research Asia, China; Zheng-Jun Zha, University of Science and Technology of China, China; Xian-Sheng Hua, Microsoft Research Asia, China</i>	
TU-PM2-L2.2: A REAL-TIME VIDEO SURVEILLANCE SYSTEM WITH HUMAN OCCLUSION HANDLING USING NONLINEAR REGRESSION	305
<i>Jungong Han, Minwei Feng, Peter de With, University of Technology Eindhoven, Netherlands</i>	
TU-PM2-L2.3: VISION-BASED VEHICLE EVENT DETECTION THROUGH VISUAL RHYTHM ANALYSIS	309
<i>Chia-Hung Yeh, National Sun Yat-Sen University, Taiwan; Jia-Chi Bai, National Dong-Hwa University, Taiwan; Sun-Chen Wang, Po-Yi Sung, Ruey-Nan Yeh, Chung-Shan Institute of Science and Technology, Taiwan; Maverick Shih, MAVsLab Inc., Taiwan</i>	
TU-PM2-L2.4: SEMANTIC EVENT DETECTION FOR CONSUMER PHOTO AND VIDEO COLLECTIONS	313
<i>Wei Jiang, Columbia University, United States; Alexander Loui, Eastman Kodak Company, United States</i>	
TU-PM2-L3: DIALOGUE AND INTERACTIVE SYSTEMS	
TU-PM2-L3.1: MAHALANOBIS DISTANCE BASED POLYNOMIAL SEGMENT MODEL FOR CHINESE SIGN LANGUAGE RECOGNITION	317
<i>Yu Zhou, School of Computer Science and Technology, Harbin Institute of Technology, China; Xilin Chen, Institute of Computing Technology, Chinese Academy of Sciences, China; Debin Zhao, Hongxun Yao, School of Computer Science and Technology, Harbin Institute of Technology, China; Wen Gao, Institute of Computing Technology, Chinese Academy of Sciences, China</i>	
TU-PM2-L3.2: HUMAN-CENTERED IMAGE NAVIGATION ON MOBILE DEVICES	321
<i>Cunxun Zang, Qingshan Liu, Jian Cheng, Hanqing Lu, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China</i>	
TU-PM2-L3.3: AUTOMATIC SCHEDULING OF CCTV CAMERA VIEWS USING A HUMAN-CENTRIC APPROACH	325
<i>Pradeep K. Atrey, M. Anwar Hossain, Abdulmotaleb El Saddik, University of Ottawa, Canada</i>	

TU-PM2-L4: CODING

TU-PM2-L4.1: PARALLELIZATION OF H.264 VIDEO DECODER FOR EMBEDDED MULTICORE PROCESSOR329

Kosuke Nishihara, Atsushi Hatabu, Tatsuji Moriyoshi, NEC Corporation, Japan

TU-PM2-L4.2: AN APPROXIMATE SQUARE CRITERION FOR H.264/AVC INTRA MODE DECISION333

Yi-Chih Chao, Kuan-Hung Lin, Bin-Da Liu, Jar-Ferr Yang, National Cheng Kung University, Taiwan

TU-PM2-L4.3: ON THE REFINEMENT OF THE DCT/IDCT SCALING FACTOR SENSITIVITY337

Ihab Amer, Wael Badawy, Vassil Dimitrov, Graham Jullien, ATIPS, Canada

TU-PM2-L4.4: CONTEXT-ADAPTIVE BINARY ARITHMETIC CODING FOR FRAME-BASED ANIMATED MESH COMPRESSION341

Heiner Kirchhoffer, Detlev Marpe, Karsten Müller, Thomas Wiegand, Fraunhofer Institute for Telecommunications - Heinrich-Hertz-Institute, Germany

TU-PM2-L5: DIGITAL WATERMARKING III

TU-PM2-L5.1: TRACEABLE MULTIMEDIA FINGERPRINTING BASED ON THE MULTILEVEL USER GROUPING345

Yu-Tzu Lin, National Taiwan Normal University, Taiwan; Ja-Ling Wu, National Taiwan University, Taiwan

TU-PM2-L5.2: EFFECTIVE DETECTION METHOD FOR CDMA-BASED FINGERPRINTING SCHEME349

Minoru Kuribayashi, Masakatu Morii, Kobe University, Japan

TU-PM2-L5.3: RUN LENGTH BASED STEGANALYSIS FOR LSB MATCHING STEGANOGRAPHY353

Xiaoyi Yu, Noboru Babaguchi, Osaka University, Japan

TU-PM2-L5.4: BLIND MOTION-COMPENSATED VIDEO WATERMARKING357

Peter Meerwald, Andreas Uhl, University of Salzburg, Austria

TU-PM2-P1: APPLICATIONS I

TU-PM2-P1.1: ASSESSING RHYTHM RECOGNITION SKILLS IN A MULTIMEDIA ENVIRONMENT361

Irene Cheng, University of Pennsylvania, United States; Chris Kerr, Walter Bischof, University of Alberta, Canada

TU-PM2-P1.2: COMMUNITY COORDINATED MULTIMEDIA: CONVERGING CONTENT-DRIVEN AND SERVICE-DRIVEN MODELS365

Jiehan Zhou, Mika Rautiainen, Mika Ylianttila, University of Oulu, Finland

TU-PM2-P1.3: WEB VIDEO RECOMMENDATION AND LONG TAIL DISCOVERING369

Xiao Wu, Yongdong Zhang, Junbo Guo, Jintao Li, Institute of Computing Technology, Chinese Academy of Sciences, China

TU-PM2-P1.4: A ROBUST VIDEO STABILIZATION SYSTEM BY ADAPTIVE MOTION VECTORS FILTERING	373
<i>Sebastiano Battiato, Giovanni Puglisi, University of Catania, Italy; Arcangelo Ranieri Bruna, STMicroelectronics Catania, Italy</i>	
TU-PM2-P1.5: HEART SOUND CANCELLATION FROM RESPIRATORY SOUND USING A FILTER BANK BASED SEMI-BLIND SOURCE EXTRACTION ALGORITHM	377
<i>Feng Jin, Farook Sattar, Nanyang Technological University, Singapore</i>	
TU-PM2-P1.6: HEART SOUND LOCALIZATION FROM RESPIRATORY SOUND USING A ROBUST WAVELET BASED APPROACH	381
<i>Feng Jin, Farook Sattar, Sirajudeen Gulam Razul, Nanyang Technological University, Singapore; Daniel Y T Goh, National University Hospital, Singapore</i>	
TU-PM2-P1.7: A BIOMEDICAL ENTERTAINMENT PLATFORM DESIGN BASED ON MUSICAL RHYTHM CHARACTERISTICS AND HEART RATE VARIABILITY (HRV)	385
<i>Yu-Chieh Huang, Shih-Hsiang Lin, Ching-Yen Chien, Yi-Cheng Chen, Lei-Chun Chou, Sheng-Chieh Huang, National Chiao-Tung University, Taiwan; Ming-Yie Jan, Academia Sinica, Taiwan</i>	
TU-PM2-P1.8: SPATIAL SCENE ADAPTATION IN BROADCAST ENVIRONMENT	389
<i>Benoît Pellan, RTL, France; Cyril Concolato, GET / TELECOM ParisTech CNRS LTCI, France</i>	
TU-PM2-P1.9: A VERSATILE EXPRESSIVE PERCUSSION INSTRUMENT WITH GAME TECHNOLOGY	393
<i>Sebastian Heise, Joern Loviscach, Hochschule Bremen (University of Applied Sciences), Germany</i>	
TU-PM2-P1.10: A STREAMING-BASED APPROACH FOR REMOTE INTERACTION OF THE MULTI-CHANNEL DISPLAY SYSTEM FOR GROUP USERS	397
<i>Zhongding Jiang, Junyi Tao, Lei Zhang, Fudan University, China; Hai Lin, Hujun Bao, Zhejiang University, China</i>	
TU-PM2-P1.11: PHANTOM MATERIALIZATION FOR HEADPHONE REPRODUCTION	401
<i>Jeroen Breebaart, Philips Research, Netherlands; Erik Schuijers, Philips Applied Technologies, Netherlands</i>	
TU-PM2-P2: TRAFFIC, ERROR, QOS, SECURITY AND TRANSPORT	
TU-PM2-P2.1: D-PUP: AN ENHANCED PREDICTION ALGORITHM FOR REAL-TIME MPEG-4 VBR VIDEO TRAFFIC WITH DYNAMIC ADAPTATION	405
<i>Kang Yong Lee, ETRI, Republic of Korea; Moonseong Kim, Michigan State University, United States; Kee-Seong Cho, ETRI, Republic of Korea</i>	
TU-PM2-P2.2: CONCEALMENT AWARE MODE SELECTION FOR POWER-RATE-DISTORTION OPTIMIZED H.264/AVC ENCODER	409
<i>Yuan Lin, Norwegian University of Science and Technology, Norway; Eren Gurses, University of Waterloo, Canada; Anna N Kim, Andrew Perkis, Norwegian University of Science and Technology, Norway</i>	

TU-PM2-P2.3: ENHANCING ERROR RESILIENCY FOR	413
MULTI-HYPOTHESIS VIDEO CODING TECHNIQUES	
<i>Wen-Nung Lle, Zhi-Wei Gao, National Chung Cheng University, Taiwan; Chih-Chang Chen, Human-Computer Interaction Lab., Industrial Technology Research Institute South, Taiwan</i>	
TU-PM2-P2.4: ADAPTIVE ERROR PROTECTION FOR SCALABLE VIDEO	417
CODING EXTENSION OF H.264/AVC	
<i>Dieu Thanh Nguyen, Michio Hayashi, Joern Ostermann, Leibniz Universität Hannover, Germany</i>	
TU-PM2-P2.5: A NOVEL FRAME RECOVERY ALGORITHM BASED ON	421
SPATIAL AND TEMPORAL CORRELATION	
<i>Yang Ling, Shanghai Jiao Tong University, China; Jin Wang, Yunqiang Liu, Philips Research Asia - Shanghai, China; Wenjun Zhang, Shanghai Jiao Tong University, China</i>	
TU-PM2-P2.6: A NOVEL HOTSPOT LOCATION ALGORITHM FOR P2P	425
STREAMING DISTRIBUTION NETWORKING	
<i>Zhen Yang, Huadong Ma, Beijing University of Posts and Telecommunications, China</i>	
TU-PM2-P2.7: AN OPTIMAL SMOOTH QOS ADAPTATION STRATEGY FOR	429
QOS DIFFERENTIATED SCALABLE MEDIA STREAMING	
<i>Xiaorong Li, Edward Chuah, Institute of High Performance Computing, Singapore; Jo Yew Tham, Kwong Huang Goh, Institute for Infocomm Research (I2R), Singapore</i>	
TU-PM2-P2.8: A MULTIMEDIA TERMINAL FOR ADAPTATION AND	433
END-TO-END QOS CONTROL	
<i>Beilu Shao, Marco Mattavelli, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Daniele Renzi, bSoft, ltd, Italy; Maria Andrade, INESC Porto, Portugal; Stefano Battista, bSoft, ltd, Italy; Samuel Keller, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Giorgiana Ciobanu, Pedro Carvalho, INESC Porto, Portugal</i>	
TU-PM2-P2.9: FOUR DIMENSIONAL CHAOTIC CIPHERS FOR SECURE	437
IMAGE TRANSMISSION	
<i>Mohamed Hamdi, Noureddine Boudriga, CN&S, Tunisia</i>	
TU-PM2-P2.10: A COMPARATIVE STUDY OF NETWORK TRANSPORT	441
PROTOCOLS FOR IN-VEHICLE MEDIA STREAMING	
<i>Mehrnoush Rahmani, Andrea Pettiti, BMW Group Research and Technology, Germany; Ernst Biersack, Institut Eurecom, France; Eckehard Steinbach, Technische Universität München, Germany; Joachim Hillebrand, BMW Group Research and Technology, Germany</i>	
TU-PM2-P3: MULTIMEDIA STREAMING	
TU-PM2-P3.1: SPARSE FEC CODES FOR FLEXIBLE MEDIA PROTECTION	445
<i>Jari Korhonen, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
TU-PM2-P3.2: MEASUREMENT STUDY OF PACKET LOSS VERSUS	449
DELAY IN CONGESTION DETECTION FOR VIDEO STREAMING	
<i>Marcos Paredes Farrera, Martin Fleury, Mohammed Ghanbari, Ken Guild, University of Essex, United Kingdom</i>	

TU-PM2-P3.3: VARIABLE BIT RATE DV STREAMING WITH TCP-FRIENDLY RATE CONTROL	453
<i>Zhijie Zhao, Dieu Thanh Nguyen, Jörn Ostermann, Leibniz Universität Hannover, Germany</i>	
TU-PM2-P3.4: ADAPTIVE MULTI-SOURCE VIDEO MULTICAST	457
<i>Francisco de Asís López-Fuentes, Eckehard Steinbach, Technische Universität München, Germany</i>	
TU-PM2-P3.5: ANALYSIS OF A DISTRIBUTED PROCESSING MODEL FOR SPATIALIZED AUDIO CONFERENCES	461
<i>Christopher J Reynolds, Martin J Reed, University of Essex, United Kingdom; Peter J Hughes, BT Group, United Kingdom</i>	
TU-PM2-P3.6: OPTIMAL PREFIX CACHING AND DATA SHARING STRATEGY	465
<i>Kaihui Li, Changqiao Xu, Yuanhai Zhang, Institute of Software, Chinese Academy of Sciences, China; Zhimei Wu, Institute of Software, The Chinese Academy of Sciences, China</i>	
TU-PM2-P3.7: SCALABLE VIDEO ADAPTATION OPTIMIZATION USING SOFT DECISION SCHEME	469
<i>Chia-Ho Pan, National Taiwan University, Taiwan; Sheng-Chieh Huang, National Chiao-Tung University, Taiwan; I-Hsien Lee, Pennsylvania State University, United States; Chung-Jr Lian, Liang-Gee Chen, National Taiwan University, Taiwan</i>	
TU-PM2-P3.8: REDUCING END-TO-END TRANSMISSION DELAY IN P2P STREAMING SYSTEMS USING MULTIPLE TREES WITH MODERATE OUTDEGREE	473
<i>Jeonghun Noh, Aditya Mavlankar, Pierpaolo Baccichet, Bernd Girod, Stanford University, United States</i>	
TU-PM2-P3.9: ADAPTIVE SCHEDULING OF STREAMING VIDEO OVER WIRELESS NETWORKS	477
<i>Honghai Zhang, Sampath Rangarajan, NEC Laboratories America, Inc., United States</i>	
TU-PM2-P3.10: FIGHTING POLLUTION IN P2P LIVE STREAMING SYSTEMS	481
<i>Alex Borges, Jussara Almeida, Sergio Campos, Universidade Federal de Minas Gerais, Brazil</i>	
TU-PM2-P4: MULTIMEDIA STREAMING AND OPTIMIZATION	
TU-PM2-P4.1: FRAME CONCEALMENT ALGORITHM FOR STEREOSCOPIC VIDEO USING MOTION VECTOR SHARING	485
<i>Chaminda T.E.R. Hewage, Stewart T. Worrall, Safak Dogan, Ahmet M. Kondo, University of Surrey, United Kingdom</i>	
TU-PM2-P4.2: PERFORMANCE MEASUREMENTS AND EVALUATION OF VIDEO STREAMING IN HSDPA NETWORKS WITH 16QAM MODULATION	489
<i>Haakon Riiser, Netview Technology AS, Norway; Pål Halvorsen, Carsten Griwodz, Simula Research Laboratory, Norway; Bjørn Hestnes, Telenor R&I, Norway</i>	
TU-PM2-P4.3: AUTOMATED LEARNING OF PLAYOUT SCHEDULING ALGORITHMS FOR IMPROVING PERCEPTUAL CONVERSATIONAL QUALITY IN MULTI-PARTY VOIP	493
<i>Zixia Huang, Batu Sat, Benjamin W. Wah, University of Illinois at Urbana-Champaign, United States</i>	

TU-PM2-P4.4: COLLABORATIVE VIDEO STREAMING WITH RAPTOR	497
NETWORK CODING	
<i>Nikolaos Thomos, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
TU-PM2-P4.5: LOSS TOLERANCE SCHEME FOR 3D PROGRESSIVE	501
MESHES STREAMING OVER NETWORKS	
<i>Hui Li, Ask.com, United States; Ziyang Tang, Xiaohu Guo, B. Prabhakaran, University of Texas at Dallas, United States</i>	
TU-PM2-P4.6: CROSS-LAYER OPTIMIZATION FOR MULTI-USER VIDEO	505
STREAMING OVER IEEE 802.11E HCCA WIRELESS NETWORKS	
<i>Tong Gan, Antoine Dejonghe, Gregory Lenoir, Kristof Denolf, Gauthier Lafruit, Iole Moccagatta, IMEC, Belgium</i>	
TU-PM2-P4.7: APPLICATION-AWARE OPTIMIZATION OF PACKET	509
SCHEDULING FOR VIDEO COMMUNICATIONS OVER INTERVEHICLE AD HOC NETWORKS	
<i>Enrico Masala, Politecnico di Torino, Italy</i>	
TU-PM2-P4.8: MULTI-GBPS WIRELESS SYSTEMS OVER 60-GHZ SIGE	513
RADIO LINK WITH BW-EFFICIENT NONCOHERENT DETECTIONS	
<i>Yasunao Katayama, Daiju Nakano, IBM Research, Tokyo Research Laboratory, Japan; Alberto Valdes-Garcia, Troy Beukema, Scott Reynolds, IBM T. J. Watson Research Center, United States</i>	
TU-PM2-P4.9: UNEQUAL POWER ALLOCATION FOR SCALABLE VIDEO	517
TRANSMISSION OVER WIMAX	
<i>Zaheer Ahmad, University of surrey, United Kingdom; Stewart Worrall, Ahmet Kondoz, University of Surrey, United Kingdom</i>	
TU-PM2-P4.10: DISTRIBUTED BANDWIDTH ALLOCATION FOR	521
MULTIMEDIA STREAMING BASED ON NORMALIZED CONGESTION PRICE IN IEEE 802.11 WIRELESS MESH NETWORKS	
<i>Jae-Yong Yoo, JongWon Kim, Gwangju Institute of Science and Technology, Republic of Korea</i>	
WE-AM1-L1: MEDICAL IMAGE PROCESSING	
WE-AM1-L1.1: ANALYSIS OF SPATIO-TEMPORAL PREDICTION METHODS	525
IN 4D VOLUMETRIC MEDICAL IMAGE DATASETS	
<i>Uwe-Erik Martin, Siemens AG Medical Solutions, Germany; André Kaup, University of Erlangen-Nuremberg, Germany</i>	
WE-AM1-L1.2: RETRIEVING MULTIDIMENSIONAL ULTRASONIC IMAGE	529
INFORMATION OF MOLECULAR MARKERS	
<i>Georg Schmitz, Michal Mleczo, Monica Siepmann, Ruhr-Universität Bochum, Germany</i>	
WE-AM1-L1.3: 4D RECONSTRUCTION OF GATED CARDIAC SPECT USING	533
FOURIER HARMONICS	
<i>Xiaofeng Niu, Yongyi Yang, Illinois Institute of Technology, United States</i>	
WE-AM1-L1.4: ENHANCEMENT OF VISUAL CONTRAST IN	537
FLUORESCENCE ENDOSCOPY	
<i>Thomas Stehle, Alexander Behrens, Til Aach, RWTH Aachen University, Germany</i>	

WE-AM1-L1.5: CONTENT BASED IMAGE RETRIEVAL: THE FOUNDATION FOR FUTURE CASE-BASED AND EVIDENCE-BASED OPHTHALMOLOGY	541
<i>Scott Acton, University of Virginia, United States; Peter Soliz, VisionQuest Inc., United States; Stephen Russell, University of Iowa, United States; Marios Pattichis, University of New Mexico, United States</i>	
WE-AM1-L2: APPLICATIONS II	
WE-AM1-L2.1: FOREGROUND STABILIZATION OF IMAGE SEQUENCES	545
<i>Shih-Hsuan Yang, Pei-Cheng Huang, National Taipei University of Technology, Taiwan</i>	
WE-AM1-L2.2: RANKING MUSIC DATA BY RELEVANCE AND IMPORTANCE	549
<i>Maria M. Ruxanda, Aalborg University, Denmark; Alexandros Nanopoulos, Aristotle University of Thessaloniki, Greece; Christian S. Jensen, Aalborg University, Denmark; Yannis Manolopoulos, Aristotle University of Thessaloniki, Greece</i>	
WE-AM1-L2.3: AUTOMATIC OPACITY DETECTION IN RETRO-ILLUMINATION IMAGES FOR CORTICAL CATARACT DIAGNOSIS	553
<i>Huiqi Li, Institute for Infocomm Research (A*STAR), Singapore; Liling Ko, National University of Singapore, Singapore; Joo Hwee Lim, Jiang Liu, Damon Wing Kee Wong, Institute for Infocomm Research (A*STAR), Singapore; Tien Yin Wong, National University of Singapore / Singapore Eye Research Institute, Singapore; Ying Sun, National University of Singapore, Singapore</i>	
WE-AM1-L2.4: DATA SCALING CLASSIFICATION IN STREAM ANALYSIS SYSTEMS	557
<i>Ya-Ti Peng, University of Washington, United States; Ching-Yung Lin, IBM T. J. Watson Research Center, United States; Ming-Ting Sun, University of Washington, United States</i>	
WE-AM1-L2.5: GENERALIZED TRAITOR TRACING FOR NESTED CODES	561
<i>Avinash Varna, Hongxia Jin, IBM Almaden Research Center, United States</i>	
WE-AM1-L2.6: A NEW ALGORITHM FOR THE ESTIMATION OF TALKER AZIMUTHAL ORIENTATION USING A LARGE APERTURE MICROPHONE ARRAY	565
<i>Avram Levi, Harvey Silverman, Brown University, United States</i>	
WE-AM1-L3: JOINT MEDIA AND MULTIMODAL PROCESSING	
WE-AM1-L3.1: COARSE-TO-FINE VIDEO TEXT DETECTION	569
<i>Guangyi Miao, Graduate School of Chinese Academy of Sciences, China; Qingming Huang, Graduate University of Chinese Academy of Sciences, China; Shuqiang Jiang, Institute of Computing Technology, Chinese Academy of Sciences, China; Wen Gao, Institute of Digital Media, Peking University, China</i>	
WE-AM1-L3.2: FLEXIBLE MOTION MODEL WITH VARIABLE SIZE BLOCKS FOR DEPTH FRAMES CODING IN COLOUR-DEPTH BASED 3D VIDEO CODING	573
<i>Buncha Kamolrat, Anil Fernando, Marta Mrak, Ahmet Konoz, University of Surrey, United Kingdom</i>	
WE-AM1-L3.3: SPATIAL RESOLUTION DECISION IN SCALABLE BITSTREAM EXTRACTION FOR NETWORK AND RECEIVER AWARE ADAPTATION	577
<i>Yu Wang, Lap-Pui Chau, Kim-Hui Yap, Nanyang Technological University, Singapore</i>	

WE-AM1-L3.4: VIDEO-BASED PERSON AUTHENTICATION WITH RANDOM PASSWORDS	581
<i>Chia-Wei Liao, Wei-Yang Lin, National Chung Cheng University, Taiwan; Chia-Wen Lin, National Tsing Hua University, Taiwan</i>	
 WE-AM1-L4: IMAGE/VIDEO COMPRESSION AND CODING I	
WE-AM1-L4.1: FAST MODE DECISION FOR ADAPTIVE PREDICTION ERROR CODING	585
<i>Cixun Zhang, Tampere University of Technology, Finland; Kemal Ugur, Nokia, Finland; Moncef Gabbouj, Tampere University of Technology, Finland</i>	
WE-AM1-L4.2: JOINT SPATIAL AND TEMPORAL CORRELATION EXPLOITATION FOR WYNER-ZIV FRAMES CODING IN DVC	589
<i>A.B.B. Adikari, W.A.C. Fernando, W.A.R.J. Weerakkody, A.M. Kondo, University of Surrey, United Kingdom</i>	
WE-AM1-L4.3: FLEXIBLE SUB BLOCK ORDERING BASED INTRA 4/SPL TIMES/4 PREDICTION	593
<i>Hu Wei, Shanghai Jiao Tong University, China; Tao Lin, Tongji University, China; Rongrong Ji, Harbin Institute of Technology, China</i>	
WE-AM1-L4.4: APPLICATIONS OF DISTRIBUTED SOURCE CODING TO ERROR RESILIENCY OF PRE-ENCODED VIDEO	597
<i>Tamer Shanableh, American University of Sharjah, United Arab Emirates; Tony May, Faisal Ishtiaq, Motorola Ltd, United Kingdom</i>	
WE-AM1-L4.5: RHO-GGD SOURCE MODELING FOR WAVELET COEFFICIENTS IN IMAGE/VIDEO CODING	601
<i>Chia-Yang Tsai, National Chiao-Tung University, Taiwan; Hsueh-Ming Hang, National Taipei University of Technology, Taiwan</i>	
WE-AM1-L4.6: SINGLE-LOOP DECODING FOR MULTIVIEW VIDEO CODING	605
<i>Ying Chen, Tampere University of Technology, Finland; Ye-Kui Wang, Miska M. Hannuksela, Nokia, Finland; Moncef Gabbouj, Tampere University of Technology, Finland</i>	
 WE-AM1-L5: IMAGE PROCESSING	
WE-AM1-L5.1: REDUCED-REFERENCE IMAGE QUALITY ASSESSMENT USING DISTRIBUTED SOURCE CODING	609
<i>Keiichi Chono, Yao-Chung Lin, David Varodayan, Stanford University, United States; Yoshihiro Miyamoto, NEC Corporation, Japan; Bernd Girod, Stanford University, United States</i>	
WE-AM1-L5.2: AUTHENTICATING CONTRAST AND BRIGHTNESS ADJUSTED IMAGES USING DISTRIBUTED SOURCE CODING AND EXPECTATION MAXIMIZATION	613
<i>Yao-Chung Lin, David Varodayan, Stanford University, United States; Torsten Fink, Erwin Bellers, NXP Semiconductors, United States; Bernd Girod, Stanford University, United States</i>	

WE-AM1-L5.3: RE-EXAMINATION OF APPLYING WAVELET BASED PROGRESSIVE IMAGE CODER FOR 3D SEMI-REGULAR MESH COMPRESSION	617
<i>Juyong Zhang, Jianfei Cai, Wei Guan, Jianmin Zheng, Nanyang Technological University, Singapore; Susanto Rahardja, Institute for Infocomm Research (A*STAR), Singapore</i>	
WE-AM1-L5.4: IMAGE ERROR-CONCEALMENT VIA BLOCK-BASED BILATERAL FILTERING	621
<i>Guangtao Zhai, Shanghai Jiao Tong University, China; Jianfei Cai, Weisi Lin, Nanyang Technological University, Singapore; Xiaokang Yang, Wenjun Zhang, Shanghai Jiao Tong University, China</i>	
WE-PM1-L1: DISTRIBUTED VIDEO CODING	
WE-PM1-L1.1: WYNER-ZIV VIDEO CODING: A REVIEW OF THE EARLY ARCHITECTURES AND FURTHER DEVELOPMENTS	625
<i>Fernando Pereira, Catarina Brites, Instituto Superior Técnico – Instituto de Telecomunicações, Portugal; João Ascenso, Instituto Superior de Engenharia de Lisboa – Instituto de Telecomunicações, Portugal; Marco Tagliasacchi, Politecnico di Milano, Italy</i>	
WE-PM1-L1.2: WYNER-ZIV CODING OF MULTIVIEW IMAGES WITH UNSUPERVISED LEARNING OF TWO DISPARITIES	629
<i>David Chen, David Varodayan, Markus Flierl, Bernd Girod, Stanford University, United States</i>	
WE-PM1-L1.3: HYBRID SPATIAL AND TEMPORAL ERROR CONCEALMENT FOR DISTRIBUTED VIDEO CODING	633
<i>Shuiming Ye, Mourad Ouaret, Frederic Dufaux, Touradj Ebrahimi, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
WE-PM1-L1.4: DISTRIBUTED IMAGE CODING BASED ON INTEGRATED MARKOV MODELING AND LDPC DECODING	637
<i>Jinrong Zhang, Houqiang Li, University of Science and Technology of China, China; Chang Wen Chen, University at Buffalo, State University of New York, China</i>	
WE-PM1-L2: PEER-TO-PEER	
WE-PM1-L2.1: DONET-VOD: A HYBRID OVERLAY SOLUTION FOR EFFICIENT PEER-TO-PEER VIDEO ON DEMAND SERVICES	641
<i>Changqiao Xu, Athlone Institute of Technology, Ireland; Gabriel-Miro Muntean, Dublin City University, Ireland; Enda Fallon, Xiaoguang Li, Athlone Institute of Technology, Ireland</i>	
WE-PM1-L2.2: VIDEO QUALITY ASSESSMENT AND COMPARATIVE EVALUATION OF PEER-TO-PEER VIDEO STREAMING SYSTEMS	645
<i>Aditya Mavlankar, Pierpaolo Baccichet, Bernd Girod, Stanford University, United States; Sachin Agarwal, Jatinder Pal Singh, Deutsche Telekom A.G., Laboratories, Germany</i>	
WE-PM1-L2.3: P2TSS: TIME-SHIFTED AND LIVE STREAMING OF VIDEO IN PEER-TO-PEER SYSTEMS	649
<i>Sachin Deshpande, Sharp Laboratories of America, United States; Jeonghun Noh, Stanford University, United States</i>	

WE-PM1-L2.4: VIDEO TRANSMISSION SCHEDULING FOR PEER-TO-PEER LIVE STREAMING SYSTEMS	653
<i>Ying Li, Princeton University, United States; Zhu Li, Hong Kong Polytechnic University, Hong Kong SAR of China; Mung Chiang, A. Robert Calderbank, Princeton University, United States</i>	
 WE-PM1-L3: NEAR DUPLICATE DETECTION	
WE-PM1-L3.1: EFFICIENT NEAR-DUPLICATE IMAGE DETECTION BY LEARNING FROM EXAMPLES	657
<i>Yang Hu, University of Science and Technology of China, China; Mingjing Li, Microsoft Research Asia, China; Nenghai Yu, University of Science and Technology of China, China</i>	
WE-PM1-L3.2: QUERY ORIENTED SUBSPACE SHIFTING FOR NEAR-DUPLICATE IMAGE DETECTION	661
<i>Lei Wu, University of Science and Technology of China, China; Jing Liu, Chinese Academy of Sciences, China; Nenghai Yu, University of Science and Technology of China, China; Mingjing Li, Microsoft Research Asia, China</i>	
WE-PM1-L3.3: AN IMAGE COPY DETECTION SCHEME BASED ON EDGE FEATURES	665
<i>Chia-Chen Lin, Providence University, Taiwan; Klara Nahrstedt, University of Illinois at Urbana-Champaign, United States; Chung-Juei Hung, Providence University, Taiwan</i>	
WE-PM1-L3.4: VISUAL-WORD-BASED DUPLICATE IMAGE SEARCH WITH PSEUDO-RELEVANCE FEEDBACK	669
<i>Jen-Hao Hsiao, National Taiwan University, Taiwan; Chu-Song Chen, Institute of Information Science, Academia Sinica, Taiwan; Ming-Syan Chen, National Taiwan University, Taiwan</i>	
 WE-PM1-L4: CONTENT UNDERSTANDING	
WE-PM1-L4.1: SEPARABILITY AND REFINEMENT OF HIERARCHICAL SEMANTIC VIDEO LABELS AND THEIR GROUND TRUTH	673
<i>John Kender, Columbia University, United States</i>	
WE-PM1-L4.2: STRUCTURE LEARNING IN A BAYESIAN NETWORK-BASED VIDEO INDEXING FRAMEWORK	677
<i>Siwar Baghdadi, Thomson, France; Guillaume Gravier, IRISA/CNRS, France; Claire-Hélène Demarty, Thomson, France; Patrick Gros, IRISA/INRIA, France</i>	
WE-PM1-L4.3: MUSIC LOOP EXTRACTION FROM DIGITAL AUDIO SIGNALS	681
<i>Bee Suan Ong, Sebastian Streich, Yamaha Corporation, Japan</i>	
WE-PM1-L4.4: AUTOMATIC VIDEO ANNOTATION THROUGH SEARCH AND MINING	685
<i>Emily Moxley, University of California, Santa Barbara, United States; Tao Mei, Xian-Sheng Hua, Wei-Ying Ma, Microsoft Research Asia, China; B. S. Manjunath, University of California, Santa Barbara, United States</i>	

WE-PM1-P1: H.264/VIDEO CODING

WE-PM1-P1.1: DISTORTION ESTIMATION IN CBR CHANNEL AND ITS APPLICATION FOR H.264 RATE CONTROL689

Ilhong Shin, Jungjoo Yoo, Jinwoo Hong, ETRI, Republic of Korea

WE-PM1-P1.2: AN EFFICIENT INTRA MODE SELECTION SCHEME FOR INTER FRAME CODING IN H.264/AVC VIDEO CODING693

Jong-Ho Kim, Information & Communications University, Republic of Korea; Byung-Gyu Kim, ETRI, Republic of Korea; Munchurl Kim, Information & Communications University, Republic of Korea

WE-PM1-P1.3: H.264/AVC MOTION ESTIMATION IMPLEMENTATION ON COMPUTE UNIFIED DEVICE ARCHITECTURE (CUDA)697

Wei-Nien Chen, Hsueh-Ming Hang, National Chiao-Tung University, Taiwan

WE-PM1-P1.4: MULTI-ALGORITHM TARGETED LOW MEMORY BANDWIDTH ARCHITECTURE FOR H.264/AVC INTEGER-PEL MOTION ESTIMATION701

Jae Hun Lee, KiWon Yoo, Samsung Electronics, Republic of Korea

WE-PM1-P1.5: IMPROVING H.264 VIDEO CODING THROUGH BLOCK ORIENTED TRANSFORMS705

Antoine Robert, Isabelle Amonou, France Telecom R&D, France; Béatrice Pesquet-Popoescu, TSI ENST Paris, France

WE-PM1-P1.6: IMPROVED INTER MODE DECISION BASED ON RESIDUE IN H.264/AVC709

Insu Park, David Capson, McMaster University, Canada

WE-PM1-P1.7: A TWO-STAGE P-DOMAIN RATE CONTROL SCHEME FOR H.264 ENCODER713

Guixu Lin, Shibao Zheng, Jianling Hu, Shanghai Jiao Tong University, China

WE-PM1-P1.8: NEW RATE-COMPLEXITY-QUANTIZATION MODELING AND EFFICIENT RATE CONTROL FOR H.264/AVC717

Yimin Zhou, University of Electronic Science & Technology of China, China; Yu Sun, University of Central Arkansas, United States; Zhidan Feng, Axiom Corporation, United States; Shixin Sun, University of Electronic Science & Technology of China, China

WE-PM1-P1.9: USING H.264 CODED BLOCK PATTERNS FOR FAST INTER-MODE SELECTION721

Bo-Yuan Chen, Shih-Hsuan Yang, National Taipei University of Technology, Taiwan

WE-PM1-P1.10: COMPARISON BETWEEN JPEG2000 AND H.264 FOR DIGITAL CINEMA725

Boxin Shi, Lin Liu, Chao Xu, Peking University, China

WE-PM1-P2: IMAGE/VIDEO COMPRESSION AND CODING II

WE-PM1-P2.1: FAST SEARCH METHOD FOR VECTOR QUANTIZATION BY SIMULTANEOUSLY USING TWO SUBVECTORS729

Zhibin Pan, Xian Jiaotong University, China; Koji Kotani, Tadahiro Ohmi, Tohoku University, Japan

WE-PM1-P2.2: EFFICIENT FRAME SELECTION SCHEMES FOR	733
MULTI-REFERENCE AND VARIABLE BLOCK SIZE MOTION ESTIMATION	
<i>Sung Dae Kim, Myung Hoon Sunwoo, Ajou university, Republic of Korea</i>	
WE-PM1-P2.3: ZEROTREE DATA STRUCTURE FOR 4D WAVELET	737
COEFFICIENT CODING	
<i>Liang Zhang, Carlos Vázquez, Wa James Tam, Demin Wang, Communications Research Centre Canada, Canada</i>	
WE-PM1-P2.4: WYNER-ZIV VIDEO CODING WITH BLOCK	741
CLASSIFICATION	
<i>Yangli Wang, Xidian University, China; Jechang Jeong, Hanyang University, Republic of Korea; Chengke Wu, Xidian University, China</i>	
WE-PM1-P2.5: LOW-DELAY RANDOM VIEW ACCESS IN MULTI-VIEW	745
CODING USING A BIT-RATE ADAPTIVE DOWNSAMPLING APPROACH	
<i>Erhan Ekmekcioglu, Stewart Worrall, Ahmet Kondoz, University of Surrey, United Kingdom</i>	
WE-PM1-P2.6: MULTI-OCTAGON-GRID SEARCH ALGORITHM FOR FAST	749
MOTION ESTIMATION	
<i>C. J. Duanmu, Yu Zhang, Xing Chen, Shuihong Zhou, Zhejiang Normal Univeristy, China</i>	
WE-PM1-P2.7: LIKELIHOOD-BASED NON-UNIFORM ALLOCATION OF	753
GAUSSIAN KERNELS IN SCALAR DIMENSION FOR HMM COMPRESSION	
<i>Xiao-Bing Li, Douglas O'Shaughnessy, INRS-Energy, Materials and Telecommunications, Canada</i>	
WE-PM1-P2.8: EFFICIENT SEARCH ALGORITHMS FOR	757
BLOCK-MATCHING MOTION ESTIMATION	
<i>Shashi Kant, S.S.B.K.Gupta Pallapothu, Aricent, India; Ramkishor Korada, Path Partner, India; Mithun Uliyar, Aricent, India</i>	
WE-PM1-P2.9: MIXED DIAMOND, HEXAGON, AND CROSS SEARCH FAST	761
MOTION ESTIMATION ALGORITHM FOR H.264	
<i>Chunjiang Duanmu, Xing Chen, Yu Zhang, Shuihong Zhou, Zhejiang Normal University, China</i>	
WE-PM1-P2.10: A FAST MODE DECISION ALGORITHM WITH	765
MACROBLOCK-ADAPTIVE RATE-DISTORTION ESTIMATION FOR INTRA-ONLY	
SCALABLE VIDEO CODING	
<i>Hung-Chih Lin, Wen-Hsiao Peng, Hsueh-Ming Hang, National Chiao-Tung University, Taiwan</i>	
WE-PM1-P2.11: REDUCED COMPLEXITY MPEG2 VIDEO	769
POST-PROCESSING FOR HD DISPLAY	
<i>Kamran Virk, Kingston University, United Kingdom; Søren Forchhammer, Technical University of Denmark, Denmark</i>	
WE-PM1-P2.12: LOW-COMPLEXITY ASYMMETRIC MULTIVIEW VIDEO	773
CODING	
<i>Ying Chen, Tampere University of Technology, Finland; Shujie Liu, University of Science and Technology of China, China; Ye-Kui Wang, Miska M. Hannuksela, Nokia Research Center, Finland; Houqiang Li, University of Science and Technology of China, China; Moncef Gabbouj, Tampere University of Technology, Finland</i>	

WE-PM1-P2.13: DISTRIBUTED VIDEO CODING WITH ZERO MOTION	777
SKIP AND EFFICIENT DCT COEFFICIENT ENCODING	
<i>Guogang Hua, Florida Institute of Technology, United States; Chang Wen Chen, University at Buffalo, State University of New York, United States</i>	
WE-PM1-P2.14: FAST MOTION ESTIMATION AND MODE DECISION FOR	781
H.264 VIDEO CODING IN PACKET LOSS ENVIRONMENT	
<i>Li Liu, Xinhua Zhuang, University of Missouri Columbia, United States</i>	
WE-PM1-P3: IMAGE/VIDEO COMPRESSION AND CODING III	
WE-PM1-P3.1: WYNER-ZIV CODING WITH SPATIO-TEMPORAL	785
REFINEMENT BASED ON SUCCESSIVE TURBO DECODING	
<i>Bonghyuck Ko, Hiuk Jae Shim, Byeungwoo Jeon, Sungkyunkwan University, Republic of Korea</i>	
WE-PM1-P3.2: DESIGN OF MULTI-MODE DEPTH BUFFER	789
COMPRESSION FOR 3D GRAPHICS SYSTEM	
<i>Tzung-Rung Jung, Lan-Da Van, Teng-Yao Sheu, Cheng-Wei Lin, Wai-Chi Fang, National Chiao Tung University, Taiwan</i>	
WE-PM1-P3.3: THE SEGMENT-BASED RATE CONTROL ALGORITHM IN	793
JPEG-LS FOR BANDWIDTH-EFFICIENCY APPLICATIONS	
<i>Tsung-Han Tsai, Shu-Ching Kao, Yu-Xuan Lee, National Central University, Taiwan</i>	
WE-PM1-P3.4: LAPLACIAN MODELING OF DCT COEFFICIENTS FOR	797
REAL-TIME ENCODING	
<i>Jin Li, Moncef Gabbouj, Jarmo Takala, Hexin Chen, Tampere University of Technology, Finland</i>	
WE-PM1-P3.5: FLEXIBLE DISTRIBUTION OF COMPUTATIONAL	801
COMPLEXITY BETWEEN THE ENCODER AND THE DECODER IN DISTRIBUTED VIDEO CODING	
<i>Hu Chen, Eckehard Steinbach, Munich University of Technology, Germany</i>	
WE-PM1-P3.6: LINEAR REGRESSION MODELS FOR DCT DOMAIN	805
APPROXIMATE FILTERING AND DEBLURRING	
<i>Wei Hu, Nanning Zheng, Jianru Xue, Xuguang Lan, Tao Xu, Xi'an Jiaotong University, China</i>	
WE-PM1-P3.7: IMPROVED BIDIRECTIONALLY DECODABLE WYNER-ZIV	809
VIDEO CODING	
<i>Xiaopeng Fan, Oscar Au, Jiantao Zhou, Mengyao Ma, Liwei Guo, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
WE-PM1-P3.8: VIDEO CODING WITH SPATIO-TEMPORAL TEXTURE	813
SYNTHESIS AND EDGE-BASED INPAINTING	
<i>Chunbo Zhu, University of Science and Technology of China, China; Xiaoyan Sun, Feng Wu, Microsoft Research Asia, China; Houqiang Li, University of Science and Technology of China, China</i>	
WE-PM1-P3.9: DYNAMIC FRAME-RATE SELECTION FOR LIVE LBR	817
VIDEO ENCODERS USING TRIAL FRAMES	
<i>Arunoday Thammineni, Arvind Raman, SaratChandra Vadapalli, Sriram Sethuraman, Ittiam Systems Pvt. Ltd., India</i>	

WE-PM1-P3.10: NOVEL FRACTIONAL PIXEL MOTION ESTIMATION	821
ALGORITHM USING MOTION PREDICTION AND FAST SEARCH PATTERN	
<i>Jin soo Kim, Kwang woo Lee, Myung Sunwoo, Ajou University, Republic of Korea</i>	
WE-PM1-P3.11: ARCHITECTURE DESIGN OF HIGH PERFORMANCE	825
EMBEDDED COMPRESSION FOR HIGH DEFINITION VIDEO CODING	
<i>Wei-Yin Chen, Li-Fu Ding, Pei-Kuei Tsung, Liang-Gee Chen, National Taiwan University, Taiwan</i>	
WE-PM1-P3.12: A FAST REGION-BASED INTER MODE SELECTION	829
ALGORITHM	
<i>Qingsheng Yuan, Yiqiang Chen, Institute of Computing Technology, Chinese Academy of Sciences, China; Yi Kang, Spreadtrum Communications(Shanghai) Co., Ltd., China</i>	
WE-PM1-P3.13: ADAPTIVE PARTIAL DISTORTION SEARCH ALGORITHM	833
USING HISTOGRAM-BASED SORTING	
<i>Sang-Jun Park, Soonjong Jin, Jechang Jeong, Hanyang University, Republic of Korea</i>	
WE-PM1-P3.14: DETERMINISTIC AND RANDOMIZED LOCAL SEARCH	837
ALGORITHMS FOR CLUSTERING	
<i>Pasi Fränti, Marko Tuononen, Olli Virmajoki, University of Joensuu, Finland</i>	
WE-PM1-P3.15: ENCODING OPTIMIZATION OF LOW RESOLUTION	841
SOCCER VIDEO SEQUENCES	
<i>Luca Superiori, Markus Rupp, Technical University of Vienna, Austria</i>	
 WE-PM2-L1: MULTICAST	
WE-PM2-L1.1: UNEQUAL AUTHENTICITY PROTECTION OF VIDEO	845
MULTICASTING	
<i>Jian-Ru Chen, Chun-Shien Lu, Academia Sinica, Taiwan</i>	
WE-PM2-L1.2: A STAGGERED-CHANNEL-CLUSTER APPROACH TO	849
SUPPORT VIDEO MULTICAST HANDOFF IN WIRELESS NETWORKS	
<i>Sheau-Ru Tong, Chun-Wei Hung, National Pingtung University of Science and Technology, Taiwan</i>	
WE-PM2-L1.3: A BENCHMARKING SYSTEM FOR MULTIPATH OVERLAY	853
MULTIMEDIA STREAMING	
<i>Svetlana Boudko, Norwegian Computing Center, Norway; Carsten Griwodz, Paal Halvorsen, Simula Research Laboratory, Norway; Wolfgang Leister, Norwegian Computing Center, Norway</i>	
WE-PM2-L1.4: PREDICTIVE COST-BASED SCHEDULING FOR SCALABLE	857
MEDIA STREAMING	
<i>Mohammad Alsmirat, Nabil Sarhan, Wayne State University, United States</i>	
 WE-PM2-L2: MULTIMEDIA LIBRARIES I	
WE-PM2-L2.1: AUTOMATIC INDEXING AND RECOGNITION OF	861
RE-BROADCASTED VIDEO PROGRAMS THROUGH VISUAL AND TEMPORAL	
FEATURES	
<i>Bashar Tahayna, Mohammed Belkhatir, Saadat Alhashmi, Monash University- Sunway Campus, Malaysia</i>	

WE-PM2-L2.2: THE VERA AM MITTAG GERMAN AUDIO-VISUAL EMOTIONAL SPEECH DATABASE	865
<i>Michael Grimm, Kristian Kroschel, Universität Karlsruhe (TH), Germany; Shrikanth Narayanan, University of Southern California, United States</i>	
WE-PM2-L2.3: VOCABULARY TREE INCREMENTAL INDEXING FOR SCALABLE LOCATION RECOGNITION	869
<i>Rongrong Ji, Harbin Institute of Technology, China; Xing Xie, Microsoft Research Asia, China; Hongxun Yao, Harbin Institute of Technology, China; Yongjian Wu, Wuhan University, China; Weiyang Ma, Microsoft Research Asia, China</i>	
WE-PM2-L2.4: MYOWNLIFE: INCREMENTAL SUMMARIZATION OF A PERSONAL IMAGE COLLECTION ON MOBILE DEVICES	873
<i>Antoine Pigeau, University of Nantes, France</i>	
WE-PM2-L3: CONTENT UNDERSTANDING WITH WAVELETS	
WE-PM2-L3.1: COLOR TEXTURE RETRIEVAL USING WAVELET DECOMPOSITION ON THE HUE/SATURATION PLANE	877
<i>Ye Mei, Dimitrios Androustos, Ryerson University, Canada</i>	
WE-PM2-L3.2: GRAPH CUTS BY USING LOCAL TEXTURE FEATURES OF WAVELET COEFFICIENT FOR IMAGE SEGMENTATION	881
<i>Keita Fukuda, Tetsuya Takiguchi, Yasuo Arikawa, Kobe University, Japan</i>	
WE-PM2-L3.3: DIRECTIONAL CORRELATION ANALYSIS OF LOCAL HAAR BINARY PATTERN FOR TEXT DETECTION	885
<i>Rongrong Ji, Pengfei Xu, Harbin Institute of Technology, China; Hongxun Yao, Harbin Institute of Technology, China; Xiaoshuai Sun, Tianqiang Liu, Harbin Institute of Technology, China</i>	
WE-PM2-L4: SPORTS CONTENT	
WE-PM2-L4.1: DIGITAL CAMERA WORK FOR SOCCER VIDEO PRODUCTION WITH EVENT RECOGNITION AND ACCURATE BALL TRACKING BY SWITCHING SEARCH METHOD	889
<i>Yasuo Arikawa, Tetsuya Takiguchi, Kazuki Yano, Kobe University, Japan</i>	
WE-PM2-L4.2: TOOL-AIDED SEMANTICS ACQUISITION FOR LIVE SOCCER VIDEO	893
<i>Xinguo Yu, Xin Yan, Yiqun Li, Institute for Infocomm Research, Singapore</i>	
WE-PM2-L4.3: SYNCHRONIZATION ANALYSIS FOR SYNCHRONIZED DIVING VIDEOS	897
<i>Haoyang Ding, Jian Cheng, Hanqing Lu, Zhixin Zhou, Institute of Automation, Chinese Academy of Sciences, China</i>	
WE-PM2-L4.4: AUTOMATIC TRADEMARK DETECTION AND RECOGNITION IN SPORT VIDEOS	901
<i>Lamberto Ballan, Marco Bertini, Alberto Del Bimbo, Arjun Jain, University of Florence, Italy</i>	

WE-PM2-L5: DIGITAL WATERMARKING IV

WE-PM2-L5.1: SKIN TONE BASED STEGANOGRAPHY IN VIDEO FILES905 EXPLOITING THE YCBCR COLOUR SPACE

Abbas Cheddad, Joan Condell, Kevin Curran, Paul Mc Kevitt, School of Computing and Intelligent Systems, United Kingdom

WE-PM2-L5.2: SECURE FACE BIOMETRIC VERIFICATION IN THE909 RANDOMIZED RADON SPACE

Mohammad A. Dabbah, Satnam S. Dlay, Wai L. Woo, The University of Newcastle, United Kingdom

WE-PM2-L5.3: AN EFFICIENT DATA REPRESENTATION SCHEME FOR913 COMPLETE VIDEO QUALITY PRESERVING DATA HIDING

KokSheik Wong, Kiyoshi Tanaka, Shinshu University, Japan; Koichi Takagi, Yasuyuki Nakajima, KDDI R&D Laboratories Inc., Japan

WE-PM2-L5.4: DESIGN AND IMPLEMENTATION OF REAL-TIME917 ACOUSTIC STEGANOGRAPHY

Xuping Huang, Iwate Prefectural University, Japan; Ryota Kawashima, Graduate University of Advanced Studies, Japan; Norihisa Segawa, Yoshihiko Abe, Iwate Prefectural University, Japan

WE-PM2-P1: MULTIMEDIA ENVIRONMENTS

WE-PM2-P1.1: LOCALIZATION BASED OBJECT RECOGNITION FOR921 SMART HOME ENVIRONMENTS

Rahul Swaminathan, Michael Nischt, Christine Kühnel, Deutsche Telekom Labs, Germany

WE-PM2-P1.2: SPATIAL JUST NOTICEABLE DISTORTION PROFILE FOR925 IMAGE IN DCT DOMAIN

Zhenyu Wei, King N Ngan, Chinese University of Hong Kong, Hong Kong SAR of China

WE-PM2-P1.3: A COMPUTER VISION TANGIBLE USER INTERFACE FOR929 MIXED REALITY BILLIARDS

Brian Hammond, Pace University, United States

WE-PM2-P1.4: ROBUST AAM BUILDING FOR MORPHING IN AN933 IMAGE-BASED FACIAL ANIMATION SYSTEM

Kang Liu, Axel Weissenfeld, Joern Ostermann, Leibniz Universität Hannover, Germany; Xinghan Luo, Tampere University of Technology, Finland

WE-PM2-P1.5: DEFORMATION MODELING USING GLOBAL MEDIAL937 REPRESENTATION STRUCTURES AND EVALUATION BY BISET MESH MATCHING

Yanyan Zou, Pengfei Huang, Lixu Gu, Jianghua Wu, Zhennan Yan, Sizhe Lv, Feng Chen, Jiasi Song, Hongshan Zhou, Qi Duan, Shanghai Jiao Tong University, China

WE-PM2-P1.6: 3D CARICATURE GENERATION BY MANIFOLD LEARNING.....941

Pengfei Li, Yiqiang Chen, Junfa Liu, Guanhua Fu, Institute of Computing Technology, Chinese Academy of Sciences, China

WE-PM2-P1.7: AUTOMATIC PANORAMA IMAGE MOSAIC AND GHOST ELIMINATING	945
<i>Yanli Wan, Zhenjiang Miao, Institute of Information Science, Beijing Jiaotong University, China</i>	
WE-PM2-P1.8: REAL-TIME OUTDOOR PRE-VISUALIZATION METHOD FOR VIDEOGRAPHERS - REAL-TIME GEOMETRIC REGISTRATION USING POINT-BASED MODEL -	949
<i>Sei Ikeda, Takafumi Taketomi, Bunyo Okumura, Tomokazu Sato, Masayuki Kanbara, Naokazu Yokoya, Kunihiko Chihara, Nara Institute of Science and Technology, Japan</i>	
WE-PM2-P1.9: ILLUMINATION INVARIANT TRACKING IN OFFICE ENVIRONMENTS USING NEUROBIOLOGY-SALIENCY BASED PARTICLE FILTER	953
<i>Dwarikanath Mahapatra, Mukesh Kumar Saini, Ying Sun, National University of Singapore, Singapore</i>	
WE-PM2-P1.10: MUSCLE-DRIVEN MODELING OF WRINKLES FOR 3D FACIAL EXPRESSIONS	957
<i>Yu Zhang, Institute of High Performance Computing, Singapore</i>	
WE-PM2-P1.11: JOINT-PROCESSING OF AUDIO-VISUAL SIGNALS IN HUMAN PERCEPTION OF CONFLICTING SYNTHETIC CHARACTER EMOTIONS	961
<i>Emily Mower, Sungbok Lee, Maja J Mataric, Shrikanth Narayanan, University of Southern California, United States</i>	
WE-PM2-P1.12: INTERACTIVE EXPRESSIVE 3D CARICATURES DESIGN	965
<i>Guanhua Fu, Information Engineer College, Xiangtan University / Institute of Computing Technology, Chinese Academy of Sciences, China; Yiqiang Chen, Junfa Liu, Institute of Computing Technology, Chinese Academy of Sciences, China; Jingye Zhou, Information Engineer College, Xiangtan University, China; Pengfei Li, Institute of Computing Technology, Chinese Academy of Sciences, China</i>	
WE-PM2-P2: USER INTERFACES AND INTERACTIVE SYSTEMS	
WE-PM2-P2.1: CONSTRUCTING PANORAMIC VIEWS THROUGH FACIAL GAZE TRACKING	969
<i>Fadi Dornaika, Institut Geographique National, France; Bogdan Raducanu, Computer Vision Center, Spain</i>	
WE-PM2-P2.2: SPEECH ENHANCEMENT FOR TELEPHONY NAME SPEECH RECOGNITION	973
<i>Chang Huai You, Susanto Rahardja, Haizhou Li, Institute for Infocomm Research, Singapore</i>	
WE-PM2-P2.3: FAST FINGERTIP POSITIONING BY COMBINING PARTICLE FILTERING WITH PARTICLE RANDOM DIFFUSION	977
<i>Ko-Jen Hsiao, Tse-Wei Chen, Shao-Yi Chien, National Taiwan University, Taiwan</i>	
WE-PM2-P2.4: TOWARDS MORE EFFICIENT AND ACCURATE METHODS FOR MANDARIN LVCSR DISCRIMINATIVE TRAINING	981
<i>Haihua Xu, Jie Zhu, Shanghai Jiao Tong University, China</i>	
WE-PM2-P2.5: CARTOON-LIKE STYLIZATION OF VIDEO FOR REAL-TIME APPLICATIONS	985
<i>Chaoqun Hong, Zhi Yang, Jiajun Bu, Yi Liu, Chun Chen, Zhejiang University, China</i>	

WE-PM2-P2.6: INTERACTING WITH LARGE MUSIC COLLECTIONS:989 TOWARDS THE USE OF ENVIRONMENTAL METADATA <i>Gordon Reynolds, Dan Barry, Ted Burke, Eugene Coyle, Dublin Institute of Technology, Ireland</i>	989
WE-PM2-P2.7: USING HUMAN BODY GESTURES AS INPUTS FOR993 GAMING VIA DEPTH ANALYSIS <i>Yong Wang, Tianli Yu, Larry Shi, Zhu Li, Motorola Labs, United States</i>	993
WE-PM2-P2.8: FRAMEWORK FOR VIRTUAL COLLABORATION997 EMPHASIZED BY AWARENESS INFORMATION AND ASYNCHRONOUS INTERACTION <i>Tomo Matsuda, Nara Institute of Science and Technology, Japan; Naoki Shibata, Shiga Univirsity, Japan; Keiichi Yasumoto, Minoru Ito, Nara Institute of Science and Technology, Japan</i>	997
 WE-PM2-P3: COMPONENTS AND TECHNOLOGIES	
WE-PM2-P3.1: H.264/AVC DECODER PARALLELIZATION AND1001 OPTIMIZATION ON ASYMETRIC MULTICORE PLATFORM USING DYNAMIC LOAD BALANCING <i>Yun-il Kim, Jong-tae Kim, Sehyun Bae, Hyunki Baik, Hyo Jung Song, Samsung Electonics Co., Ltd, Republic of Korea</i>	1001
WE-PM2-P3.2: EFFICIENT VISIBILITY PROJECTION ON SPHERICAL1005 POLAR COORDINATES FOR SHADOW RENDERING USING GEOMETRY SHADER <i>Lingchun Li, Xubo Yang, Shuangjiu Xiao, Shanghai Jiao Tong University, China</i>	1005
WE-PM2-P3.3: HARDWARE-ORIENTED DIRECTION-BASED FAST1009 FRACTIONAL MOTION ESTIMATION ALGORITHM IN H.264/AVC <i>Yang Song, Yao Ma, Zhenyu Liu, Takeshi Ikenaga, Satoshi Goto, Waseda University, Japan</i>	1009
WE-PM2-P3.4: AN ADAPTIVE, FEATURE-BASED LOW POWER MOTION1013 ESTIMATION ALGORITHM <i>Ajit Gupte, Texas Instruments India LTD, India; Amrutur Bharadwaj, Indian Institute of Science, India</i>	1013
WE-PM2-P3.5: NOISE FILTERING METHOD FOR COLOR IMAGES BASED1017 ON LDA AND NONLINEAR DIFFUSION <i>Woong Hee Kim, Thomas Sikora, Technical University of Berlin, Germany</i>	1017
WE-PM2-P3.6: HYBRID PARALLEL MOTION ESTIMATION1021 ARCHITECTURE BASED ON FAST PEL-SUBSAMPLING ALGORITHM <i>Yeong-Kang Lai, Lien-Fei Chen, Tian-En Hsieh, Shien-Yu Huang, National Chung Hsing University, Taiwan</i>	1021
WE-PM2-P3.7: LUMINANCE SCALABLE CODING USING H.264/AVC SVC1025 EXTENSIONS FOR MOBILE VIDEO APPLICATIONS <i>Heejung Lee, Dongeun Lee, Yonghee Lee, Heonshik Shin, Seoul National University, Republic of Korea</i>	1025
WE-PM2-P3.8: CONTENT-AWARE IMAGE RESIZING USING PERCEPTUAL1029 SEAM CARVING WITH HUMAN ATTENTION MODEL <i>Daw-Sen Hwang, Shao-Yi Chien, National Taiwan University, Taiwan</i>	1029

WE-PM2-P3.9: A HIGH THROUGHPUT AND LOW COST DIAMOND SEARCH ARCHITECTURE FOR HDTV MOTION ESTIMATION	1033
<i>Marcelo Porto, Universidade Federal do Rio Grande do Sul, Brazil; Luciano Agostini, Universidade Federal de Pelotas, Brazil; Sergio Bampi, Altamiro Susin, Universidade Federal do Rio Grande do Sul, Brazil</i>	
WE-PM2-P3.10: AN H.264/AVC FULL-MODE INTRA-FRAME ENCODER FOR 1080HD VIDEO	1037
<i>Huang-Chih Kuo, Youn-Long Lin, National Tsing Hua University, Taiwan</i>	
WE-PM2-P3.11: A SERVICE-SPECIFIC MIDDLEWARE FOR FLEXIBLE DEPLOYMENT OF WIRELESS BODY AREA NETWORK APPLICATIONS	1041
<i>Ying Song, Wendong Xiao, Agustinus Borgy Waluyo, Xiang Chen, Jian Kang Wu, Institute for Infocomm Research, Singapore</i>	
WE-PM2-P3.12: ON-DEMAND HD VIDEO USING JINI BASED GRID	1045
<i>Simon Kent, Peter Broadbent, Nigel Warren, Stephen Gulliver, Brunel University, United Kingdom</i>	
TH-AM1-L1: RECONFIGURABLE VIDEO CODING AND PROCESSING	
TH-AM1-L1.1: CODE GENERATION FOR THE MPEG RECONFIGURABLE VIDEO CODING FRAMEWORK: FROM CAL ACTIONS TO C FUNCTIONS	1049
<i>Matthieu Wipliez, Ghislain Roquier, Mickaël Raulet, Jean-François Nezan, Olivier Déforges, IETR, France</i>	
TH-AM1-L1.2: DESIGN SPACE EXPLORATION OF AN H.264/AVC-BASED VIDEO EMBEDDING TRANSCODER USING TRANSACTION LEVEL MODELING	1053
<i>Chih-Hung Li, Wen-Hsiao Peng, Tihao Chiang, National Chiao Tung University, Taiwan</i>	
TH-AM1-L1.3: ON THE EFFICIENT ALGORITHM/ARCHITECTURE CO-EXPLORATION FOR COMPLEX VIDEO PROCESSING	1057
<i>Gwo Giun (Chris) Lee, Ming-Jiun Wang, He-Yuan Lin, Ron-Lai Lai, National Cheng Kung University, Taiwan</i>	
TH-AM1-L1.4: RECONFIGURABLE BIT-STREAM PARSER	1061
<i>Sunyoung Lee, Hyungyu Kim, Sinwook Lee, Jaebum Jun, Euee S. Jang, Hanyang university, Republic of Korea</i>	
TH-AM1-L1.5: PROFILING DATAFLOW PROGRAMS	1065
<i>Jorn W. Janneck, Ian Miller, Dave B. Parlour, Xilinx, United States</i>	
TH-AM1-L1.6: A CO-DESIGN PLATFORM FOR ALGORITHM/ARCHITECTURE DESIGN EXPLORATION	1069
<i>Christophe Lucarz, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Julien Dubois, Université de Bourgogne, France; Marco Mattavelli, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland</i>	
TH-AM1-L2: KEYWORDS AND SALIENCY	
TH-AM1-L2.1: A STOCHASTIC MODEL OF SELECTIVE VISUAL ATTENTION WITH A DYNAMIC BAYESIAN NETWORK	1073
<i>Derek Pang, Simon Fraser University, Canada; Akisato Kimura, Tatsuto Takeuchi, Junji Yamato, Kunio Kashino, NTT Corporation, Japan</i>	

TH-AM1-L2.2: SPATIAL PYRAMID MINING FOR LOGO DETECTION IN NATURAL SCENES	1077
<i>Jim Kleban, University of California, Santa Barbara, United States; Xing Xie, Wei-Ying Ma, Microsoft Research Asia, China</i>	
TH-AM1-L2.3: FAST KEYWORD DETECTION WITH SPARSE TIME-FREQUENCY MODELS	1081
<i>Effrosyni Kokiopoulou, Pascal Frossard, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland; Olivier Verscheure, IBM Research, United States</i>	
TH-AM1-L2.4: DYNAMIC VISUAL SALIENCY MODELING BASED ON SPATIOTEMPORAL ANALYSIS	1085
<i>Duan-Yu Chen, Institute of Information Science, Academia Sinica, Taiwan; Hsiao-Rong Tyan, Chung Yuan Christian University, Taiwan; Dun-Yu Hsiao, Institute of Information Science, Academia Sinica, Taiwan; Sheng-Wen Shih, National Chi-Nan University, Taiwan; Hong-Yuan Mark Liao, Institute of Information Science, Academia Sinica, Taiwan</i>	
TH-AM1-L3: USER INTERFACES	
TH-AM1-L3.1: EMOTION RECOGNITION BASED ON PRESSURE SENSOR KEYBOARDS	1089
<i>Hai-Rong Lv, Zhong-Lin Lin, Wen-Jun Yin, Jin Dong, IBM China Research Lab, China</i>	
TH-AM1-L3.2: EVALUATION OF SEGMENT-BASED PROXY CACHING FOR VIDEO ON DEMAND	1093
<i>Muhammad Muhammad, Wei Tu, Eckehard Steinbach, Technische Universität München, Germany</i>	
TH-AM1-L3.3: UNSUPERVISED PRONUNCIATION GRAMMAR GROWING USING KNOWLEDGE-BASED AND DATA-DRIVEN APPROACHES	1097
<i>Chien-Lin Huang, Chung-Hsien Wu, National Cheng Kung University, Taiwan; Haizhou Li, Institute for Infocomm Research (A*STAR), Singapore; Chia-Hsin Hsieh, National Cheng Kung University, Taiwan; Bin Ma, Institute for Infocomm Research (A*STAR), Singapore</i>	
TH-AM1-L3.4: A VIEW CONTROL INTERFACE FOR 3D TELE-IMMERSIVE ENVIRONMENTS	1101
<i>Morihiko Tamai, Nara Institute of Science and Technology, Japan; Wanmin Wu, Klara Nahrstedt, University of Illinois at Urbana-Champaign, United States; Keiichi Yasumoto, Nara Institute of Science and Technology, Japan</i>	
TH-AM1-L3.5: HAND TRAJECTORY BASED GESTURE RECOGNITION USING SELF-ORGANIZING FEATURE MAPS AND MARKOV MODELS	1105
<i>George Caridakis, Kostas Karpouzis, Christos Pateritsas, Athanasios Drosopoulos, Andreas Stafylopatis, Stefanos Kollias, National Technical University of Athens, Greece</i>	
TH-AM1-L4: IMAGE/VIDEO COMPRESSION AND CODING IV	
TH-AM1-L4.1: TEXTURAL COMPLEXITY-BASED RATE CONTROL ALGORITHM	1109
<i>Gwo Giun Lee, He-Yuan Lin, Ming-Jiun Wang, National Cheng Kung University, Taiwan</i>	

TH-AM1-L4.2: UNEQUAL INTER-VIEW RATE ALLOCATION USING SCALABLE STEREO VIDEO CODING AND AN OBJECTIVE STEREO VIDEO QUALITY MEASURE	1113
<i>Nukhet Ozbek, Ege University, Turkey; A. Murat Tekalp, Koc University, Turkey</i>	
TH-AM1-L4.3: PRIORITY-BASED TEMPLATE MATCHING INTRA PREDICTION	1117
<i>Yi Guo, University of Science and Technology of China, China; Ye-Kui Wang, Nokia Corporation, Finland; Houqiang Li, University of Science and Technology of China, China</i>	
TH-AM1-L4.4: FRAME-BASED COMPRESSION OF ANIMATED MESHES IN MPEG-4	1121
<i>Khaled Mamou, Titus Zaharia, Françoise Prêteux, GET/Institut National des Télécommunications, France; Nikolce Stefanoski, Jörn Ostermann, Leibniz Universität Hannover, Germany</i>	
TH-AM1-L4.5: DVC USING A HALF-FEEDBACK BASED APPROACH	1125
<i>José Luis Martínez, Universidad de Castilla-La Mancha, Spain; Christopher Holder, Florida Atlantic University, United States; Gerardo Fernández-Escribano, Universidad de Castilla-La Mancha, Spain; Hari Kalva, Florida Atlantic University, United States; Francisco José Quiles Flor, Universidad de Castilla-La Mancha, Spain</i>	
TH-AM1-L4.6: LEAST SQUARES BASED OPTIMAL SWITCHED PREDICTORS FOR LOSSLESS COMPRESSION OF IMAGES	1129
<i>Anil Kumar Tiwari, LNM Institute of Information Technology, Jaipur, India; R. V. Raja Kumar, Indian Institute of Technology, Kharagpur, India</i>	
TH-AM1-L5: MEDIA PROCESSING, CONVERSION AND TRANSCODING I	
TH-AM1-L5.1: IMAGE CHARACTERISTIC ORIENTED TONE MAPPING FOR HIGH DYNAMIC RANGE IMAGES	1133
<i>Chun hung Liu, Oscar C. Au, Peter H. W. Wong, Man Cheung Kung, Hong Kong University of Science and Technology, Hong Kong SAR of China</i>	
TH-AM1-L5.2: AN ADAPTIVE AND PARALLEL SCHEME FOR HD VIDEO DE-INTERLACING	1137
<i>Jie Dong, King Ngai Ngan, Chinese University of Hong Kong, Hong Kong SAR of China</i>	
TH-AM1-L5.3: ADDING VIRTUAL LINKS TO REALIZE MULTI-GRAPH FUSION	1141
<i>Yanping Zhou, University of Science and Technology of China, China; Mingjing Li, Microsoft Research Asia, China</i>	
TH-AM1-L5.4: SYNCHRONIZATION OF DATA STREAMS IN DISTRIBUTED REALTIME MULTIMODAL SIGNAL PROCESSING ENVIRONMENTS USING COMMODITY HARDWARE	1145
<i>Lukas Diduch, Antoine Fillinger, Imad Hamchi, Mathieu Hoarau, Vincent Stanford, NIST, United States</i>	
TH-AM1-L5.5: ON THE BIASED ESTIMATION OF NONLOCAL MEANS FILTER	1149
<i>Hao Xu, University of Science and Technology of China, China; Jizheng Xu, Feng Wu, Microsoft Research Asia, China</i>	

TH-PM1-L1: PERSONALIZED MEDIA PROCESSING FOR ATTENTION SERVICE APPLICATIONS

TH-PM1-L1.1: PERSONALIZATION OF MEDIA AND ITS ATTENTION1153 SERVICE APPLICATIONS

Lingyu Duan, Changsheng Xu, Institute for Infocomm Research, Singapore

TH-PM1-L1.2: PERSONALIZED EVENT-BASED NEWS VIDEO RETRIEVAL1157 WITH DYNAMIC USER-LOG

*Ming Li, Yantao Zheng, Shi-Yong Neo, School of Computing, National University of Singapore, Singapore;
Xiangdong Wang, Sheng Tang, Shou-Xun Lin, Institute of Computing Technology, Chinese Academy of
Sciences, China*

TH-PM1-L1.3: ONLINE VIDEO ADVERTISING BASED ON USER'S1161 ATTENTION RELEVANCY COMPUTING

Jinqiao Wang, Yikai Fang, Hanqing Lu, Chinese Academy of Sciences, China

TH-PM1-L1.4: AUTOMATIC PERSONAL PREFERENCE ACQUISITION1165 FROM TV VIEWER'S BEHAVIORS

Makoto Yamamoto, Naoko Nitta, Noboru Babaguchi, Osaka University, Japan

TH-PM1-L2: ROBUST COMMUNICATION

TH-PM1-L2.1: PROGRESSIVE RENDERING FROM RDTC OPTIMIZED1169 STREAMS

Ingo Bauermann, Werner Maier, Eckehard Steinbach, Technische Universität München, Germany

TH-PM1-L2.2: CONCEALMENT DRIVEN SMART SLICE REORDERING1173 FOR ROBUST VIDEO TRANSMISSION

Enrico Baccaglioni, Tammam Tillo, Gabriella Olmo, Politecnico di Torino, Italy

TH-PM1-L2.3: MOBILE TV USING SCALABLE VIDEO CODING AND1177 LAYER-AWARE FORWARD ERROR CORRECTION

*Cornelius Hellge, Thomas Schierl, Fraunhofer HHI, Germany; Thomas Wiegand, Fraunhofer HHI and
Technical University of Berlin, Germany*

TH-PM1-L2.4: DYNAMIC SEGMENT BASED PROXY CACHING FOR1181 VIDEO ON DEMAND

Xiaoling Li, Wei Tu, Eckehard Steinbach, Technische Universität München, Germany

TH-PM1-L3: ROBUST CONTENT UNDERSTANDING

TH-PM1-L3.1: FAST COMMERCIAL DETECTION BASED ON AUDIO1185 RETRIEVAL

*Dan Zhao, Xiangdong Wang, Yueliang Qian, Qun Liu, Shouxun Lin, Institute of Computing Technology,
Chinese Academy of Sciences, China*

TH-PM1-L3.2: BODY PART SEGMENTATION OF NOISY HUMAN1189 SILHOUETTE IMAGES

Mark Barnard, Matti Matilainen, Janne Heikkilä, The University of Oulu, Finland

TH-PM1-L3.3: USING DTW BASED UNSUPERVISED SEGMENTATION TO IMPROVE THE VOCAL PART DETECTION IN POP MUSIC	1193
<i>Linxing Xiao, Jie Zhou, Tsinghua University, China; Tong Zhang, Hewlett-Packard, United States</i>	
TH-PM1-L4: MULTIMEDIA ENVIRONMENTS	
TH-PM1-L4.1: PRACTICAL MULTI-CAMERA CALIBRATION ALGORITHM WITH 1D OBJECTS FOR VIRTUAL ENVIRONMENTS	1197
<i>Zijian Zhao, Yuncai Liu, Shanghai Jiao Tong University, China</i>	
TH-PM1-L4.2: JOINT CALIBRATION OF A CAMERA TRIPLET AND A LASER RANGEFINDER	1201
<i>Florian Schweiger, Ingo Bauermann, Eckehard Steinbach, Technische Universität München, Germany</i>	
TH-PM1-L4.3: REAL-TIME CONVERSION FROM A SINGLE 2D FACE IMAGE TO A 3D TEXT-DRIVEN EMOTIVE AUDIO-VISUAL AVATAR	1205
<i>Hao Tang, Yuxiao Hu, Yun Fu, Mark Hasegawa-Johnson, Thomas Huang, University of Illinois at Urbana-Champaign, United States</i>	
TH-PM1-L4.4: RECOMMENDING PERSONALIZED SCENIC ITINERARY WITH GEO-TAGGED PHOTOS	1209
<i>Chih-Hua Tai, De-Nian Yang, Lung-Tsai Lin, Ming-Syan Chen, National Taiwan University, Taiwan</i>	
TH-PM1-P1: MULTIMEDIA LIBRARIES II	
TH-PM1-P1.1: EVALUATION OF A RECOMMENDATION SYSTEM FOR MUSICAL CONTENTS	1213
<i>Luigi Lancieri, Mai Manguin, Stephane Mangon, Orange - France Telecom, France</i>	
TH-PM1-P1.2: IMPROVING PHONEME-BASED SPOKEN DOCUMENT RETRIEVAL WITH PHONETIC CONTEXT EXPANSION	1217
<i>Olivier Le Blouch, Patrice Collen, France Telecom R&D, France</i>	
TH-PM1-P1.3: CLUSTERING-BASED SUBSPACE SVM ENSEMBLE FOR RELEVANCE FEEDBACK LEARNING	1221
<i>Rongrong Ji, Hongxun Yao, Jicheng Wang, Pengfei Xu, Xianming Liu, Harbin Institute of Technology, China</i>	
TH-PM1-P1.4: QUERY BY HUMMING VIA MULTISCALE TRANSPORTATION DISTANCE IN RANDOM QUERY OCCURRENCE CONTEXT	1225
<i>Shen Huang, Lei Wang, Sheng Hu, Hongchen Jiang, Bo Xu, Chinese Academy of Sciences, Institute of Automation, China</i>	
TH-PM1-P1.5: 3D MOTION SEQUENCE RETRIEVAL BASED ON DATA DISTRIBUTION	1229
<i>Xing Wang, Zhiwen Yu, Hau-San Wong, City University of Hong Kong, Hong Kong SAR of China</i>	
TH-PM1-P1.6: SEARCHING OF MOTION DATABASE BASED ON HIERARCHICAL SOM	1233
<i>Xing Wang, Zhiwen Yu, Hau-San Wong, City University of Hong Kong, Hong Kong SAR of China</i>	

TH-PM1-P1.7: KERNEL REGION APPROXIMATION BLOCKS FOR INDEXING HETEROGONOUS DATABASES	1237
<i>Imane Daoudi, Khalid Idrissi, LIRIS, INSA-Lyon, France; Saïd El Alaoui Ouatik, Faculté des Sciences de Fès, Maroc, Morocco</i>	
TH-PM1-P1.8: BOOST IMAGE CLUSTERING WITH USER QUERY LOG	1241
<i>Hao Cheng, Kien A. Hua, Ning Yu, University of Central Florida, United States</i>	
TH-PM1-P1.9: LOW-LEVEL INVARIANT IMAGE RETRIEVAL BASED ON RESULTS FUSION	1245
<i>Noureddine Abbadeni, Haikel Alhichri, Al-Ain University of Science and Technology, United Arab Emirates</i>	
TH-PM1-P2: INDEXING AND SEARCHING	
TH-PM1-P2.1: QUERY-INDEPENDENT LEARNING FOR VIDEO SEARCH	1249
<i>Yuan Liu, University of Science and Technology of China, China; Tao Mei, Microsoft Research Asia, China; Guojun Qi, Xiuqing Wu, University of Science and Technology of China, China; Xian-Sheng Hua, Microsoft Research Asia, China</i>	
TH-PM1-P2.2: DYNAMIC DIRECTIONAL NAVIGATION IN CONTENT-BASED IMAGE RETRIEVAL	1253
<i>Ning Yu, Kien Hua, Hao Cheng, University of Central Florida, United States</i>	
TH-PM1-P2.3: EXACT AND PROGRESSIVE IMAGE RETRIEVAL WITH THE HIPER FRAMEWORK	1257
<i>Nouha Bouteldja, Valérie Gouet-Brunet, CNAM, France</i>	
TH-PM1-P2.4: MUSIC FINGERPRINT EXTRACTION FOR CLASSICAL MUSIC COVER SONG IDENTIFICATION	1261
<i>Samuel Kim, Erdem Unal, Shrikanth Narayanan, University of Southern California, United States</i>	
TH-PM1-P2.5: A FUZZY STATISTICAL CORRELATION-BASED APPROACH TO CONTENT-BASED IMAGE RETRIEVAL	1265
<i>Xiaojun Qi, Ran Chang, Utah State University, United States</i>	
TH-PM1-P2.6: EFFICIENTLY MINING FREQUENT PATTERNS IN RECENT MUSIC QUERY STREAMS	1269
<i>Hua-Fu Li, Kainan University, Taiwan; Ming-Ho Hsiao, Hsuan-Sheng Chen, National Chiao-Tung University, Taiwan</i>	
TH-PM1-P2.7: INTELLIGENT CONCEPT-ORIENTED AND CONTENT-BASED IMAGE RETRIEVAL BY USING DATA MINING AND QUERY DECOMPOSITION TECHNIQUES	1273
<i>Vincent. S. Tseng, Ja-Hwung Su, Hao-Hua Ku, Bo-Wen Wang, National Cheng Kung University, Taiwan</i>	
TH-PM1-P2.8: COMBINING FEEDBACK AND IMAGE DATABASE CATEGORIZATION IN CBIR	1277
<i>Hichem Frigui, Rami Mahdi, Jason Meredith, University of Louisville, United States</i>	
TH-PM1-P2.9: VISOR: VIDEO SURVEILLANCE ON-LINE REPOSITORY FOR ANNOTATION RETRIEVAL	1281
<i>Roberto Vezzani, Rita Cucchiara, University of Modena and Reggio Emilia, Italy</i>	

TH-PM1-P3: CONTENT UNDERSTANDING I

TH-PM1-P3.1: KEY-FRAME EXTRACTION USING DOMINANT-SET CLUSTERING1285

Xianglin Zeng, Weiming Hu, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China; Wanqing Li, University of Wollongong, Australia; Xiaoqin Zhang, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China; Bo Xu, Institute of Automation, Chinese Academy of Sciences, China

TH-PM1-P3.2: A NOVEL SCHEME FOR VIDEO SCENES SEGMENTATION AND SEMANTIC REPRESENTATION1289

Songhao Zhu, Yuncai Liu, Shanghai Jiao Tong University, China

TH-PM1-P3.3: STATISTICAL PROCESSING OF VIDEO FOR DETECTION OF EVENTS IN SPACE AND TIME1293

Alexia Briassouli, Ioannis Kompatsiaris, Informatics and Telematics Institute (ITI), Greece

TH-PM1-P3.4: LOGITBOOST WEKA CLASSIFIER SPEECH SEGMENTATION1297

Bartosz Ziolkowski, Suresh Manandhar, Richard C. Wilson, University of York, United Kingdom; Mariusz Ziolkowski, AGH University of Science and Technology, Poland

TH-PM1-P3.5: KEYPOINTS LABELING FOR BACKGROUND SUBTRACTION IN TRACKING APPLICATIONS1301

Rémi Trichet, Bernard Mérialdo, Institut Eurecom, France

TH-PM1-P3.6: OBJECT RETRIEVAL BASED ON SPATIALLY FREQUENT ITEMS WITH INFORMATIVE PATCHES1305

Ke Gao, Shouxun Lin, Junbo Guo, Dongming Zhang, Yongdong Zhang, Yufeng Wu, Institute of Computing Technology, Chinese Academy of Sciences, China

TH-PM1-P3.7: HIERARCHICAL MOTION ANALYSIS FOR FAST SUMMARISATION OF SCALABLE CODED VIDEO1309

Marta Mrak, Janko Calic, University of Surrey, United Kingdom; Giovanni Cordara, Telecom Italia LAB, Italy; Ahmet Konoz, University of Surrey, United Kingdom

TH-PM1-P3.8: VISUAL PATTERN WEIGHTING FOR NEAR-DUPLICATE IMAGE RETRIEVAL1313

Manni Duan, University of Science and Technology of China, China; Xing Xie, Microsoft Research Asia, China; Xiuqing Wu, University of Science and Technology of China, China; Wei-Ying Ma, Microsoft Research Asia, China

TH-PM1-P3.9: USING CHROMA HISTOGRAM TO MEASURE THE PERCEPTUAL SIMILARITY OF MUSIC1317

Linxing Xiao, Jie Zhou, Tsinghua University, China

TH-PM1-P3.10: GRAPH-BASED SEMI-SUPERVISED LEARNING WITH MULTI-LABEL1321

Zheng-Jun Zha, University of Science and Technology of China, China; Tao Mei, Jingdong Wang, Microsoft Research Asia, China; Zengfu Wang, University of Science and Technology of China, China; Xian-Sheng Hua, Microsoft Research Asia, China

TH-PM1-P3.11: UNBIASED ACTIVE LEARNING FOR IMAGE RETRIEVAL	1325
<i>Bo Geng, Peking University, China; Linjun Yang, Microsoft Research Asia, China; Zheng-Jun Zha, University of Science and Technology of China, China; Chao Xu, Peking University, China; Xian-Sheng Hua, Microsoft Research Asia, China</i>	
TH-PM1-P3.12: LOW-LEVEL FEATURE FUSION MODELS FOR SOCCER SCENE CLASSIFICATION	1329
<i>Rachid Benmokhtar, Benoit Huet, Eurecom Institute, France; Sid-Ahmed Berrani, Orange Labs-France Telecom, France</i>	
TH-PM1-P4: CONTENT UNDERSTANDING II	
TH-PM1-P4.1: COMBINING SPEECH RECOGNITION AND ACOUSTIC WORD EMOTION MODELS FOR ROBUST TEXT-INDEPENDENT EMOTION RECOGNITION	1333
<i>Bjoern Schuller, Technische Universität München, Germany; Bogdan Vlasenko, Otto-von-Guericke University, Germany; Dejan Arsic, Gerhard Rigoll, Technische Universität München, Germany; Andreas Wendemuth, Otto-von-Guericke University, Germany</i>	
TH-PM1-P4.2: APPLICATION OF SPATIOTEMPORAL SEARCH-SPACE REDUCTION IN LICENSE PLATE DETECTION	1337
<i>Shen-Zheng Wang, National Chiao-Tung University, Taiwan; Hsi-Jian Lee, Tzu-Chi University, Taiwan</i>	
TH-PM1-P4.3: CLASSIFICATION OF SOUND CLIPS BY TWO SCHEMES: USING ONOMATOPOEIA AND SEMANTIC LABELS.	1341
<i>Shiva Sundaram, Shirkanth Narayanan, Speech Analysis and interpretation Lab, United States</i>	
TH-PM1-P4.4: A STUDY OF IMAGE-BASED MUSIC COMPOSITION.....	1345
<i>Xiaoying Wu, Ze-Nian Li, Simon Fraser University, Canada</i>	
TH-PM1-P4.5: A NOVEL CONTEXTUAL DESCRIPTORS FOR CATEGORY RECOGNITION	1349
<i>Yi Ouyang, Ming Tang, Jian Cheng, Jinqiao Wang, Hanqing Lu, Songde Ma, Chinese Academy of Sciences, Institute of Automation, China</i>	
TH-PM1-P4.6: BI-LAYER SEGMENTATION FROM STEREO VIDEO SEQUENCES BY FUSING MULTIPLE CUES	1353
<i>Yi Wu, Patricia Wang, Jianguo Li, Intel Corporation, United States</i>	
TH-PM1-P4.7: SEGMENTATION-BASED EXTRACTION OF IMPORTANT OBJECTS FROM VIDEO FOR OBJECT-BASED INDEXING	1357
<i>Muhammet Bastan, Ugur Güdükbay, Özgür Ulusoy, Bilkent University, Turkey</i>	
TH-PM1-P4.8: AUDIO TONALITY MODE CLASSIFICATION WITHOUT TONIC ANNOTATIONS	1361
<i>Zhiyao Duan, Tsinghua University, China; Lie Lu, Microsoft Research Asia, China; Changshui Zhang, Tsinghua University, China</i>	
TH-PM1-P4.9: DISSIMILARITY MEASURES FOR CONTENT-BASED IMAGE RETRIEVAL	1365
<i>Rui Hu, Stefan Rueger, Dawei Song, Haiming Liu, Zi Huang, The Open University, United Kingdom</i>	

TH-PM1-P4.10: AFFECTIVE MTV ANALYSIS BASED ON AROUSAL AND VALENCE FEATURES	1369
<i>Shiliang Zhang, Chinese Academy of Science, China; Qi Tian, The University of Texas at San Antonio, United States; Shuqiang Jiang, Qingming Huang, Wen Gao, Chinese Academy of Science, China</i>	
TH-PM1-P4.11: WEB IMAGE SELECTION WITH PLSA	1373
<i>Keiji Yanai, The University of Electro-Communications, Japan</i>	
TH-PM1-P4.12: MUSIC GENRE CLASSIFICATION USING NOVEL FEATURES AND A WEIGHTED VOTING METHOD	1377
<i>Dalwon Jang, Minho Jin, Chang D. Yoo, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
 TH-PM2-L1: GENERAL	
TH-PM2-L1.1: USING WAVPACK FOR REAL-TIME AUDIO CODING IN INTERACTIVE APPLICATIONS	1381
<i>Zefir Kurtisi, Lars Wolf, Technische Universität Braunschweig, Germany</i>	
TH-PM2-L1.2: SUB-OPTIMAL MMSE BASED JOINT SOURCE/CHANNEL DECODING OF A MATCHING PURSUIT CODED IMAGE BIT-STREAM OVER A MEMORYLESS NOISY CHANNEL	1385
<i>Abbas Ebrahimi-Moghadam, Shahram Shirani, McMaster University, Canada</i>	
TH-PM2-L1.3: ENERGY EFFICIENT H.264 VIDEO TRANSMISSION OVER WIRELESS AD HOC NETWORKS BASED ON ADAPTIVE 802.11E EDCA MAC PROTOCOL	1389
<i>Byung Joon Oh, Florida Institute of Technology, United States; Chang Wen Chen, University at Buffalo, State University of New York, United States</i>	
TH-PM2-L1.4: BUFFER SHARING AND SMOOTHING SCHEME OF VBR STREAMS	1393
<i>Kaihui Li, Yuanhai Zhang, Changqiao Xu, Zhimei Wu, Institute of Software, Chinese Academy of Sciences, China</i>	
 TH-PM2-L2: IMAGE UNDERSTANDING	
TH-PM2-L2.1: CONSTRAINED SAMPLING FOR IMAGE RETARGETING	1397
<i>Tongwei Ren, Yanwen Guo, Gangshan Wu, Fuyan Zhang, Nanjing University, China</i>	
TH-PM2-L2.2: FOREGROUND SEGMENTATION WITH SINGLE REFERENCE FRAME USING ITERATIVE LIKELIHOOD ESTIMATION AND GRAPH-CUT	1401
<i>Keita Takahashi, Taketoshi Mori, The University of Tokyo, Japan</i>	
TH-PM2-L2.3: A NOVEL LOCAL FEATURE DESCRIPTOR FOR IMAGE MATCHING	1405
<i>Heng Yang, Qing Wang, Northwestern Polytechnical University, China</i>	

TH-PM2-L3: CONTENT APPLICATIONS

TH-PM2-L3.1: AUTOMATICALLY CONSTRUCTING BLUE PAGES FOR1409 CHARACTERS IN INSTRUCTIONAL VIDEOS

Ying Li, Youngja Park, IBM T. J. Watson Research Center, United States

TH-PM2-L3.2: GNAVI: GOLF NAVIGATION SYSTEM BASED ON PLAYER1413 INFORMATION

Cheolkon Jung, Joongkyu Kim, Sungkyunkwan University, Republic of Korea

TH-PM2-L3.3: ACCOMPANIMENT SEPARATION AND KARAOKE1417 APPLICATION BASED ON AUTOMATIC MELODY TRANSCRIPTION

Matti Ryyänänen, Tuomas Virtanen, Jouni Paulus, Anssi Klapuri, Tampere University of Technology, Finland

TH-PM2-L3.4: HIGH LEVEL ACTIVITY ANNOTATION OF DAILY1421 EXPERIENCES BY A COMBINATION OF A WEARABLE DEVICE AND WI-FI BASED POSITIONING SYSTEM

Waythit Puangpakisiri, Toshihiko Yamasaki, Kiyoharu Aizawa, The University of Tokyo, Japan

TH-PM2-L4: PERCEPTUAL QUALITY AND HUMAN FACTORS

TH-PM2-L4.1: SYNCHRONISATION OF OLFACTORY-ENHANCED1425 MULTIMEDIA: PERSPECTIVES FROM AN EMPIRICAL STUDY

Oluwakemi Ademoye, Gheorghita Ghinea, Brunel University, United Kingdom

TH-PM2-L4.2: PHONETIC AND INTONATION ENHANCEMENT OF SPEECH1429 FOR JAPANESE HEARING-IMPAIRED SPEAKERS

Shogo Watanabe, Keio University, Japan; Tsuyoshi Moriyama, Tokyo Polytechnic University, Japan; Shinji Ozawa, Keio University, Japan

TH-PM2-L4.3: PRE-ATTENTIVE DISCRIMINATION OF1433 INTERESTINGNESS IN IMAGES

Harish Katti, School of Computing, National University of Singapore, Singapore; Yang Bin Kwok, National University of Singapore, Singapore; Tat-Seng Chua, Mohan Kankanhalli, School of Computing, National University of Singapore, Singapore

TH-PM2-L5: ALGORITHMS

TH-PM2-L5.1: REAL-TIME MVC VIEWER FOR FREE VIEWPOINT1437 NAVIGATION

Hideaki Kimata, Shinya Shimizu, Yutaka Kunita, Megumi Isogai, Kazuto Kamikura, Yoshiyuki Yashima, NTT Corporation, Japan

TH-PM2-L5.2: REFERENCE FRAME ACCESS OPTIMIZATION FOR ULTRA1441 HIGH RESOLUTION H.264/AVC DECODING

Ping Chao, Youn-Long Lin, National Tsing Hua University, Taiwan

TH-PM2-L5.3: POWER-SCALABLE MULTI-LAYER HALFTONE VIDEO1445 DISPLAY FOR ELECTRONIC PAPER

Chao-Yung Hsu, Academia Sinica and National Taiwan University, Taiwan; Chun-Shien Lu, Academia Sinica, Taiwan; Soo-Chang Pei, National Taiwan University, Taiwan

TH-PM2-L5.4: LEARNING OBJECT FROM SMALL AND IMBALANCED DATASET WITH BOOST-BFKO	1449
<i>Liansheng Zhuang, Wei Zhou, University of Science and Technology of China, China; Qi Tian, University of Texas at San Antonio, United States; Nenghai Yu, University of Science and Technology of China, China</i>	
TH-PM2-P1: CONTENT UNDERSTANDING III	
TH-PM2-P1.1: HUMAN ACTION RECOGNITION BASED ON LAYERED-HMM	1453
<i>Yen-Chieh Wu, Hsuan-Sheng Chen, Wen-Jiin Tsai, Suh-Yin Lee, National Chiao-Tung University, Taiwan; Jen-Yu Yu, Industrial Technology Research Institute, Taiwan</i>	
TH-PM2-P1.2: INTERRUPTION POINT DETECTION OF SPONTANEOUS SPEECH USING PRIOR KNOWLEDGE AND MULTIPLE FEATURES	1457
<i>Wei-Bin Liang, National Cheng Kung University, Taiwan; Jui-Feng Yeh, National Chiayi University, Taiwan; Chung-Hsien Wu, Chi-Chiuan Liou, National Cheng Kung University, Taiwan</i>	
TH-PM2-P1.3: MOVING OBJECT DETECTION IN DYNAMIC SCENES USING NONPARAMETRIC LOCAL KERNEL HISTOGRAM ESTIMATION	1461
<i>Bo Li, Baozong Yuan, Zhenjiang Miao, Institute of Information Science, Beijing Jiaotong University, China</i>	
TH-PM2-P1.4: PARALLEL MODEL COMBINATION AND WORD RECOGNITION IN SOCCER AUDIO	1465
<i>Jack Longton, Philip Jackson, Surrey University, United Kingdom</i>	
TH-PM2-P1.5: AUTOMATIC CHARACTER IDENTIFICATION IN FEATURE-LENGTH FILMS	1469
<i>Yifan Zhang, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China; Changsheng Xu, Institute for Infocomm Research, Singapore; Hanqing Lu, National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, China</i>	
TH-PM2-P1.6: HUMAN ATTENTION MODEL FOR SEMANTIC SCENE ANALYSIS IN MOVIES	1473
<i>Anan Liu, Tianjin University / Institute of Computing Technology, Chinese Academy of Sciences, China; Yongdong Zhang, Yan Song, Dongming Zhang, Jintao Li, Institute of Computing Technology, Chinese Academy of Sciences, China; Zhaoxuan Yang, Tianjin University, China</i>	
TH-PM2-P1.7: EVENT DETECTION IN TENNIS MATCHES BASED ON VIDEO DATA MINING	1477
<i>Ming-Chun Tien, Yi-Tang Wang, Chen-Wei Chou, Kuei-Yi Hsieh, National Taiwan University, Taiwan; Wei-Ta Chu, National Chung Cheng University, Taiwan; Ja-Ling Wu, National Taiwan University, Taiwan</i>	
TH-PM2-P1.8: IMAGE CLASSIFICATION BASED ON THE BAGGING-ADABOOST ENSEMBLE	1481
<i>Zhiwen Yu, Hau-San Wong, City University of Hong Kong, Hong Kong SAR of China</i>	
TH-PM2-P1.9: IMPROVEMENTS IN AUDIO CLASSIFICATION BASED ON SINUSOIDAL MODELING	1485
<i>Jalil Shirazi, Islamic Azad University, Gonabad Branch, Iran; Shahrokh Ghaemmaghami, Sharif University of Technology, Iran; Farbod Razzazi, Islamic Azad University, Research and Science Branch, Iran</i>	

TH-PM2-P1.10: FULL-REFERENCE QUALITY DIAGNOSIS FOR VIDEO	1489
SUMMARY	
<i>Yan Liu, Yan Zhang, Hong Kong Polytechnic University, Hong Kong SAR of China; Maosong Sun, Tsing University, China; Wenjie Li, Hong Kong Polytechnic University, Hong Kong SAR of China</i>	
TH-PM2-P1.11: CASCADED CLASSIFICATION WITH OPTIMAL CANDIDATE	1493
SELECTION FOR EFFECTIVE PLACE RECOGNITION	
<i>Yiqun Li, Joo-Hwee Lim, Hanlin Goh, Institute for Infocomm Research, Singapore</i>	
TH-PM2-P2: CONTENT UNDERSTANDING IV	
TH-PM2-P2.1: HMM BASED EVENT DETECTION IN AUDIO	1497
CONVERSATION	
<i>Shajith Ikkal, Tanveer Faruque, IBM India Research Lab, India</i>	
TH-PM2-P2.2: A PIXEL-WISE LOCAL INFORMATION-BASED	1501
BACKGROUND SUBTRACTION APPROACH	
<i>Zhong Wei, Graduate University of Chinese Academy of Sciences, China; Shuqiang Jiang, Institute of Computing Technology, Chinese Academy of Sciences, China; Qingming Huang, Graduate University of Chinese Academy of Sciences, China</i>	
TH-PM2-P2.3: AUTOMATIC CHORD RECOGNITION FOR MUSIC	1505
CLASSIFICATION AND RETRIEVAL	
<i>Heng-Tze Cheng, Yi-Hsuan Yang, Yu-Ching Lin, National Taiwan University, Taiwan; I-Bin Liao, Chunghwa Telecom, Taiwan; Homer H. Chen, National Taiwan University, Taiwan</i>	
TH-PM2-P2.4: TRANSDUCTIVE VIDEO ANNOTATION VIA LOCAL	1509
LEARNABLE KERNEL CLASSIFIER	
<i>Xinmei Tian, University of Science and Technology of China, China; Linjun Yang, Jingdong Wang, Microsoft Research Asia, China; Xiuqing Wu, University of Science and Technology of China, China; Xian-Sheng Hua, Microsoft Research Asia, China</i>	
TH-PM2-P2.5: A GENERALIZED MODEL FOR DETECTION OF	1513
DEMOSAICING CHARACTERISTICS	
<i>Hong Cao, Alex Chichung Kot, Nanyang Technological University, Singapore</i>	
TH-PM2-P2.6: SPATIAL-TEMPORAL ATTENTION ANALYSIS FOR HOME	1517
VIDEO	
<i>Xuekan Qiu, Graduate University of Chinese Academy of Sciences, China; Shuqiang Jiang, Huiying Liu, Institute of Computing Technology, Chinese Academy of Sciences, China; Qingming Huang, Graduate University of Chinese Academy of Sciences, China; Longbing Cao, Faculty of Information Technology, University of Technology Sydney, Australia</i>	
TH-PM2-P2.7: A GEOMETRIC METHOD TO COMPUTE DIRECTIONALITY	1521
FEATURES FOR TEXTURE IMAGES	
<i>Md Islam, Dengsheng Zhang, Guojun Lu, Monash University, Australia</i>	
TH-PM2-P2.8: ACCOMMODATING SAMPLE SIZE EFFECT ON SIMILARITY	1525
MEASURES IN SPEAKER CLUSTERING	
<i>Alexander Haubold, John Kender, Columbia University, United States</i>	

TH-PM2-P2.9: LOWER ATTENTIVE REGION DETECTION FOR VIRTUAL CONTENT INSERTION IN BROADCAST VIDEO	1529
<i>Huiying Liu, Shuqiang Jiang, Institute of Computing Technology, Chinese Academy of Sciences, China; Qingming Huang, Graduate University of Chinese Academy of Sciences, China; Changsheng Xu, Institute for Infocomm Research, Singapore</i>	
TH-PM2-P2.10: SPEAKER DIARIZATION IN A MULTI-SPEAKER ENVIRONMENT USING PARTICLE SWARM OPTIMIZATION AND MUTUAL INFORMATION	1533
<i>Masoud Mirrezaie, Mohammad Ahadi, Amirkabir University of Technology, Iran</i>	
TH-PM2-P2.11: ATTACK BY COLORIZATION OF A GREY-LEVEL IMAGE HIDING ITS COLOR PALETTE	1537
<i>Marc Chaumont, William Puech, Laboratory of Computer Science, Robotic and Microelectronic of Montpellier, France</i>	
TH-PM2-P2.12: AUTOMATIC PIXEL-SHIFT DETECTION AND RESTORATION IN VIDEOS	1541
<i>Haidong Yuan, Huadong Ma, Xiaodong Huang, Beijing University of Posts and Telecommunications, China</i>	
TH-PM2-P2.13: COMPRESSED DOMAIN ROBUST HASHING FOR AAC AUDIO	1545
<i>Yuhua Jiao, Mingyu Li, Bian Yang, Xiamu Niu, Harbin Institute of Technology, China</i>	
TH-PM2-P3: MEDIA PROCESSING	
TH-PM2-P3.1: AUDIO AND VIDEO SIGNATURES FOR SYNCHRONIZATION	1549
<i>Regunathan Radhakrishnan, Kent Terry, Claus Bauer, Dolby Laboratories, Inc., United States</i>	
TH-PM2-P3.2: EXPRESSIONAL FACE IMAGE ANALYSIS WITH CONSTRAINED OPTICAL FLOW	1553
<i>Chao-Kuei Hsieh, Shang-Hong Lai, Yung-Chang Chen, National Tsing Hua University, Taiwan</i>	
TH-PM2-P3.3: ADVERTISEMENT VIDEO COMPLETION USING HIERARCHICAL MODEL	1557
<i>Chih-Lun Fang, Tsung-Han Tsai, National Central University, Taiwan</i>	
TH-PM2-P3.4: USE HIERARCHICAL GENETIC PARTICLE FILTER TO FIGURE ARTICULATED HUMAN TRACKING	1561
<i>Long Ye, Qin Zhang, Communication University of China, China; Ling Guan, Ryerson University, Canada</i>	
TH-PM2-P3.5: HIERARCHICAL MESH DECOMPOSITION AND MOTION TRACKING FOR TIME-VARYING-MESHES	1565
<i>Ning Sung Lee, Toshihiko Yamasaki, Kiyoharu Aizawa, University of Tokyo, Japan</i>	
TH-PM2-P3.6: FEATURE-BASED SUPER-RESOLUTION FOR FACE RECOGNITION	1569
<i>Zhifei Wang, Zhenjiang Miao, Institute of Information Science, Beijing Jiaotong University, China</i>	
TH-PM2-P3.7: AN EXAMPLE-BASED ANTHROPOMETRIC MODEL FOR FACE SHAPE SYNTHESIS	1573
<i>Yu Zhang, Institute of High Performance Computing, Singapore; Edmond Prakash, Manchester Metropolitan University, United Kingdom</i>	

TH-PM2-P3.8: DEVELOPMENT OF A SIMPLE FREE VIEWPOINT VIDEO SYSTEM	1577
<i>Seokhwan Jo, Dohyun Lee, Yoonseob Kim, Chang D. Yoo, Korea Advanced Institute of Science and Technology, Republic of Korea</i>	
TH-PM2-P3.9: MULTIVIEW VIDEO HYBRID CODING SYSTEM WITH TEXTURE-DEPTH SYNTHESIS	1581
<i>Pei-Kuei Tsung, Chun-Yi Lin, Wei-Yin Chen, Li-Fu Ding, Liang-Gee Chen, National Taiwan University, Taiwan</i>	
TH-PM2-P3.10: SUBSPACE LEARNING FOR HUMAN HEAD POSE ESTIMATION	1585
<i>Yuxiao Hu, Thomas Huang, University of Illinois, United States</i>	
TH-PM2-P3.11: VIDEO-BASED FACE RECOGNITION BASED ON VIEW SYNTHESIS FROM 3D FACE MODEL RECONSTRUCTED FROM A SINGLE IMAGE	1589
<i>Chia-Te Liao, Shu-Fang Wang, Yun-Jen Lu, Shang-Hong Lai, National Tsing Hua University, Taiwan</i>	
DEMO: WIIVIEW: A VIEW CONTROL INTERFACE FOR 3D TELE-IMMERSIVE ENVIRONMENTS	1593
<i>Morihiko Tamai, Nara Institute of Science and Technology, Japan; Wanmin Wu, Mahsa Kamali, Klara Nahrstedt, University of Illinois at Urbana-Champaign, United States</i>	
DEMO: AN AUTOMATIC INDEXING SYSTEM FOR TELEVISION NEWSCASTS	1595
<i>Alberto Messina, Roberto Borgotallo, Giorgio Dimino, Laurent Boch, Daniele Airola Gnota, RAI - Centre for Research and Technological Innovation, Italy</i>	
DEMO: ENABLING ACCESS TO SOUND ARCHIVES THROUGH INTEGRATION, ENRICHMENT AND RETRIEVAL	1597
<i>Ivan Damnjanovic, Queen Mary, University of London, United Kingdom; Dan Barry, Dublin Institute of Technologies, Ireland; Josh Reiss, Queen Mary, University of London, United Kingdom</i>	
DEMO: JIVE – A BLU-RAY DISC™ AUTHORIZING ENVIRONMENT	1599
<i>Jobst Hörentrup, Ralf Ostermann, Thomson, Germany</i>	
DEMO: IT LEVERAGE FOR MEDIA ACQUISITION: NEW PARADIGMS IN THE KEY AREA OF DIGITAL CINEMATOGRAPHY AND HD PRODUCTION WORKFLOWS	1601
<i>Thomas Brune, Axel Kochale, Jens Peter Wittenburg, Thomson, Germany</i>	
DEMO: ANALYZING VIDEO CONCEPT DETECTORS VISUALLY	1603
<i>Cees Snoek, Richard van Balen, Dennis Koelma, Arnold Smeulders, Marcel Worring, University of Amsterdam, Netherlands</i>	
DEMO: SMART VIDEO PLAYER	1605
<i>Linjun Yang, Microsoft Research Asia, China; Yichen Yang, Zhejiang University, China; Xian-Sheng Hua, Microsoft Research Asia, China</i>	

DEMO: AN INTEROPERABLE MULTIMEDIA DELIVERY FRAMEWORK1607
FOR SCALABLE VIDEO CODING BASED ON MPEG-21 DIGITAL ITEM
ADAPTATION

Michael Eberhard, ITEC - Klagenfurt University, Austria; Luca Celetto, ST Microelectronics, Italy; Christian Timmerer, ITEC - Klagenfurt University, Austria; Emanuele Quacchio, ST Microelectronics, Italy; Hermann Hellwagner, ITEC - Klagenfurt University, Austria; Fabrizio Rovati, ST Microelectronics, Italy

DEMO: V-MP2000: A FLEXIBLE MULTI-CORE PLATFORM FOR1609
MULTI-STANDARD VIDEO APPLICATIONS

Young-Hun Kluge, Hans-Joachim Stolberg, videantis GmbH, Germany