

## TABLE OF CONTENTS

Preface .....	i
Committees .....	xvi
Auxiliary Reviewers .....	xix
Technical Program.....	xxi
Keynote Speeches .....	1
THREE DIMENSIONAL SENSING, VISUALIZATION, AND DISPLAY .....	3
<i>Bahram Javidi, University of Connecticut, USA</i>	
3D MODELING OF REAL-WORLD OBJECTS, SCENES AND .....	5
EVENTS FROM VIDEOS	
<i>Marc Pollefeys, ETH Zurich, Switzerland / University of North Carolina at Chapel Hill, USA</i>	
3D IN THE HOME: MASS MARKET OR NICHE? .....	7
<i>Anthony Vetro, Mitsubishi Electric Research Laboratories, USA</i>	
Tutorials .....	9
COMPRESSION OF 3D MESHES - .....	11
APPLICATIONS, APPROACHES, STANDARDS,	
<i>Nikolce Stefanoski, Leibniz University of Hannover, Germany ;</i>	
<i>Libor Vasa, University of West Bohemia, Plzen, Czech Republic;</i>	
<i>Joern Ostermann, Leibniz University of Hannover, Germany</i>	
CHALLENGES TO 3D REALISTIC BROADCASTING SYSTEM .....	15
<i>Yo-Sung Ho, Gwangju Institute of Science and Technology, Republic of Korea</i>	
COMPUTER-GENERATED HOLOGRAMS AND .....	17
3-D VISUAL COMMUNICATION	
<i>Leonid P. Yaroslavsky, Tel Aviv University, Israel</i>	

## Papers

### Display Technologies for 3DTV I

SCANNING LED ARRAY BASED VOLUMETRIC DISPLAY .....	21
---	----

*Murat Sayinta, Serhan O. Isikman, Hakan Urey, Koç University, Turkey*

NOVEL DEPTH-FUSED DISPLAY (DFD) SYSTEM WITH WIDE VIEWING 3D IMAGES .....	25
--	----

*Ching-Yi Hsu, Yi-Pai Huang, Yu-Chen Chang, National Chiao Tung University, Taiwan, R.O.C.; Chih-Ping Su, Chung-Hwa Picture Tubes, Ltd. Taiwan, R.O.C.*

DESIGN AND IMPLEMENTATION OF A DMD BASED VOLUMETRIC 3D DISPLAY .....	29
--	----

*Veysel Yücesoy, Doruk Tunaoğlu, Metodi Kovachev, Rossitza Ilieva, Levent Onural, Bilkent University, Turkey*

IMPLEMENTATION OF STEREOSCOPIC AND DUALVIEW IMAGES ON A MICRODISPLAY HIGH DEFINITION TELEVISION .....	33
---	----

*Michael D. McCormick, Henry W. Neal, David C. Hutchison, Texas Instruments, Inc., USA*

MEASUREMENTS AND EXPERIMENTS OF THE IMMATERIAL VIRTUAL REALITY DISPLAY .....	37
--	----

*Ismo Rakkolainen, Tampere University of Technology, FogScreen, Finland*

DISPARITY ADAPTIVE FILTER FOR ANTI-ALIASING OF STEREOGRAPHIC 3D IMAGES .....	41
--	----

*Wook-Joong Kim, Korean Advanced Institute of Science and Technology (KAIST), Republic of Korea; Jinwoong Kim, Electronics and Telecommunications Research Institute (ETRI), Republic of Korea*

### 3D Scene Capture and Reconstruction (3D-SCR)

WHY HDR IS IMPORTANT FOR 3DTV MODEL ACQUISITION .....	45
---	----

*Benjamin Huhle, University of Tuebingen, Germany; Ossi Pirinen, Tampere University of Technology, Finland; Sven Fleck, University of Tuebingen, Germany; Atanas Gotchev, Tampere University of Technology, Finland; Wolfgang Straßer, University of Tuebingen, Germany*

<b>AUTOMATIC INITIALIZATION FOR THE REGISTRATION OF GIS AND VIDEO DATA</b>	<b>49</b>
<i>Thomas Colleu, Gaël Sourimant, Luce Morin, IRISA/INRIA/University of Rennes 1, France</i>	
<b>3D SCENE RECONSTRUCTION BASED ON ROBUST CAMERA MOTION ESTIMATION AND SPACE SWEEPING FOR A CULTURAL HERITAGE VIRTUAL TOUR SYSTEM</b>	<b>53</b>
<i>Xenophon Zabulis, Foundation for Research and Technology – Hellas, Greece; Nikolaos Grammalidis, Informatics and Telematics Institute-CERTH, Thessaloniki, Greece; Yalin Bastanlar, Erdal Yilmaz, Yasemin Yardimci Cetin, Middle East Technical University, Turkey</i>	
<b>3DTV VIEW GENERATION USING UNCALIBRATED CAMERAS</b>	<b>57</b>
<i>Songkran Jarusirisawad, Hideo Saito, Keio University, Japan</i>	
<b>AN EFFICIENT RECTIFICATION ALGORITHM FOR MULTI-VIEW IMAGES IN PARALLEL CAMERA ARRAY</b>	<b>61</b>
<i>Yun-Suk Kang, Cheon Lee, Yo-Sung Ho, Gwangju Institute of Science and Technology, (GIST), Korea</i>	
<b>A NOVEL METHOD FOR SEMI-AUTOMATIC 2D TO 3D VIDEO CONVERSION</b>	<b>65</b>
<i>Chenglei Wu, Guihua Er, Xudong Xie, Tao Li, Xun Cao, Qionghai Dai, Tsinghua University, China</i>	
 <b>Applications for 3DTV</b>	
<b>MOBILE 3D VIDEO USING MVC AND N800 INTERNET TABLET</b>	<b>69</b>
<i>Kai Willner, Kemal Ugur, Marja Salmimaa, Antti Hallapuro, Jani Lainema, Nokia Research Center, Finland</i>	
<b>HOW DOES MY 3D VIDEO SOUND LIKE? –IMPACT OF LOUDSPEAKER SET-UPS ON AUDIOVISUAL QUALITY ON MID-SIZED AUTOSTEREOSCOPIC DISPLAY</b>	<b>73</b>
<i>Dominik Strohmeier, Technische Universität Ilmenau, Germany; Satu Jumisko-Pyykkö, Tampere University of Technology, Finland</i>	
<b>DEPTH ESTIMATION VIA STAGE CLASSIFICATION</b>	<b>77</b>
<i>Vladimir Nedović, Arnold W.M. Smeulders, University of Amsterdam, The Netherlands; André Redert, Philips Research Laboratories, The Netherlands; Jan-Mark Geusebroek, University of Amsterdam, The Netherlands</i>	
<b>3D VIDEO FINGERPRINTING</b>	<b>81</b>
<i>Vikas Ramachandra, Matthias Zwicker, Truong Nguyen, University of California, San Diego, USA</i>	

<b>HDR IMAGING FROM DIFFERENTLY EXPOSED MULTIVIEW VIDEOS ....</b>	<b>85</b>
<i>Vikas Ramachandra, Matthias Zwicker, Truong Nguyen, University of California, San Diego, USA</i>	
<b>INTERACTIVE MULTI-VIEW VIDEO ADAPTATION FOR 3DTV .....</b>	<b>89</b>
<i>Ilkwon Park, Yonsei University, Republic of Korea; Manbae Kim, Kangwon National University, Republic of Korea; Hong Kook Kim, Gwangju Institute of Science and Technology, Republic of Korea; Hyeran Byun, Yonsei, University, Republic of Korea</i>	
 <b>Special Session: MPEG-4 3D Graphics</b>	
Session organizers: Marius Preda, Institut Telecom, France and Karsten Mueller, Fraunhofer HHI, Germany	
<b>PEER-TO-PEER VISUALIZATION OF VERY LARGE 3D .....</b>	<b>93</b>
<b>LANDSCAPE AND CITY MODELS USING MPEG-4</b>	
<i>Jérôme Royan, Patrick Gioia, Romain Cavagna, Orange Labs, France; Christian Bouville, IRISA, France</i>	
<b>THE NEW MPEG-4/FAMC STANDARD FOR ANIMATED .....</b>	<b>97</b>
<b>3D MESH COMPRESSION</b>	
<i>Khaled Mamou, Institut TELECOM, France; Nikolce Stefanoski, Leibniz Universität Hannover, Germany; Heiner Kirchhoff, Karsten Müller, Heinrich-Hertz-Institut, Germany; Titus Zaharia, Françoise Preteux, Institut TELECOM, France; Detlev Marpe, Heinrich-Hertz-Institut, Germany; Joern Ostermann, Leibniz Universität Hannover, Germany</i>	
<b>MPEG-4 PART 25: A GENERIC MODEL FOR .....</b>	<b>101</b>
<b>3D GRAPHICS COMPRESSION</b>	
<i>Blagica Jovanova, Marius Preda, Françoise Preteux, Institut TELECOM, France</i>	
<b>3D COMPRESSION BENCHMARKING WITH .....</b>	<b>105</b>
<b>MYMULTIMEDIAWORLD.COM</b>	
<i>Benoît Le Bonhomme, Marius Preda, Françoise Prêteux, Institut TELECOM, France</i>	
<b>2D WAVELET-BASED COMPRESSION OF 3D ANIMATION .....</b>	<b>109</b>
<b>SEQUENCES WITH FIXED CONNECTIVITY</b>	
<i>Sergey Korolev, Peter Panfilov, Alexey Nikitine, Moscow State Institute of Electronics and Mathematics (Technical University), Russia</i>	
<b>EMPIRICAL RATE-DISTORTION ANALYSIS OF JPEG 2000 3D AND .....</b>	<b>113</b>
<b>H.264/AVC CODED INTEGRAL IMAGING BASED 3D-IMAGES</b>	
<i>Roger Olsson, Mid Sweden University, Sweden</i>	

**Special Session: GPU-based Image Processing**  
Session organizers: Atanas Gotchev, Tampere University of Technology, Finland  
and Christian Weigel, Technical University of Ilmenau, Germany

<b>BOOSTING THE LEVEL OF IMMERSION: INTEGRATING STEREOSCOPIC OUTPUT INTO INTERACTIVE AUDIOVISUAL APPLICATIONS</b>	117
<i>Cihan Altinay, Uwe Kühhirt, Fraunhofer Institute for Digital Media Technology (IDMT), Germany</i>	
<b>GPU-BASED 3D VIDEO OBJECT SYNTHESIS AND ITS QUALITY ASSESSMENT</b>	121
<i>Christian Weigel, FeiFei Fan, Technische Universität Ilmenau, Germany</i>	
<b>OPENGL-BASED CONTROL OF SEMI-ACTIVE 3D DISPLAY</b>	125
<i>Atanas Boev, Kalle Raunio, Mihail Georgiev, Atanas Gotchev, Karen Egiazarian, Tampere University of Technology, Finland</i>	
<b>A SCALABLE END-TO-END OPTIMIZED REAL-TIME IMAGE-BASED RENDERING FRAMEWORK ON GRAPHICS HARDWARE</b>	129
<i>Sammy Rogmans, Jiangbo Lu, Gauthier Lafruit, IMEC, Belgium</i>	
<b>REAL-TIME 3D VIDEO SYNTHESIS FROM BINOCULAR STEREO CAMERA</b>	133
<i>Xiubing Xu, Xudong Xie, Qionghai Dai, Tsinghua University, China</i>	

**Coding and Transmission for 3DTV**

<b>BIT-RATE ADAPTIVE DOWNSAMPLING FOR THE CODING OF MULTI-VIEW VIDEO WITH DEPTH INFORMATION</b>	137
<i>Erhan Ekmekcioglu, Stewart T. Worrall, Ahmet M. Kondoz, University of Surrey, UK</i>	
<b>REGION-OF-INTEREST 3D VIDEO CODING BASED ON DEPTH IMAGES</b>	141
<i>Linda S. Karlsson, Mårten Sjöström, Mid Sweden University, Sweden</i>	
<b>VIEW SYNTHESIS PREDICTION FOR RATE-OVERHEAD REDUCTION IN FTV</b>	145
<i>Sehoon Yea, Anthony Vetro, Mitsubishi Electric Research Labs (MERL), USA</i>	
<b>A NOVEL FRAME CONCEALMENT METHOD FOR DEPTH MAPS USING CORRESPONDING COLOUR MOTION VECTORS</b>	149
<i>Chaminda T.E.R. Hewage, Stewart T. Worrall, Safak Dogan, Ahmet M. Kondoz, University of Surrey, UK</i>	

<b>INTER-VIEW RATE ALLOCATION USING EFFICIENT LAYER .....</b>	<b>153</b>
<b>EXTRACTION FOR STEREO VIDEO STREAMING OVER IP</b>	
<i>Nukhet Ozbek, Ege University, Turkey</i>	
<b>FEASIBILITY OF MULTI-VIEW VIDEO STREAMING OVER P2P .....</b>	<b>157</b>
<b>NETWORKS</b>	
<i>Engin Kurutepe, Thomas Sikora, Technische Universität Berlin, Germany</i>	
<b>Display Technologies for 3DTV II</b>	
<b>EUROPEAN RESEARCH INTO HEAD TRACKED .....</b>	<b>161</b>
<b>AUTOSTEREOSCOPIC DISPLAYS</b>	
<i>Phil Surman, Ian Sexton, De Montfort University, UK; Klaus Hopf, Heinrich Hertz Institute, Germany; Wing Kai Lee, De Montfort University, UK; Edward Buckley, Light Blue Optics, UK; Graham Jones, Sharp Laboratories of Europe, UK; Richard Bates, Sharp Laboratories of Europe, UK</i>	
<b>MOVING PARALLAX BARRIER DESIGN FOR EYE-TRACKING .....</b>	<b>165</b>
<b>AUTOSTEREOSCOPIC DISPLAYS</b>	
<i>Sang-Yi Yi, Electronics and Telecommunications Research Institute (ETRI), Republic of Korea; Ho-Byung Chae, Seung-Hyun Lee, Kwangwoon University, Republic of Korea</i>	
<b>A STUDY TO REALIZE A BOX-SHAPED 3D DISPLAY: .....</b>	<b>169</b>
<b>A CALIBRATION METHOD TO ALIGN LENS ARRAY AND DISPLAY</b>	
<i>Shunsuke Yoshida, Roberto Lopez-Gulliver, Sumio Yano, Naomi Inoue, National Institute of Information and Communications Technology (NICT), Advance Telecommunications Research Institute International (ATR), Japan</i>	
<b>LARGE-SCALE STEREO DISPLAY WALL USING .....</b>	<b>173</b>
<b>PROGRAMMABLE GRAPHICS HARDWARE</b>	
<i>Ig-Jae Kim, Sang Chul Ahn, Hyoung-Gon Kim, Korea Institute of Science and Technology (KIST), Republic of Korea</i>	
<b>ADVANCED STEREO PROJECTION USING INTERFERENCE FILTERS ....</b>	<b>177</b>
<i>Helmut Jorke, Arnold Simon, Markus Fritz, INFITEC GmbH, Germany</i>	
<b>DEPTH SCALING OF MULTIVIEW IMAGES FOR .....</b>	<b>181</b>
<b>AUTOMULTISCOPIC 3D MONITORS</b>	
<i>Manbae Kim, Seno Lee, Changyeol Choi, Kangwon National University, Republic of Korea, Electronics and Telecommunications Research Institute, Republic of Korea; Gi-Mun Um, Namho Hur, Jinwoong Kim, Electronics and Telecommunications Research Institute (ETRI), Republic of Korea</i>	

## Dense Depth Techniques

<b>DEPTH ASSISTED OBJECT SEGMENTATION IN MULTI-VIEW VIDEO ....</b>	<b>185</b>
<i>Cevahir Çığla, A.Aydın Alatan, Middle East Technical University, Turkey</i>	
<b>HYBRID METHOD OF 3-D IMAGE RECONSTRUCTION FROM ..... STEREO PICTURES</b>	<b>189</b>
<i>Martin Brezňan, University of Žilina, Slovakia</i>	
<b>SEGMENT-BASED MULTI-VIEW DEPTH MAP ESTIMATION .....</b>	<b>193</b>
<b>USING BELIEF PROPAGATION FROM DENSE MULTI-VIEW VIDEO</b>	
<i>Sang-Beom Lee, Kwan-Jung Oh, Yo-Sung Ho, Gwangju Institute of Science and Technology (GIST), Republic of Korea</i>	
<b>DEPTH IMAGE GENERATION FOR AUTOSTEREOSCOPIC MONITORS ..</b>	<b>197</b>
<i>Shiro Ozawa, Takao Abe, Takuya Ogawa, Masanori Ogawara, Mitsunori Hirano, Kazuhiko Tanaka, NTT COMWARE Corporation, Japan</i>	
<b>HIGH-RESOLUTION DEPTH MAP GENERATION BY APPLYING .....</b>	<b>201</b>
<b>STEREO MATCHING BASED ON INITIAL DEPTH INFORMATON</b>	
<i>Eun-Kyung Lee, Sung-Yeol Kim, Gwangju Institute of Science and Technology (GIST), Republic of Korea; Young-Ki Jung, Honam University, Republic of Korea; Yo-Sung Ho, Gwangju Institute of Science and Technology (GIST), Republic of Korea</i>	
<b>2D-TO-3D CONVERSION BASED ON MOTION AND COLOR MERGENCE .</b>	<b>205</b>
<i>Feng Xu, Guihua Er, Xudong Xie, Qionghai Dai, Tsinghua University, China</i>	

## Perceptual Factors in 3DTV

<b>OPTIMAL ASPECT RATIO UNDER VERGENCE FOR 3D TV .....</b>	<b>209</b>
<i>Irene Cheng, Kostas Daniilidis, University of Pennsylvania, USA, Anup Basu, University of Alberta, Canada</i>	
<b>MEASUREMENT OF 3D VISUAL FATIGUE USING EVENT-RELATED .....</b>	<b>213</b>
<b>POTENTIAL (ERP): 3D ODDBALL PARADIGM</b>	
<i>Hyung-Chul O. Li, Junho Seo, Kwangwoon University, Republic of Korea; Keetaek Kham, Kangwon National University, Republic of Korea; Seung-Hyun Lee, Kwangwoon University, Republic of Korea</i>	
<b>ARBITRARY OBJECT RELIGHTING WITH COMPLEX PATTERN .....</b>	<b>217</b>
<b>TEXTURE FOR REDUCING EYE FATIGUE AND IMPROVING PERCEIVED DEPTH</b>	
<i>Heechul Han, Samsung Electronics, Republic of Korea; Kwanghoon Sohn, Yonsei University, Republic of Korea</i>	

<b>MULTI-VIEW 3D TV SUB-PIXEL CODING FOR STRESS FREE PERCEPTION</b>	<b>221</b>
<i>Siegbert Hentschke, Josef Boercsoek, Thorsten Elle, Eduard Fuchs, Johannes Becker, Tanja Neumann, Kassel University, Germany</i>	
<b>OBJECTIVE QUALITY ASSESSMENT IN FREE-VIEWPOINT VIDEO PRODUCTION</b>	<b>225</b>
<i>Jonathan Starck, Joe Kilner, Adrian Hilton, University of Surrey, UK</i>	
<b>Rendering Techniques for 3DTV</b>	
<b>VIEW GENERATION WITH 3D WARPING USING DEPTH INFORMATION FOR FTV</b>	<b>229</b>
<i>Yuji Mori, Norishige Fukushima, Toshiaki Fujii, Masayuki Tanimoto, Nagoya University, Japan</i>	
<b>VIEW GENERATION BY RAY-SPACE METHOD IN CIRCULAR CAMERA SETUP FOR FTV</b>	<b>233</b>
<i>Takeshi Uemori, Tomohiro Yendo, Toshiaki Fujii, Masayuki Tanimoto, Nagoya University, Japan</i>	
<b>DEPTH IMAGE BASED RENDERING FOR 3D DATA SERVICE OVER T-DMB</b>	<b>237</b>
<i>KwangHee Jung, Young Kyung Park, Joong Kyu Kim, Sungkyunkwan University, Republic of Korea; Hyun Lee, Kugjin Yun, Namho Hur, Jinwoong Kim, Electronics and Telecommunications Research Institute (ETRI), Republic of Korea</i>	
<b>REAL-TIME ALL-IN-FOCUS VIDEO-BASED RENDERING USING A NETWORK CAMERA ARRAY</b>	<b>241</b>
<i>Yuichi Taguchi, Keita Takahashi, Takeshi Naemura, The University of Tokyo, Japan</i>	
<b>THE EFFECT OF DEPTH COMPRESSION ON MULTIVIEW RENDERING QUALITY</b>	<b>245</b>
<i>Philipp Merkle, Fraunhofer Institute for Telecommunications Heinrich-Hertz-Institut, Germany; Yannick Morvan, Eindhoven University of Technology, The Netherlands; Aljoscha Smolic, Fraunhofer Institute for Telecommunications Heinrich-Hertz-Institut, Germany; Dirk Farin, Eindhoven University of Technology, The Netherlands; Karsten Müller, Fraunhofer Institute for Telecommunications Heinrich-Hertz-Institut, Germany; Peter H.N. de With, Eindhoven University of Technology, The Netherlands; Thomas Wiegand, Fraunhofer Institute for Telecommunications, Heinrich-Hertz-Institut, Germany</i>	
<b>VIRTUAL VIEW RENDERING SYSTEM FOR 3DTV</b>	<b>249</b>
<i>Dongbo Min, Donghyun Kim, Kwanghoon Sohn, Yonsei University, Republic of Korea</i>	

## **Holographic Techniques**

<b>ADAPTIVE LOCAL PHASE APPROXIMATIONS AND GLOBAL UNWRAPPING</b>	<b>253</b>
<i>Jose Bioucas-Dias, Technical University of Lisbon, Spain; Vladimir Katkovnik, Jaakko Astola, Karen Egiazarian, University of Tampere, Finland</i>	
<b>PERFORMANCE ASSESSMENT OF A DIFFRACTION FIELD COMPUTATION METHOD BASED ON SOURCE MODEL</b>	<b>257</b>
<i>G.Bora Esmer, Levent Onural, Haldun M. Ozaktas, Bilkent University, Turkey, Vladislav Uzunov, Atanas Gotchev, Tampere University of Technology, Finland</i>	
<b>3D SCENE CAPTURE BY MULTI-WAVELENGTH PATTERN PROJECTION AT DIVERGENT ILLUMINATION OF A SINUSOIDAL PHASE GRATING</b>	<b>261</b>
<i>Elena Stoykova, Ventseslav Sainov, Georgi Minchev, Central Laboratory of Optical Storage and Processing of Information, Bulgarian Academy of Sciences (CLOSPI-BAS), Bulgaria</i>	
<b>WAVEFIELD RECONSTRUCTION AND DESIGN AS DISCRETE INVERSE PROBLEMS</b>	<b>265</b>
<i>Vladimir Katkovnik, Jaakko Astola, Karen Egiazarian, Tampere University of Technology, Finland</i>	
<b>3D VIDEO VISUALIZATION ON THE HOLOVIZIO™ SYSTEM</b>	<b>269</b>
<i>Zoltán Megyesi, Attila Barsi, Tibor Balogh, Holografika, Hungary</i>	

## **Human Face and Body Specific Techniques**

<b>SPEECH-DRIVEN AUTOMATIC FACIAL EXPRESSION SYNTHESIS</b>	<b>273</b>
<i>Elif Bozkurt, Çiğdem Eroğlu Erdem, Momentum, Turkey; Engin Erzin, Koç University, Turkey; Tanju Erdem, Mehmet Özkan, Momentum, Turkey; A. Murat Tekalp, Koç University, Turkey</i>	
<b>REAL-TIME SYNTHESIS OF NATURAL HEAD MOTION ON A 3D AVATAR FROM RECONSTRUCTED 3D FRONTAL FACE DATA</b>	<b>277</b>
<i>Sabri Gurbuz, Shunsuke Yoshida, Naomi Inoue, NICT Universal Media Research Center, ATR Cognitive Information Science Laboratories, Japan</i>	
<b>UNCALIBRATED 3D HUMAN TRACKING WITH A PTZ-CAMERA VIEWING A PLANE</b>	<b>281</b>
<i>Alberto Del Bimbo, Federico Pernici, University of Florence, Italy</i>	

<b>INTERACTIVE REFINEMENT AND EDITING .....</b>	<b>285</b>
<b>FOR TIME-VARYING MESH</b>	
<i>Toshihiko Yamasaki, Yuuki Hamazaki, Kiyoharu Aizawa,</i>	
<i>The University of Tokyo, Japan</i>	
<b>IMPROVEMENT FOR 3D COORDINATE RECONSTRUCTION OF .....</b>	<b>289</b>
<b>FACIAL FEATURE POINTS IN VIDEO SEQUENCES</b>	
<i>Yuta Takano, Ichiro Yuyama, Yoko Seki, Hiroshi Hasegawa, Yu Watanabe,</i>	
<i>Utsunomiya University, Japan</i>	
<b>KEYFRAME REDUCTION TECHNIQUES FOR .....</b>	<b>293</b>
<b>MOTION CAPTURE DATA</b>	
<i>Onur Önder, Uğur Güdükbay, Bülent Özgüç, Bilkent University, Turkey;</i>	
<i>Tanju Erdem, Çigdem Erdem, Mehmet Özkan, Momentum, Turkey</i>	
 <b>Poster Session 1</b>	
<b>PRECISE CONTROL OVER THE INDIVIDUAL DMD MICROMIRROR .....</b>	<b>297</b>
<b>FOR VOLUMETRIC THREE-DIMENSIONAL DISPLAY APPLICATIONS</b>	
<i>Hakki H. Refai, Mostafa H. Dahshan, James J. Sluss, Jr.,</i>	
<i>The University of Oklahoma-Tulsa, USA</i>	
<b>3D VIDEO QUALITY EVALUATION WITH DEPTH .....</b>	<b>301</b>
<b>QUALITY VARIATIONS</b>	
<i>Gustavo Leon, Hari Kalva, Borko Furht, Florida Atlantic University, USA</i>	
<b>3D ROBUST RECONSTRUCTION USING A HAND-HELD .....</b>	<b>305</b>
<b>DIGITAL CAMERA</b>	
<i>Zen Chen, Chang-Hao Wu, Wen-Chao Chen,</i>	
<i>National Chiao Tung University, Taiwan R.O.C.</i>	
<b>DISPARITY COMPENSATED VIEW FILTERING WAVELET BASED .....</b>	<b>309</b>
<b>MULTIVIEW IMAGE CODEC USING LAGRANGIAN OPTIMIZATION</b>	
<i>Akbar Sheikh Akbari, Nishan Canagarajah, David Redmill, David Bull,</i>	
<i>University of Bristol, UK</i>	
<b>MULTIPLE BACKGROUND SPRITE GENERATION USING CAMERA .....</b>	<b>313</b>
<b>MOTION CHARACTERIZATION FOR OBJECT-BASED VIDEO CODING</b>	
<i>Andreas Krutz, Alexander Glantz, Martin Haller, Michael Droese, Thomas Sikora,</i>	
<i>Technische Universität Berlin, Germany</i>	
<b>A HIERARCHICAL TWO-STAGE NEURAL-CLASSIFIER FOR .....</b>	<b>317</b>
<b>MODE DECISION OF H.264/AVC STEREO VIDEO ENCODING</b>	
<i>Jui-Chiu Chiang, Lien-Ming Liu, Wen-Nung Lie,</i>	
<i>National Chung Cheng University, Taiwan, R.O.C.</i>	

<b>A SIMULATOR FOR THE CAFADIS REAL TIME 3DTV CAMERA .....</b>	<b>321</b>
<i>Fernando Pérez Nava, Jonas Philipp Lüke, J. Gil Marichal-Hernández, Fernando Rosa, J. Manuel Rodríguez-Ramos, Universidad de La Laguna, Spain</i>	
<b>THE NOVEL NON-HOLE-FILLING APPROACH OF DEPTH .....</b>	<b>325</b>
<b>IMAGE BASED RENDERING</b>	
<i>Yu-Cheng Fan, Tsung-Chen Chi, National Taipei University of Technology, Taiwan R.O.C.</i>	
<b>MESH REPRESENTATION DRIVEN BY VARIANCE .....</b>	<b>329</b>
<b>NORMALIZED NEIGHBORHOOD IN SCALE SPACE</b>	
<i>Irene Cheng, Kostas Daniilidis, University of Pennsylvania, USA</i>	
<b>EXAMPLE-BASED DEPTH GENERATION FROM .....</b>	<b>333</b>
<b>SINGLE IMAGE FOR 3D CONTENT</b>	
<i>Kai-Che Liu, Industrial Technology Research Institute, Taiwan, R.O.C.; Qi Wu, Carnegie Mellon University, USA; Wen-Chao Chen, Cheng-Feng Wu, Fu-Chiang Jan, Industrial Technology Research Institute, Taiwan, R.O.C.; Tsuhan Chen, Carnegie Mellon University, USA</i>	
<b>DEPTH MAP MANIPULATION FOR 3D VISUALIZATION .....</b>	<b>337</b>
<i>Ianir Ideses, Leonid Yaroslavsky, Barak Fishbain, Tel-Aviv University Israel</i>	
<b>OUTLIER REMOVAL FOR SPARSE .....</b>	<b>341</b>
<b>3D RECONSTRUCTION FROM VIDEO</b>	
<i>Elif Vural, A.Aydin Alatan, Middle East Technical University, Turkey</i>	
<b>EVALUATION OF AN EYE TRACKING TECHNOLOGY FOR .....</b>	<b>345</b>
<b>3D DISPLAY APPLICATIONS</b>	
<i>Jinn-Cherng Yang, Chang-Shuo Wu, Industrial Technology Research Institute, Taiwan R.O.C.; Chuan-Heng Hsiao, National Taiwan University, Taiwan R.O.C.; Rung-Ywan Tsai, Industrial Technology Research Institute, Taiwan R.O.C.; Yi-Ping Hung, National Taiwan University, Taiwan R.O.C.</i>	
<b>AUGMENTED 3D ENDOSCOPY VIDEO .....</b>	<b>349</b>
<i>Alexander Nedzved, National Academy of Sciences of Belarus, Belarus; Victor Bucha, Samsung Research Center, Russia; Sergey Ablameyko, National Academy of Sciences of Belarus, Belarus</i>	

## Poster Session 2

<b>INTRODUCING STEREO EFFECTS INTO CEL ANIMATIONS .....</b>	<b>353</b>
<i>Sonja Schär, Hanspeter Bieri, Thomas Killer, University of Bern, Switzerland;</i>	
<i>Xiaoyi Jiang, University of Münster, Germany</i>	
<b>ANIMATION OF BOILING PHENOMENA .....</b>	<b>357</b>
<i>Abdullah Bülbül, Onur Küçüktunç, Bülent Özgür, Bilkent University, Turkey</i>	
<b>SIMULATION OF WATER DROPS ON A SURFACE .....</b>	<b>361</b>
<i>Eren Algan, Mustafa Kabak, Bülent Özgür, Tolga Çapin, Bilkent University, Turkey</i>	
<b>3D FACE RECOGNITION BY SPATIAL ARRANGEMENT OF ISO-GEODESIC SURFACES .....</b>	<b>365</b>
<i>Stefano Berretti, Alberto Del Bimbo, Pietro Pala, University of Firenze, Italy</i>	
<b>3D FOREST FIRE PROPAGATION SIMULATION .....</b>	<b>369</b>
<i>Kivanç Köse, Bilkent University, Turkey; Nikolaos Grammalidis, Informatics and Telematics Institute-CERTH, Greece; Erdal Yilmaz, Middle East Technical University (METU), Turkey; Enis Çetin, Bilkent University, Turkey</i>	
<b>3D GAZE ESTIMATION AND INTERACTION .....</b>	<b>373</b>
<i>Jeongseok Ki, Yong-Moo Kwon, Korea Institute of Science and Technology (KIST), Republic of Korea</i>	
<b>CHILDREN'S GAME EXPERIENCES IN DIFFERENT SETTINGS .....</b>	<b>377</b>
<i>Satu Jumisko-Pyykkö, Satu-Maria Hellsten, Mandy Weitzel, Tampere University of Technology, Finland; Ismo Rakkolainen, FogScreen Inc., Finland</i>	
<b>A NEW 3D WATERMARKING ALGORITHM .....</b>	<b>381</b>
<i>Dumitru Dan Burdescu, Liana Stanescu, Anca Ion, Razvan Tanasie, University of Craiova, Romania</i>	
<b>WATERMARK SELECTION FOR LIGHT FIELD RENDERING IN FTV .....</b>	<b>385</b>
<i>Evlambios E. Apostolidis, Georgios A. Triantafyllidis, Technological Educational Institute of Crete, Informatics and Telematics Institute-CERTH, Greece</i>	
<b>3D EYE POSITION BASED INTERACTION WITHIN HIERARCHICALLY REPRESENTED IMAGES .....</b>	<b>389</b>
<i>Sang Min Yoon, Holger Graf, Darmstadt University of Technology, Germany</i>	
<b>REGION-BASED 3D ARTWORK INDEXING AND CLASSIFICATION .....</b>	<b>393</b>
<i>Marcel Alcoverro, Sylvie Philipp-Foliguet, Michel Jordan, Université de Cergy-Pontoise, France; Laurent Najman, Jean Cousty, Université Paris-Est, France</i>	

<b>MULTI-VIEW IMAGE MATTING AND COMPOSITING USING .....</b>	<b>397</b>
<b>TRIMAP SHARING FOR NATURAL 3-D SCENE GENERATION</b>	
<i>Myung-Han Hyun, Sung-Yeol Kim, Yo-Sung Ho,</i>	
<i>Gwangju Institute of Science and Technology (GIST), Republic of Korea</i>	
<b>A FAST COMPUTATION ALGORITHM OF .....</b>	<b>401</b>
<b>BINOCULAR ENERGY MODEL</b>	
<i>Youngsoo Park, Korea University of Science and Technology (UST),</i>	
<i>Republic of Korea; Namho Hur, Electronics and Telecommunications</i>	
<i>Research Institute (ETRI), Republic of Korea</i>	
<b>TV SPORT BROADCASTS: REAL TIME VIRTUAL .....</b>	<b>405</b>
<b>REPRESENTATION IN 3D TERRAIN MODELS</b>	
<i>Maider Laka Iñurrategi, Igor García Olaizola, Alejandro Ugarte, Iván Macía,</i>	
<i>Visual Communication and Interaction Technologies (VICOMTech), Spain</i>	
<b>Author Index.....</b>	<b>409</b>