

TABLE OF CONTENTS

Monday, June 13, 2011

Session 1: Video Analysis

- 1-1 Classification of Pedestrian Behavior in a Shopping Mall based on LRF and Camera Observations 1
Kotaro Okamoto, Akira Utsumi, Tetsushi Ikeda, Hirotake Yamazoe, Takahiro Miyashita, Shinji Abe, Kazuhiro Takahashi and Norihiro Hagita, Japan
- 1-2 An Adaptive Particle Filter Method for Tracking Multiple Interacting Targets 6
Isabella Szotka and Matthias Butenuth, Germany
- 1-3 Method of Updating Shadow Model for Shadow Detection based on Nonparametric Bayesian Estimation 10
Shinji Fukui, Wataru Kurahashi, Yuji Iwahori, Robert J. Woodham, Japan

Session 2: Invited Talk 1

- 2-1 Behavior Imaging: Using Computer Vision to Study Autism 14
Prof. James M. Rehg, Georgia Institute of Technology, United States of America

Session 3: MVA Award candidates 1

- 3-1 Fast and Structure-preserving Inpainting Based on Probabilistic Structure Estimation 22
Takashi Shibata, Akihiko Iketani and Shuji Senda, Japan
- 3-2 Homogeneous Superpixels from Random Walks 26
Frank Perbet and Atsuto Maki, United Kingdom
- 3-3 A Blanket Binarization Method for Character String Extraction 31
Hiromi Yoshida and Naoki Tanaka, Japan
- 3-4 Gaussian Neighborhood Descriptors for Brain Segmentation 35
Henrik Skibbe, Marco Reisert and Hans Burkhardt, Germany

Session 4: Poster Session 1 (Motion, 3D, Recognition, Feature)

- 4-1 Trajectory Generation for 1000 fps Direct Visual Servoing 39
Roel Pieters, Pieter Jonker and Henk Nijmeijer, Netherlands
- 4-2 Motion Estimation for Hybrid Cameras Using Point and Line Feature Fusion 43
Sang Ly, Cédric Demonceaux, Pascal Vasseurand and Claude Pégard, France
- 4-3 A Quick Browsing System for Surveillance Videos 47
Cheng-Chieh Chiang, Ming-Nan Tsai and Huei-Fang Yang (Taiwan)
- 4-4 Evaluation of Synchronization Accuracy between High Speed Cameras in Infrared and Visible Spectrums 51
Senya Polikovskiy, Yoshinari Kameda and Yuichi Ohta, Japan

4-5	Bottlenecks and Tradeoffs in High Frame Rate Visual Servoing : A Case Study	55
	<i>Zhenyu Ye, Yifan He, Roel Pieters, Bart Mesman, Henk Corporaal and Pieter Jonker , Netherlands</i>	
4-6	Image Driven Generation of Pose Hypotheses for 3D Model-based Tracking	59
	<i>Martim Brandão, Alexandre Bernardino and José Santos-Victor, Portugal</i>	
4-7	Sequential Particle Filter for Multiple Object Tracking	63
	<i>Nam Trung Pham, Karianto Leman and Teck Wee Chua, Singapore</i>	
4-8	Multi-class Co-training Learning for Object and Scene Recognition	67
	<i>Xian-Hua Han, Yen-Wei Chen and Xiang Ruan, Japan</i>	
4-9	Similar Partial Copy Recognition for Line Drawings Using Concentric Multi-Region Histograms of Oriented Gradients	71
	<i>Weihan Sun and Koichi Kise, Japan</i>	
4-10	Segmentation of Images with Insufficient Dynamical Range	75
	<i>Zujun Hou, How-Lung Eng, Yue Wang and Ruijiang Luo, Singapore</i>	
4-11	Inhibition of Return in the Bayesian Strategy to Active Visual Search	79
	<i>Kai Welke, Tamim Asfour and Rüdiger Dillmann, Germany</i>	
4-12	Query-by-Sketch Image Retrieval Using Edge Relation Histogram	83
	<i>Yoshiki Kumagai, Toru Arikawa and Gosuke Ohashi, Japan</i>	
4-13	Object Category Recognition by Bag-of-Features Using Co-Occurrence Representation by Foreground and Background Information	87
	<i>Tomoyuki Nagahashi and Hironobu Fujiyoshi, Japan</i>	
4-14	Common Visual Pattern Detection by Mixture Particle Filtering	91
	<i>Kota Aoki and Hiroshi Nagahashi, Japan</i>	
4-15	Estimation of Minimum Quantization Levels by Using Reconstructed Histogram	95
	<i>Munetoshi Numada and Hiroyasu Koshimizu, Japan</i>	
4-16	Fast Combined Separability Filter for Detecting Circular Objects	99
	<i>Yasuhiro Ohkawa, Chendra Hadi Suryanto and Kazuhiro Fukui, Japan</i>	
4-17	Direct Shape Carving: Smooth 3D Points and Normals for Surface Reconstruction	104
	<i>Kazuki Matsuda and Norimichi Ukita, Japan</i>	
4-18	3D Object Reconstruction from Image Sequences with a One Line Search Method	108
	<i>J. Zhang, G. Chesi and Y. S. Hung (China)</i>	
4-19	Optimal Computation of 3-D Rotation under Inhomogeneous Anisotropic Noise	112
	<i>Hirotsuka Niitsuma and Kenichi Kanatani, Japan</i>	
4-20	A Free-viewpoint TV System	116
	<i>Yuichi Yaguchi, Takashi Matsuzaki, Toshimitsu Suzuki, Yukihiro Yoshida, Yuichi Okuyama, Kazuaki Takahashi and Ryuichi Oka, Japan</i>	
4-21	Alignment of 3D Shape Data by Hashing Sets of Feature Points	120
	<i>Yuka Kohno, Osamu Yamaguchi, Toshio Sato and Bunpei Irie, Japan</i>	
4-22	Slant-invariant Stagger Grid Pattern Projection with Error-tolerant Decoding Technique for One-shot Shape Measurement	124
	<i>Tetsuri Sonoda, Shinichiro Uno, Kenji Saitoh and Shinji Uchiyama, Japan</i>	

4-23	Facades Modeling from a Ground-View Video with Map Constraints	128
	<i>LIU Ruijun, Myriam Servières and Guillaume Moreau (France)</i>	
4-24	Object Reconstruction and Recognition leveraging an RGB-D Camera	132
	<i>Nicolas Burrus, Mohamed Abderrahim, Jorge Garcia and Luis Moreno, Spain</i>	
4-25	A Level Set Method for Joint 3-D Motion Estimation and Segmentation in Range Image Sequences	136
	<i>Abderrahman Hmimia and Amar Mitiche, Canada</i>	
4-26	Accurate 3-D Measurement System Using the Pico Projector-based Phase Shifting Techniques	140
	<i>Ja Myoung Koo and Tai-Hoon Cho, Korea, South</i>	
4-27	Auto-Determination of Camera Geometric Parameters for Scenario Simulations in Visual Surveillance Applications	144
	<i>Richard Chang, Nam Trung Pham, Karianto Leman and Wang Yue, Singapore</i>	
4-28	Dense 3D Measurement of the Near Surroundings by Fisheye Stereo	148
	<i>Nobuyuki Kita, Japan</i>	
4-29	Controlled Illumination for the Object Recognition with Projector Camera Feedback	152
	<i>Toshiyuki Amano, Kazuki Osamura, Makoto Fujisawa, Jun Miyazaki and Hirokazu Kato, Japan</i>	
4-30	Superpixel Based Inpainting for Interactive 3D Indoor Modeler	156
	<i>Kalaivani Thangamani, Takeshi Kurata and Tomoya Ishikawa, Japan</i>	
4-31	Range Camera for Simple behind Display Interaction	160
	<i>Anton Treskunov, Seung Wook Kim and Stefan Marti, United States of America</i>	
4-32	Dense Stereo Disparity Maps - Real-time Video Implementation by the Sparse Feature Sampling	164
	<i>Kunio Takaya, Canada</i>	

Session 5: MVA Award candidates 2

5-1	Fast Focus Mechanism Using a Pair of Convergent and Divergent Lenses Differentially for Three-dimensional Imaging	168
	<i>Akira Ishii, Japan</i>	
5-2	Spectral-Differential Feature Matching and Clustering for Multi-body Motion Estimation	173
	<i>Anton N. Averkin, Igor P. Gurov, Maxim V. Peterson and Alexey S. Potapov, Russia</i>	
5-3	Stabilizing Omnidirectional Videos Using 3D Structure and Spherical Image Warping	177
	<i>Mostafa Kamali, Atsuhiko Banno, Jean-Charles Bazin, In So Kweon and Katsushi Ikeuchi, Japan</i>	
5-4	Color Prior for Feature-based 3D Head Tracking	181
	<i>Jixia Zhang, Franck Davoine, Haibo Wang and Chunhong Pan, China</i>	
5-5	A Head-Wearable Short-Baseline Stereo System for the Simultaneous Estimation of Structure and Motion	185
	<i>Hernán Badino and Takeo Kanade, United States of America</i>	

Tuesday, June 14, 2011

Session 6: Feature based Techniques

- 6-1 MCM: An Efficient Geometric Constraint Method for Robust Local Feature Matching 190
Kai Chen, Yi Zhou, Qi Zheng, Xiaokang Yang and Li Song, China
- 6-2 Keypoint Recognition Using Two-Stage Randomized Trees 194
Shoichi Shimizu and Hironobu Fujiyoshi, Japan
- 6-3 Image Colorization Using Discriminative Textural Features 198
Michal Kawulok, Jolanta Kawulok and Bogdan Smolka, Poland
- 6-4 Multi-Class Labeling Improved by Random Forest for Automatic Image Annotation 202
Motofumi Fukui, Noriji Kato and Wenyuan Qi, Japan

Session 7: Invited Talk 2

- 7-1 Model Guided Multimodal Imaging and Visualization for Computer Assisted Interventions .. 206
Prof. Nassir Navab, Technical University of Munich, Germany

Session 8: Inspection

- 8-1 Semisynthetic Ground Truth for Dirt Particle Counting and Classification Methods 215
Nataliya Strokina, Aki Mankki, Tuomas Eerola, Lasse Lensu, Jari Käyhkö and Heikki Kälviäinen, Finland
- 8-2 One-Class Classification for Anomaly Detection in Wire Ropes with Gaussian Processes in a Few Lines of Code 219
Erik Rodner, Esther-Sabrina Wacker, Michael Kemmler and Joachim Denzler, Germany
- 8-3 On-line Detection of Imperfections in Laser-brazed Joints 223
Daniel Fecker, Volker Maergner and Tim Fingscheidt, Germany
- 8-4 3D Free-Form Object Material Identification by Surface Reflection Analysis with a Time-of-Flight Range Sensor 227
Md. Abdul Mannan, Hisato Fukuda, Lu Cao, Yoshinori Kobayashi and Yoshinori Kuno, Japan

Session 9: Poster Session 2 (Application, Character, Image Processing, ITS)

- 9-1 New Ridge Flux Analysis for Fingerprint Minutiae Detection 231
Tomohiko Ohtsuka, Japan
- 9-2 A Statistical Shape Model and SVMs Based Scheme for Visual Inspection of Microdrill Bits in PCB Production 235
Guifang Duan and Yen-wei Chen, Japan
- 9-3 A Multi-Neural Network Approach to Image Detection and Segmentation of Gas Meter Counter 239
Angelo Nodari, Ignazio Gallo, Italy
- 9-4 Automatic Road Extraction from Printed Maps 243
Sebastien Callier and Hideo Saito, Japan

9-5	Development of Inspection System for Wooden Chopsticks	247
	<i>Takeshi Saitoh, Japan</i>	
9-6	Camera Based Lumber Strength Classification System	251
	<i>Riku Hietaniemi, Jari Hannuksela and Olli Silvén, Finland</i>	
9-7	Quantifying Rotations of Spheric Objects	255
	<i>Alexander Szep, Austria</i>	
9-8	Color Recognition by Extended Color Space Method for 64-color 2-D Barcode	259
	<i>Takuma Shimizu, Mariko Isami, Kenji Terada, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kimura, Japan</i>	
9-9	Extraction Method of Scallop Areas Using Shelly Rim Features Considering Bottom Sediment of Sand	263
	<i>Koichiro Enomoto, Masashi Toda and Yasuhiro Kuwahara, Japan</i>	
9-10	Scene Analysis Based on Horse Vision System	267
	<i>Hanchao Jia and Shigang Li, Japan</i>	
9-11	Cooking Support System Utilizing Built-in Cameras and Projectors	271
	<i>Shunsuke Morioka and Hirotada Ueda, Japan</i>	
9-12	Daily Clothes Observation from Visible Surfaces Based on Wrinkle and Cloth-Overlap Detection	275
	<i>Kimitoshi Yamazaki, Kotaro Nagahama and Masayuki Inaba, Japan</i>	
9-13	Automated Vision-based System for Inspecting Glue Route Quality in Harddisk Drive Top Cover Assembly	279
	<i>Wirat Rajchawong and Pakorn Kaewtrakulpong, Thailand</i>	
9-14	A Technique for Clustering Individual Defects from Images of Steel Strips with Periodical Defects	283
	<i>Francisco Gonzalez Bulnes, Daniel Fernando Garcia, Ruben Usamentiaga and Julio Molleda, Spain</i>	
9-15	Fast Color Matching Using Weighted Subspace on Medicine Package Recognition	287
	<i>Kenjiro Sugimoto and Sei-ichiro Kamata, Japan</i>	
9-16	A Method for Fast Composing of Images Captured from Deformed Documents by a Quadocular Scanner Setup	291
	<i>Marco Körner, Herbert S^üße, Wolfgang Ortmann and Joachim Denzler, Germany</i>	
9-17	Off-Line Signature Verification Using Two Step Transitional Features	295
	<i>Elias Zois, Athanasios Nassiopoulos, Konstantinos Tselios, Elias Stores and George Economou, Greece</i>	
9-18	Binary Tree-based Accuracy-keeping Clustering Using CDA for Very Fast Japanese Character Recognition	299
	<i>Yohei Sobu and Hideaki Goto, Japan</i>	
9-19	Optical Character Verification of Print on Pharmaceutical Capsules	303
	<i>Miha Možina, Dejan Tomaževič, Franjo Pernuš and Boštjan Likar, Slovenia</i>	
9-20	Extraction of Character String Regions from Scenery Images Based on Contours and Thickness of Characters	307
	<i>Tomohiro Nishino, Kimitoshi Yamazaki, Kei Okada and Masayuki Inaba, Japan</i>	

9-21	A New Method for Ranking of Word Hypotheses Generated from OCR: The Application on the Arabic Word Recognition	311
	<i>Houda Gaddour, Hanene Guesmi, Fouad Slimane, Slim Kanoun and Jean Hennebert, Tunisia</i>	
9-22	A Lossless Data-hiding Technique Based on Wavelet Transform	316
	<i>Hui-Yu Huang and Shih-Hsu Chang, Taiwan</i>	
9-23	Fast Polar Cosine Transform for Image Description	320
	<i>Zhuo Yang and Sei-ichiro Kamata, Japan</i>	
9-24	Histogram Enhancement Using Adaptive Segmentation Algorithm	324
	<i>Chung-Cheng Chiu, Sheng-Yi Chiu, Han-Ni Yang and Ching-Tung Lo, Taiwan</i>	
9-25	A Grayscale Image Authentication Method with a Pixel-level Self-recovering Capability against Image Tampering	328
	<i>Che Wei Lee and Wen Hsiang Tsai, Taiwan</i>	
9-26	Study on Stimulation Effects for Driver Based on Fragrance Presentation	332
	<i>Mariko Yoshida, Chie Kato, Yuki Kakamu, Mikiko Kawasumi, Hatsuo Yamasaki, Shin Yamamoto, Tomoaki Nakano and Muneo Yamada, Japan</i>	
9-27	Real-Time Video Stabilization for Unmanned Aerial Vehicles	336
	<i>Yue Wang, ZuJun Hou, Karianto Leman and Richard Chang, Singapore</i>	
9-28	UAV Motion Estimation Using Hybrid Stereoscopic Vision	340
	<i>Damien Eynard, Cedric Demonceaux, Pascal Vasseur and Vincent Fremont, France</i>	
9-29	Robust vSLAM for Dynamic Scenes	344
	<i>Jun Shimamura, Masashi Morimoto and Hideki Koike, Japan</i>	
9-30	Vision-based Automatic Flight Control for Small UAVs	348
	<i>Chung-Cheng Chiu, Ching-Tung Lo, Chung-Hsieh Tsai and Sheng-Yi Chiu, Taiwan</i>	
9-31	Quadrotor Helicopter Flight Control Using Hough Transform and Depth Map from a Microsoft Kinect Sensor	352
	<i>John Ross Stowers, Michael Hayes and Andrew Bainbridge-Smith, New Zealand</i>	
9-32	On-road Obstacle Detection by Comparing Present and Past In-vehicle Camera Images	357
	<i>Haruya Kyutoku, Daisuke Deguchi, Tomokazu Takahashi, Yoshito Mekada, Ichiro Ide and Hiroshi Murase, Japan</i>	
9-33	An Efficient Algorithm for UAV Indoor Pose Estimation Using Vanishing Geometry	361
	<i>Yuxiang Wang, Singapore</i>	

Session 10: 3D Reconstruction and Retrieval

10-1	Reconstructing 3D Land Surface from a Sequence of Aerial Images	365
	<i>Shinya Mizoe, Yuichi Yaguchi, Kazuaki Takahashi, Kazuhiro Ota and Ryuichi Oka, Japan</i>	
10-2	Augmenting Depth Camera Output Using Photometric Stereo	369
	<i>Robert Anderson, Björn Stenger and Roberto Cipolla, United Kingdom</i>	
10-3	A Globally Convergent Algorithm for Range Image Registration Based on Consistency Evaluation of Rigid Transformation of Correspondences	373
	<i>Shingo Yamada and Ikuko Shimizu, Japan</i>	
10-4	Skeleton Features Distribution for 3D Object Retrieval	377
	<i>Tomoki Hayashi, Benjamin Raynal, Vincent Nozick and Hideo Saito, Japan</i>	

Wednesday, June 15, 2011

Session 11: Basic Techniques

- 11-1 Finite Element Laplacian Feature Detector 381
Dermot Kerr, Sonya Coleman and Bryan Scotney, United Kingdom
- 11-2 A Parallelization Method for Multiview Stereo 385
Masaru Fukushi, Naoki Sekiguchi and Toru Abe, Japan
- 11-3 An Adaption of the Lucy-Richardson Deconvolution Algorithm to Noncentral Chi-Square Distributed Data 389
Fabian Diewald, Jens Klappstein, Juergen Dickmann and Klaus Dietmayer, Germany
- 11-4 KNN Kernel Shift Clustering with Highly Effective Memory Usage 393
Makoto Hirohata, Tomoyuki Shibata, Kazunori Imoto and Toshimitsu Kaneko, Japan

Session 12: Invited Talk 3

- 12-1 Stereo Vision System on Automobile for Collision Avoidance 397
Prof. Keiji Saneyoshi, Tokyo Institute of Technology, Japan

Session 13: Face Analysis

- 13-1 Eye and Nose Fields Detection from Gray Scale Facial Images 406
M. Hassaballah, Kenji Murakami and Shun Ido, Japan
- 13-2 Facial Feature Detection Using Generalized LVQ and Facial Shape Model 410
Yusuke Morishita and Hitoshi Imaoka, Japan
- 13-3 Identifying Important People in Broadcast News Videos 414
Hua Gao, Hazim Kemal Ekenel and Rainer Stiefelhagen, Germany

Session 14: Poster Session 3 (Face, Human, Gesture, Pedestrian, Medical)

- 14-1 Robust Facial Feature Localization Using Improved Active Shape Model and Gabor Filter 418
Hui-Yu Huang and Shih-Hang Hsu, Taiwan
- 14-2 Kernel-based Speaker Verification Using Spatiotemporal Lip Information 422
Chi Ho Chan, Budhaditya Goswami, Josef Kittler and William Christmas, United Kingdom
- 14-3 A Face Identification Method of Non-native Animals for Intelligent Trap. 426
Mayumi Kouda, Masakazu Morimoto and Kensaku Fujii, Japan
- 14-4 Edge-based Facial Feature Extraction Using Gabor Wavelet and Convolution Filters 430
Rosdiyana Samad and Hideyuki Sawada, Japan
- 14-5 Online Rapid Prototyping of 3D Objects Using GPU-Based 3D Cloud Computing: Application to 3D Face Modelling 434
Minh Nguyen, Patrice Delmas, Georgy Gimel'farb, Y.H. Chan, Alfonso Gastelum Strozzi and Alexander Woodward, New Zealand
- 14-6 Face Super Resolution in Reduced Spaces by Using Shape and Texture 438
Aydin Akyol and Muhittin Gökmen, Turkey

14-7	Research on Far-Field Face Detection for Recognition	442
	<i>Zhifei Wang and Zhenjiang Miao, China</i>	
14-8	Facial Analysis Aided Human Gesture Recognition for Human Computer Interaction	446
	<i>Dan Luo, Hua Gao, Hazim Kemal Ekenel and Jun Ohya, Japan</i>	
14-9	Detection of Swimmer Based on Joint Utilization of Motion and Intensity Information	450
	<i>Kwok-Leung Chan, China</i>	
14-10	Motion Analysis for Broadcast Tennis Video Considering Mutual Interaction of Players	454
	<i>Naoto Maruyama and Kazuhiro Fukui, Japan</i>	
14-11	Estimation of Human Body Orientation Using Histogram of Oriented Gradients	459
	<i>Kittipanya-ngam Panachit, Ong Soh Guat and Eng How-Lung, Singapore</i>	
14-12	Learning Multi-Feature Human Motion Patterns by Automated Near-Optimal Constrained Gravitational Clustering	463
	<i>Zhuo Chen and Nelson H.C. Yung, China</i>	
14-13	Bottom-up Attention Improves Action Recognition Using Histograms of Oriented Gradients	467
	<i>Go Tanaka, Yukie Nagai and Minoru Asada, Japan</i>	
14-14	Particle Filter-based Fingertip Tracking with Circular Hough Transform Features	471
	<i>Martin Do, Tamim Asfour and Rüdiger Dillmann, Germany</i>	
14-15	Human Body Tracking and Joint Angle Estimation from Mobile-phone Video for Clinical Analysis	475
	<i>Jehoon Lee, Peter Karasev, Liangjia Zhu and Allen Tannenbaum, United States of America</i>	
14-16	Hand Gesture Recognition Using Histogram of Oriented Gradients and Partial Least Squares Regression	479
	<i>Arindam Misra, Takashi Abe, Takayuki Okatani and Koi-chiro Deguchi, Japan</i>	
14-17	Memory Based Human Region Detection	483
	<i>Ayaka Yamamoto, Yoshio Iwai and Hiroshi Ishiguro, Japan</i>	
14-18	Headdress Detection Based on Saliency Map for Thangka Portrait Image	487
	<i>Lu Yin and Weilan Wang, China</i>	
14-19	Estimation of Thermal Comfort by Measuring Clo Value without Contact	491
	<i>Hiroki Matsumoto, Yoshio Iwai and Hiroshi Ishiguro, Japan</i>	
14-20	Analyzing Engineering Tasks Using a Hybrid Machine Vision and Knowledge Based System Application	495
	<i>Ioannis Kaloskampis, Yulia Hicks and David Marshall, United Kingdom</i>	
14-21	A Multi-staged System for Efficient Visual Person Reidentification	499
	<i>Kai Juengling and Michael Arens, Germany</i>	
14-22	Human Skin Detection by Visible and Near-Infrared Imaging	503
	<i>Yusuke Kanzawa, Yoshikatsu Kimura and Takashi Naito, Japan</i>	
14-23	Measurement of Human Stature from Surveillance Camera Based on Projective Geometry ..	508
	<i>Takuya Inoue, Hideo Saito and Makoto Kimura, Japan</i>	
14-24	A Practical Video Digest Generation System Designed for Nursery Schools	512
	<i>Yu Wang, Tomoya Ishikawa, Jien Kato, Kenichiro Ishii and Shigeki Yokoi, Japan</i>	

14-25	Pedestrian Head Detection and Tracking Using Skeleton Graph for People Counting in Crowded Environments	516
	<i>Kheir-Eddine Aziz, Djamel Merad, Bernard Fertil and Nicolas Thome, France</i>	
14-26	Stereo-based Pedestrian Detection Using Two-stage Classifiers	520
	<i>Manabu Nishiyama, Akihito Seki and Tomoki Watanabe, Japan</i>	
14-27	Integrate Sparse Depth Information into Pedestrians Detection	524
	<i>Yu Wang, Jien Kato and Kenichiro Ishii, Japan</i>	
14-28	Towards an Automatic Blind Spot Camera: Robust Real-time Pedestrian Tracking from a Moving Camera	528
	<i>Kristof Van Beeck, Toon Goedemé and Tinne Tuytelaars, Belgium</i>	
14-29	Robust Human Tracking Using Occlusion-free Images from Multiple Video Cameras	532
	<i>Kentaro Tsuji, Mingxie Zheng, Eigo Segawa, Morito Shiohara and Takashi Morihara, Japan</i>	
14-30	Symmetrical Judgment and Improvement of Co-HOG Feature Descriptor for Pedestrian Detection	536
	<i>Hirokatsu Kataoka and Yoshimitsu Aoki, Japan</i>	
14-31	Dual-direction Measuring System of Near Infrared Optical Tomography Combined with X-ray Mammography	540
	<i>Hung-Chih Chiang, Jhao-Ming Yu, Liang-Yu Chen, Min-Chun Pan, Min-Cheng Pan and Ching-Tang Wu, Taiwan</i>	
14-32	Low-Bitrate Medical Image Compression	544
	<i>Antonius Darma Setiawan, Andriyan Bayu Suksmono, Tati LR Mengko and Hendra Gunawan, Indonesia</i>	
14-33	Vessel Segmentation in Retinal Images Using Graph-Theoretical Vessel Tracking	548
	<i>Suthit Rattathanapad, Bunyarit Uyyanonvara, Pradit Mittrapiyanuruk and Pakorn Kaewtrakulpong, Thailand</i>	
14-34	Dynamic Programming and Fuzzy Classification for the Automatic Segmentation of the Carotid in Ultrasound Images	552
	<i>Rui Rocha, Jorge Silva and Aurélio Campilho, Portugal</i>	

Session 15: Real-World Applications

15-1	Robust Image Acquisition for Vision-Model Coupling by Humanoid Robots	557
	<i>David Israel Gonzalez-Aguirre, Tamim Asfour and Rüdiger Dillmann, Germany</i>	
15-2	An ID and Position Recognition Method Employing Camera Motion Blur for Modulated LED Tube Lights	562
	<i>Chang Li, Daisuke Iwai and Kosuke Sato, Japan</i>	
15-3	Towards Bendable Augmented Maps	566
	<i>Sandy Martedi and Hideo Saito, Japan</i>	