

Final Program

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MVA2007

IAPR CONFERENCE ON MACHINE VISION APPLICATIONS

May 16-18, 2007

**Institute of Industrial Science (IIS)
The University of Tokyo, JAPAN**

Topics

Machine Vision and its Applications

Algorithms / Architectures / Applications

Factory Automation / Intelligent Transport Systems / Robots

Security Systems / Medical Systems / Geographic Information Systems

Multimedia / Action Analysis and Recognition

Human Computer Interaction / Vision and Graphics / Others

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Johji TAJIMA (Nagoya City University)

Program Chair

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Sponsored by

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IAPR TC-8

Institute of Industrial Science, The University of Tokyo

In cooperation with

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The Institute of Systems, Control and Information Engineers

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Final Program

Wednesday, May 16, 2007

Registration (8:30 — 9:00)

Opening Session (9:00 — 9:20)

Session 1: Gesture & Behavior Analysis (9:20 — 10:20)

Chairs: Greg Mori and Norimichi Ukita

- 1-1 Action Recognition of Insects Using Spectral Clustering**
Maryam Moslemi Naeini, Greg Dutton, Kristina Rothley and Greg Mori, Canada
- 1-2 Multi Human Trajectory Estimation Using Stochastic Sampling and Its Application to Meeting Recognition**
Yosuke Matsusaka, Hideki Asoh and Futoshi Asano, Japan
- 1-3 A Real-Time Hand Gesture Interface Implemented on a Multi-Core Processor**
Tsukasa Ike, Nobuhisa Kishikawa and Bjorn Stenger, Japan

Break (10:20 — 10:40)

Session 2: 3D Analysis (10:40 — 12:00)

Chairs: Jaihie Kim and Hideo Saito

- 2-1 Improving Accuracy of 3-D Reconstruction by Classifying Correspondences**
Yusuke Takanashi, Yohei Shibata and Yasushi Kanazawa, Japan
- 2-2 Development of Ladder-type Laser Scanning System for 3-D Modeling of Vertical and Narrow Areas by Space-time Analysis**
Shintaro Ono and Katsushi Ikeuchi, Japan
- 2-3 Robust Semi-Dense Matching across Uncalibrated and Widely Separated Views**
Benjamin Albouy, Sylvie Treuillet and Yves Lucas, France
- 2-4 An Efficient 3D Geometrical Consistency Criterion for Detection of a Set of Facial Feature Points**
Mayumi Yuasa, Tatsuo Kozakaya and Osamu Yamaguchi, Japan

Lunch (12:00 — 13:00)

Session 3: Poster Session 1 (13:00 — 14:30)

- 3-1 A Novel Approach to Eigenpalm Features Using Feature-Partitioning Framework**
Kadappagari Vijaya Kumar and Atul Negi, India
- 3-2 3-Phase Vehicle Tracking Using Image Alignment and Haar Transform**
Lap-Chi Cheung and Yiu-Sang Moon, Hong Kong
- 3-3 Automatic Tracking, Super-Resolution and Recognition of Human Faces from Surveillance Video**
Frank Lin, Simon Denman, Vinod Chandran and Sridha Sridharan, Australia
- 3-4 A Case Study of Higher Order Tikhonov Regularization Terms Influence on the Convergence of Active Contours**
Moqing Zhang and Patrice Delmas, New Zealand

- 3-5 Paper Surface Topography Using Three-light Photometric Stereo**
Toni Kuparinen, Ville Kyrki, Jarno Mielikainen and Pekka Toivanen, Finland
- 3-6 Colour Feature Selection for Face Authentication**
Mohammad T. Sadeghi, Samaneh Khoshrou and Josef Kittler, Iran
- 3-7 Detecting the Degree of Anomal in Security Video**
Kyoko Sudo, Tatsuya Osawa, Xiaojun Wu, Kaoru Wakabayashi and Takayuki Yasuno, Japan
- 3-8 Automatic Cobb Angle Measurement System by Using Nuclear Medicine Whole Body Bone Scan**
Jia-Yann Huang, Pan-Fu Kao and Yung-Sheng Chen, Taiwan
- 3-9 A Proposal of Generalized Horizon View Camera**
Liwen Gong, Kazuhiko Yamamoto and Kunihito Kato, Japan
- 3-10 An Efficient Method for Human Behavior Identification**
Fang-Hsuan Cheng and Fu-Tai Chen, Taiwan
- 3-11 Image Segmentation Using Region Merging Combined with a Multi-class Spectral Method**
Fernando C. Monteiro and Aurelio Campilho, Portugal
- 3-12 Semi-supervised Incremental Learning of Manipulative Tasks**
Zhe Li, Sven Wachsmuth, Jannik Fritsch and Gerhard Sagerer, Germany
- 3-13 Location-Based Tracking of Moving Obstacles from a Mobile Robot**
Thatsaphan Suwannathat, Jun-ichi Imai and Masahide Kaneko, Japan
- 3-14 A Rear Vehicle Location Algorithm for Lane Change Assist**
Wei Liu, Chunyan Song, Pengyu Fu, Nan Wang and Huai Yuan, China
- 3-15 Self-Calibration for Metric 3D Reconstruction Using Homography**
Cheng-Yuan Tang, Yi-Leh Wu, Pei-Ching Hu, Hsien-Chang Lin and Wen-Chao Chen, Taiwan
- 3-16 Image Contrast Enhancement by Analysis on Embedded Surfaces of Images**
Li Tian and Sei-ichiro Kamata, Japan
- 3-17 Shift-Variant Restoration of Defocused Images Using Shift-Invariant Wavelet Transform**
Hisanaga Fujiwara, Zhong Zhang, Tetsuo Miyake and Akio Miwa, Japan
- 3-18 Online Urdu Character Recognition System**
S. Afaq Husain, Asma Sajjad and Fareeha Anwar, Pakistan
- 3-19 A Physics-Based Imaging Model of Scanning Electron Microscopes**
Kousuke Kamada, Takayuki Okatani and Koichiro Deguchi, Japan
- 3-20 Investigation of Color Spaces for Face Recognition**
Seunghwan Yoo, Rae-Hong Park and Dong-Gyu Sim, Korea
- 3-21 Relative Magnitude of Gaussian Curvature Using Neural Network and Object Rotation of Two Degrees of Freedom**
Yi Ding, Yuji Iwahori, Tsuyoshi Nakamura, Lifeng He, Robert J. Woodham and Hidenori Itoh, Japan

Thursday, May 17, 2007

- 3-22 **A Comparison of New Generic Camera Calibration with the Standard Parametric Approach**
Aubrey K. Dunne, John Mallon and Paul F. Whelan, Ireland
- 3-23 **Pre-processing Algorithms on Digital Mammograms**
Hengameh Mirzaalian, Mohammad Reza Ahmadzadeh, Saeed Sadri and Mehdi Jafari, Iran
- 3-24 **License Plate Recognition from Low-Quality Videos**
Chih-Chiang Chen and Jun-Wei Hsieh, Taiwan
- 3-25 **Adaptive Modified PCA for Face Recognition**
Youness Aliyari Ghassabeh, Hamid Abrishami Moghaddam and Mohammad Teshnehlab, Iran
- 3-26 **Fingerprint Core and Delta Detection by Candidate Analysis**
Tomohiko Ohtsuka, Daisuke Watanabe and Hiroyuki Aoki, Japan
- 3-27 **Japanese Phone Recognition Using Lip Image Information**
Takeshi Saitoh, Mitsugu Hisagi and Ryosuke Konishi, Japan
- 3-28 **A SVM Based Method to Detect Color Shift Defects in IC Packages**
R.M.C.B. Ratmayake, Craig Hicks and M.A. Akbari, Japan
- 3-29 **Object Type Classification Using Structure-based Feature Representation**
Tomoyuki Nagahashi, Hironobu Fujiyoshi and Takeo Kanade, Japan
- 3-30 **A Review of Tracking Methods under Occlusions**
Zui Zhang and Massimo Piccardi, Australia
- 3-31 **Fast Graph Segmentation Based on Statistical Aggregation Phenomena**
Frank Nielsen and Richard Nock, Japan
- 3-32 **Tracking Features with Global Motion Compensation for Drone Camera Servoing**
Benoît Louvat, Laurent Bonnaud, Nicolas Marchand and Gerard Bouvier, France

Session 4: Invited Talk 1 (14:30 — 15:30)

Chair: Katsushi Ikeuchi

- 4-1 **Computational Cameras**
Prof. Shree K. Nayar, Columbia University, USA

Break (15:30 — 15:50)

Session 5: Motion and Image Sequence Analysis (15:50 — 17:50)

Chairs: Bjorn Stenger and Atsuto Maki

- 5-1 **A Method for Estimating Rigid Object Motion Using Regularized Scene Flow**
Hiroki Mizuno and Hironobu Fujiyoshi, Japan
- 5-2 **Probabilistic Motion Segmentation of Videos for Temporal Super Resolution**
Arasanathan Thayananthan, Masahiro Iwasaki and Roberto Cipolla, UK
- 5-3 **Robust and Efficient 3-D Reconstruction by Self-Calibration**
Hanno Ackermann and Kenichi Kanatani, Japan
- 5-4 **Linear Tracking of Pose and Facial Features**
Jose Alonso Ybanez Zepeda, Franck Davoine and Maurice Charbit, France
- 5-5 **A Video Motion Capture System for Interactive Games**
Ryuzo Okada, Nobuhiro Kondoh and Bjorn Stenger, UK
- 5-6 **Using Space-Time Interest Points for Video Sequence Synchronization**
Daniel Wedge, Du Huynh and Peter Kovesi, Australia

Session 6: Image Processing & Graphics (9:00 — 10:20)

Chairs: Chu-Song Chen and Hiroaki Nakai

- 6-1 **Real-time Soft Shadows in Mixed Reality Using Shadowing Planes**
Tetsuya Kakuta, Takeshi Oishi and Katsushi Ikeuchi, Japan
- 6-2 **A High-Speed and Compact Vision System Suitable for Wearable Man-machine Interfaces**
Takashi Komuro, Björn Werkmann, Takashi Komai, Masatoshi Ishikawa and Shingo Kagami, Japan
- 6-3 **Synthesis Arbitrary Views from Two Images Based on Improved View Morphing Technique**
Huagang Liang, Shogo Tokai and Hiroyuki Hase, Japan
- 6-4 **Noisy Image Segmentation Based on a Level Set Evolution**
Khaled Issa and Hiroshi Nagahashi, Japan

Break (10:20 — 10:40)

Session 7: Multimedia (10:40 — 12:00)

Chairs: Massimo De Gregorio and Shuji Senda

- 7-1 **Patch Based Localization of Visual Object Class Instances**
Alexandra Teynor and Hans Burkhardt, Germany
- 7-2 **Correction of Geometric and Photometric Distortion of Document Images Using a Stereo Camera System**
Yusuke Suzuki, Atsushi Yamashita and Toru Kaneko, Japan
- 7-3 **A Local Keypoint Matching Technique for Transition Detection**
Chun-Rong Huang, Huai-Ping Lee and Chu-Song Chen, Taiwan
- 7-4 **New Image Encryption Method Based on ICA**
Ayman Alfalou and Ali Mansour, France

Lunch (12:00 — 13:00)

Session 8: Poster Session 2 (13:00 — 14:30)

- 8-1 **View-invariant Human Action Recognition Based on Factorization and HMMs**
Xi Li and Kazuhiro Fukui, Japan
- 8-2 **Gesture Recognition Using Temporal Templates with Disparity Information**
Kazunori Onoguchi and Masaaki Sato, Japan
- 8-3 **Vision-based UAV Navigation in Mountain Area**
Jihwan Woo, Kilho Son, Teng Li, Gwansung Kim and In So Kweon, Korea
- 8-4 **Identifying Hand Gesture Images by Using Genetic Algorithms**
Tetsuji Kobayashi and Norifumi Machida, Japan
- 8-5 **Enhanced Blood Vessels in Laparoscopy by Using Narrow-Band Imaging**
Hamed Akbari, Yukio Kosugi, Kazuyuki Kojima, Toshiaki Ohya, Hideki Akamatsu and Naofumi Tanaka, Japan
- 8-6 **An Iris Image Quality Assessment Method Based on Laplacian of Gaussian Operation**
Jing Wan, Xiaofu He and Pengfei Shi, China
- 8-7 **Calculation of Bedding Angles Inclination from Drill Core Digital Images**
Thomas Quiniou, Nazha Selmaoui, Christine Laporte-Magoni and Michel Allenbach, New Caledonia
- 8-8 **An Effective Watermark Embedding Algorithm for High JPEG Compression**
Hui-Yu Huang, Chi-Hung Fan and Wen-Hsing Hsu, Taiwan

- 8-9 Proposals of Co-occurrence Frequency Image Based Filters**
Takayuki Fujiwara, Kazuhiko Yamaashi and Hiroyasu Koshimizu, Japan
- 8-10 Wavelet-Based Multiresolution Features for Detecting Duplications in Images**
M. K. Bashar, K. Noda, N. Ohnishi, H. Kudo, T. Matsumoto and Y. Takeuchi, Japan
- 8-11 A New B-Spline Based Active Contour Approach**
Sergio Nogueira and Yassine Ruichek, France
- 8-12 Furniture Model Creation Based on Direct Teaching to a Mobile Robot**
Kimitoshi Yamazaki, Takashi Tsubouchi and Masahiro Tomono, Japan
- 8-13 A Configurable Window-Based Processing Element for Image Processing on Smart Cameras**
Fábio Dias, François Berry, Jocelyn Serot and François Marmouton, France
- 8-14 Localization of Optic Disk Using Independent Component Analysis and Modified Structural Similarity Measure**
S. Balasubramanian, Srikanth Khanna and V. Chandrasekaran, India
- 8-15 Detection of Fundus Lesions Using Classifier Selection**
Hiroto Nagayoshi, Yoshitaka Hiramatsu, Hiroshi Sako, Mitsutoshi Himaga and Satoshi Kato, Japan
- 8-16 Contour Retrieval and Matching by Affine Invariant Fourier Descriptors**
Fatma Chaker, M. Tarak Bannour and Faouzi Ghorbel, Tunisia
- 8-17 Object Recognition in Real Time via Edge Point Analysis**
Nauman Iftikhar, Saba Iqbal and Naveed Sarfraz Khattak, Pakistan
- 8-18 Assessment of Post-Stroke Functioning Using Machine Vision**
Sonya Allin and Deva Ramanan, USA
- 8-19 Matching Range Images of Streets with a Residential Map**
Lihong Tong, Shintaro Ono, Masataka Kagesawa and Katsushi Ikeuchi, Japan
- 8-20 Particle Filter Based Tracking for Crossing of Targets with Similar Pattern**
Yuji Iwahori, Shinya Okada, Haruki Kawanaka, Shinji Fukui and Robert J. Woodham, Japan
- 8-21 Land Cover Boundary Extraction in Rural Aerial Videos**
Babak Majidi and Alireza Bab-Hadiashar, Australia
- 8-22 Skin Patch Trajectories as Scene Dynamics Descriptors**
Beibei Zhan, Ndedi D. Monekosso, Paolo Remagnino, Tajin Rukhsana, Al Mansur and Yoshinori Kuno, UK
- 8-23 Object Based Contour Detection by Using Graph-cut on Stereo Image**
Taehoon Kang, Jaeseung Yu, Jangseok Oh, Yunhwan Seol, Kwanghee Choi and Mingi Kim, Korea
- 8-24 Estimation of Lane State from Car-mounted Camera Using Multiple-model Particle Filter Based on Voting Result for One-dimensional Parameter Space**
Eisuke Adachi, Hiroaki Inayoshi and Takio Kurita, Japan
- 8-25 Improving Rotation Invariance of the Volume Local Binary Pattern Operator**
Guoying Zhao and Matti Pietikäinen, Finland
- 8-26 The Agent WiSARD Approach to Intelligent Active Video Surveillance Systems**
Massimo De Gregorio, Italy
- 8-27 Visual Reconstruction of an Intersection by Integrating Cameras on Multiple Vehicles**
Daisuke Ota, Shintaro Ono and Katsushi Ikeuchi, Japan
- 8-28 Segmentation of Skin Cancer Images Based on Multistep Region Growing**
Irene Fondón, Carmen Serrano and Begoña Acha, Spain
- 8-29 Propagation of Uncertainty in Landmark Based Self-localization of Autonomous Mobile Robots**
Abdul Bais, Robert Sablatnig, Yahya M. Khawaja and Gregor Novak, Austria
- 8-30 Iris Tracking for Generating Novel Facial Interface Media**
Takuma Funahashi, Takayuki Fujiwara and Hiroyasu Koshimizu, Japan
- 8-31 Various Applying of Wavelet Transform in Digital Mammograms for Detecting Masses and Microcalcifications**
Hengameh Mirzaalian, Mohammad Reza Ahmadzadeh, Saeed Sadri and Mehdi Jafari, Iran
- 8-32 Represent Image Contents Using Curves and Chain Code**
Pornchai Mongkolnam, Chakarida Nukoolkit and Thanee Dechsakulthorn, Thailand
- 8-33 Sign Language Recognition Using Boosted Volumetric Features**
Helen Cooper and Richard Bowden, UK
- 8-34 A Simple Tone Mapping for High Dynamic Range Image Visualization Using a Pseudo-Hilbert Scan**
Jian Zhang, Sei-ichiro Kamata and Li Tian, Japan
- Session 9: Invited Talk 2 (14:30 — 15:30)**
Chair: Hiroshi Sako
- 9-1 Video Mosaicing for Non-Chronological Time Editing**
Prof. Shmuel Peleg, The Hebrew University of Jerusalem, Israel
- Break (15:30 — 15:50)**
- Session 10: Feature Extraction & Pattern Recognition (15:50 — 17:50)**
Chairs: Shishir Shah and Takeshi Masuda
- 10-1 Improved Wavelet Feature Extraction Methods Based on HSV Space for Vehicle Detection**
Xuezhi Wen, Wei Liu, Nan Wang, Huai Yuan and Hong Zhao, China
- 10-2 Fisher Non-negative Matrix Factorization with Pairwise Weighting**
Xi Li and Kazuhiro Fukui, Japan
- 10-3 Harmonic Shape Histograms for 3D Shape Classification and Retrieval**
Janis Fehr and Hans Burkhardt, Germany
- 10-4 Selection of Object Recognition Methods According to the Task and Object Category**
Al Mansur and Yoshinori Kuno, Japan
- 10-5 Robust Facial Feature Extraction Using Embedded Hidden Markov Model for Face Recognition under Large Pose Variation**
Ping-Han Lee, Yun-Wen Wang, Jison Hsu, Ming-Hsuan Yang and Yi-Ping Hung, Taiwan
- 10-6 A 3D Shape Descriptor Based on Hadamard Transform and Spherical Harmonic Transform**
Guyu Xin and Hongbin Zha, China
- Banquet (18:30 — 20:30)**

Friday, May 18, 2007

Session 11: Industrial Applications (9:00 — 10:20)

Chairs: Naoufel Werghi and Akio Nakamura

- 11-1 **Goniometric Imaging of Paper Gloss**
Tomi Kauppi, Albert Sadovnikov, Lasse Lensu, Joni-Kristian Kämäräinen, Pertti Silfsten and Heikki Kälviäinen, Finland
- 11-2 **One Fish, Two Fish, Butterfish, Trumpeter: Recognizing Fish in Underwater Video**
Andrew Rova, Greg Mori and Lawrence M. Dill, Canada
- 11-3 **Machine Vision Based Lumber Grain Measurement**
Matti Niskanen and Olli Silven, Finland
- 11-4 **Geometrical and Statistical Visual Inspection of Imprinted Tablets**
Marko Bukovec, Ziga Spiclin, Franjo Pernus and Bostjan Likar, Slovenia

Break (10:20 — 10:40)

Session 12: Medical Image Analysis & Biometrics

(10:40 — 12:00)

Chairs: Aurélio Campilho and Yasuyo Kita

- 12-1 **An Unsupervised Learning Approach Based on Hopfield-like Network for Assessing Posterior Capsule Opacification**
Naoufel Werghi, Rachid Sammouda and Fatma AlKirbi, UAE
- 12-2 **Microscopic Image Segmentation with Two-dimensional Exponential Entropy Based on Hybrid Microcanonical Annealing**
Amir Nakib, Hamouche Oulhadj and Patrick Siarry, France
- 12-3 **Fingerprint Verification Using Perturbation Method**
Satoshi Otaka, Yoshihisa Nishiyama, Takahiro Hatano and Toru Wakahara, Japan
- 12-4 **Automatic Cell Image Segmentation Using a Shape-Classification Model**
Shishir Shah, USA

Lunch (12:00 — 13:00)

Session 13: Poster Session 3 (13:00 — 14:30)

- 13-1 **Evaluation of Stereo Matching Systems for Real World Applications Using Structured Light for Ground Truth Estimation**
Martin Humenberger, Daniel Hartermann and Wilfried Kubinger, Austria
- 13-2 **Stabilizing Illumination Chromaticity Estimation Using the Illumination Line Segment**
Rei Kawakami and Katsushi Ikeuchi, Japan
- 13-3 **Probabilistically Semantic Labeling of IR Image for UAV**
Teng Li, Jihwan Woo and In So Kweon, Korea
- 13-4 **Shadow Elimination in Traffic Video Segmentation**
Hong Liu, Jintao Li, Qun Liu and Yueliang Qian, China
- 13-5 **3D Precise Inspection of Electronic Devices by Single Stereo Vision**
Takashi Watanabe, Akira Kusano, Takayuki Fujiwara and Hiroyasu Koshimizu, Japan
- 13-6 **Facial Expression Recognition by SVM-based Two-stage Classifier on Gabor Features**
Fan Chen and Kazunori Kotani, Japan
- 13-7 **Vehicle Orientation Detection Using Vehicle Color and Normalized Cut Clustering**
Jui-Chen Wu, Jun-Wei Hsieh, Yung-Sheng Chen and Cheng-Min Tu, Taiwan
- 13-8 **Human Tracking Based on Particle Filter in Outdoor Scene**
Mototsugu Muroi and Heitoh Zen, Japan
- 13-9 **Extracting Object Regions Using Locally Estimated Probability Density Functions**
Hidenori Takeshima, Takashi Ida and Toshimitsu Kaneko, Japan
- 13-10 **A Three Resolution Framework for Reliable Road Obstacle Detection Using Stereovision**
Mathias Perrollaz, Raphael Labayrade, Romain Gallen and Didier Aubert, France
- 13-11 **Human Body Region Extraction from Photos**
Yi Hu, Japan
- 13-12 **A Fast Surface-Based Visual Hull Reconstruction**
Sofiane Yous and Masatsugu Kidode, Japan
- 13-13 **Automatic Detection of Anatomical Structures in Digital Fundus Retinal Images**
Anantha Vidya Sagar, S. Balasubramanian and V. Chandrasekaran, India
- 13-14 **Illumination-robust Change Detection Using Texture Based Features**
Kentaro Yokoi, Japan
- 13-15 **Feature Extraction from Biological Motion of Human Gait Patterns for Emotion Discrimination**
Hidenori Maruta and Masahiro Ishii, Japan
- 13-16 **Robust Real Time Multi-Layer Foreground Segmentation**
Simon Denman, Vinod Chandran and Sridha Sridharan, Australia
- 13-17 **Tumor Detection Based on Spatial and Inter-Slice Analyses for MRI Breast Imaging**
Guo-Shiang Lin, Sin-Kuo Daniel Chai, Wei-Cheng Yeh and Lin-Jie Cheng, Taiwan
- 13-18 **Appearance Manifold with Embedded Covariance Matrix for Robust 3D Object Recognition**
Lina, Tomokazu Takahashi, Ichiro Ide and Hiroshi Murase, Japan
- 13-19 **A Robust Coarse-to-Fine Method for Pupil Localization in Non-ideal Eye Images**
Xiaoyan Yuan and Pengfei Shi, China
- 13-20 **Facial Caricaturing Robot COOPER Exhibited at EXPO2005 and Its Improvements**
Naoya Tokuda, Takayuki Hoshino, Takashi Watanabe, Takuma Funahashi, Takayuki Fujiwara and Hiroyasu Koshimizu, Japan
- 13-21 **Extraction of Corresponding Points from Stereo Images by Using Intersections of Segments**
Hiroshi Unno, Keikichi Hayashibe and Hitoshi Saji, Japan
- 13-22 **Rat Mammary Gland Analysis in T1 Weighted MR Images**
Bin Wang, Jianhua Xuan, Matthew T. Freedman, Peter G. Shields and Yue Wang, USA
- 13-23 **A Lawn Weed Detection in Winter Season Based on Color Information**
Ukrit Watchareeruetai, Yoshinori Takeuchi, Tetsuya Matsumoto, Hiroaki Kudo and Noboru Ohnishi, Japan
- 13-24 **A Novel Approach of 3D Face Reconstruction Using Ellipse Fitting**
Charoenpong Theekapun, Hiroyuki Hase and Shogo Tokai, Japan
- 13-25 **A Facial Sketch Animation Generator for Mobile Communication**
Yuehu Liu, Yuanqi Su, Yang Yang, Fengjuan Wang, Maojun Yuan and Zhen Ren, China
- 13-26 **Lane Detection and Tracking through Affine Rectification**
Qiang He and Chee-Hung Henry Chu, USA
- 13-27 **Statistical Background Subtraction Based on the Exact Per-pixel Distributions**
Youngbae Hwang, Hanbyul Joo, Jun-Sik Kim and In-So Kweon, Korea
- 13-28 **Periodic Pattern Inspection Using Convolution Masks**
Y. S. Weng and M. H. Perng, Taiwan

13-29 Robust Small-Object Detection for Outdoor Wide-Area Surveillance

Daisuke Abe, Eigo Segawa, Osafumi Nakayama, Morito Shiohara, Shigeru Sasaki, Nobuyuki Sugano and Hajime Kanno, Japan

13-30 Benchmarking 3D Reconstructions from Next Best View Planning

Christoph Munkelt, Michael Trummer, Joachim Denzler and Stefan Wenhardt, Germany

Session 14: Invited Talk 3 (14:30 — 15:30)

Chair: Johji Tajima

14-1 Development of Laparoscopic Surgery Training System Using VR Technology

Prof. Yoichi Miyake, Chiba University, Japan

Break (15:30 — 15:50)

Session 15: Intelligent Transportation Systems & Geographic Information Systems (15:50 — 17:50)

Chairs: Yichang (James) Tsai and Masataka Kagesawa

15-1 Free Parking Space Detection Using Optical Flow-based Euclidean 3D Reconstruction

Jae Kyu Suhr, Kwanghyuk Bae, Jaihie Kim and Ho Gi Jung, Korea

15-2 Fast Plane Parameter Estimation from Stereo Images

Shigeki Sugimoto and Masatoshi Okutomi, Japan

15-3 Improvement of Cadastral Map Assembling Based on GHT

Fei Liu, Wataru Ohyama, Tetsushi Wakabayashi and Fumitaka Kimura, Japan

15-4 Preceding Vehicle Trajectory Prediction by Multi-Cue Integration

Feng Han, Yi Tan and Jayan Eledath, USA

15-5 Overtaking Vehicle Detection Method and Its Implementation Using IMAPCAR Highly Parallel Image Processor

Kazuyuki Sakurai, Shorin Kyo and Shin'ichiro Okazaki, Japan

15-6 A New Method for Auroral Oval Detection in FUV Imagery

Chungaung Cao, Timothy S. Newman, Glynn A. Germany and Jim F. Spann, USA

Closing Session (17:50 — 18:00)

Important Notice

For all participants

Oral session site

Oral sessions will be held at the auditorium. Smoking, drinking, and eating are strictly prohibited inside the auditorium.

Poster session site

Poster sessions will be held in the foyer of the auditorium.

Name badges

All participants are requested to wear their name badges during the conference. You may not be allowed access to the conference site without your name badge. Invited speakers, regular speakers, and other participants are provided with red, dark-blue, and light-blue badges, respectively. Conference committee members and organization staff wear purple and green badges, respectively. Session chairs also put yellow marks on their badges.

Restaurants, ATMs, post offices, etc.

Please refer to the map (contained in your conference bag) for restaurants, ATMs, post offices, and convenience stores around the conference site.

Breaks

Coffee and soft drink will be served during the morning and afternoon breaks.

Banquet

The conference banquet will be held at *Komaba Eminence* from 18:30 on Thursday, May 17. Further information will be available in the registration area.

LAN

Wireless LAN will be available in the foyer of the auditorium. Further information, such as the connection name and its network key (WEP), can be found in the registration area.

Useful telephone numbers

- ✓ Registration desk: 03-5452-6298, Extension: 57589. (Please dial the extension number after you hear a dialing tone.)
- ✓ Secretariat office: 03-5452-6242
- ✓ Police: 110
- ✓ Ambulance and fire: 119

For presenters in oral sessions

All oral presentations will be given in a single track. Presenters are requested to observe the following points:

- 1) Each oral presenter is given 20 minutes including 15 minutes for presentation and about 5 minutes for questions and answers.
- 2) A PC projector will be made available at the auditorium. IBM-compatible PCs and Macs with resolutions of 640x480, 800x600, 1024x768 and/or 1280x1024 can be used with this projector. Presenters are asked to bring a laptop computer with a DB15HD port for external display and can run on 100V AC through a two-prong-socket.
- 3) Presenters should go to the auditorium 15 minutes before their session starts, introduce themselves to the session chairs, and check that their presentation works with the provided equipment.

For presenters in poster sessions

The poster session will be held over a time period of 90 minutes at the beginning of the afternoon sessions, starting at 13:00 p.m. on Wednesday, Thursday, and Friday, respectively. Presenters are encouraged to spend most of the time at their poster during their 90-minute-session. Presenters are requested to observe the following points:

- 1) A poster board of the size of 1800-mm (width) x 1000-mm (height) will be provided to each poster presenter. To find your board, look for your presentation number in the final program attached on the board. We will provide thumb-tacks (drawing pins and/or adhesive tape) for tacking the poster(s) to the board.
- 2) To enable participants to view your work more closely during the afternoon sessions, we request presenters to prepare their posters during the lunch break, and after the poster session, they can leave posters in place during all sessions in the afternoon. Please be sure to remove them by the end of the afternoon sessions.

For session chairs

- 1) Please make sure to arrive at the auditorium at least 15 minutes before the start of the session.
- 2) Make sure that all the presenters for your session are there at the start and introduce yourself to them.
- 3) All presentations are 20 minutes long including question and answer period and computer swapping time.