Final Program

http://www.mva-org.jp/ mva2011/

IAPR MVA2011

IAPR CONFERENCE ON MACHINE VISION APPLICATIONS

June 13-15, 2011
Nara Centennial Hall, Nara, JAPAN

Topics

Machine Vision and its Applications

IAPR Invited Speakers

Prof. Nassir NAVAB (Technical University of Munich)
"Model Guided Multimodal Imaging and Visualization for Computer Assisted Interventions"

Prof. James M. REHG (Georgia Institute of Technology)
"Behavior Imaging: Using Computer Vision to Study Autism"

Prof. Keiji SANEYOSHI (Tokyo Institute of Technology)
"Stereo Vision System on Automobile for Collision Avoidance"

Sponsored by

MVA Organization
IAPR TC-8
NAIST

In cooperation with

The Information Processing Society of Japan
The Institute of Electrical Engineers of Japan
The Institute of Electronics, Information and Communication Engineers
The Institute of Image Information and Television Engineers
The Institute of Systems, Control and Information Engineers
The Institute of Image Electronics Engineers of Japan
The Japanese Society for Artificial Intelligence
The Japanese Society for Non-destructive Inspection
The Japan Society for Precision Engineering
The Robotics Society of Japan
The Society of Academic Study on Sensing via Image Information
The Society of Instrument and Control Engineers
The Virtual Reality Society of Japan

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Final Program

Monday, June 13, 2011

Registration (9:10 - 9:40)

Opening Session (9:40 - 9:50)

Session 1: Video Analysis (9:50 - 10:50)
Chairs: Hernan Badino and Kyoko Sudo

1-1 **Classification of Pedestrian Behavior in a Shopping Mall based on LRF and Camera Observations**
Kotaro Okamoto, Akira Utsumi, Tetsushi Ikeda, Hirotake Yamazoe, Takahiro Miyashita, Shinji Abe, Kazuhiro Takahashi, Norihiro Hagita (Japan)

1-2 **An Adaptive Particle Filter Method for Tracking Multiple Interacting Targets**
Isabella Szottka, Matthias Butenuth (Germany)

1-3 **Method of Updating Shadow Model for Shadow Detection based on Nonparametric Bayesian Estimation**
Shinji Fukui, Wataru Kurahashi, Yuji Iwahori, Robert J. Woodham (Japan)

Break (10:50 - 11:10)

Session 2: Invited Talk 1 (11:10 - 12:10)
Chair: Katsushi Ikeuchi

Behavior Imaging: Using Computer Vision to Study Autism
Prof. James M. REHG
(Georgia Institute of Technology)

Lunch (12:10 - 13:40)

Session 3: MVA Award candidates 1 (13:40 - 15:00)
Chairs: Nassir Navab and Yoichi Sato

3-1 **Fast and Structure-preserving Inpainting Based on Probabilistic Structure Estimation**
Takashi Shibata, Akihiko Iketani, Shuji Senda (Japan)

3-2 **Homogeneous Superpixels from Random Walks**
Frank Perbet, Atsuto Maki (United Kingdom)

3-3 **A Blanket Binarization Method for Character String Extraction**
Hiromi Yoshida, Naoki Tanaka (Japan)

3-4 **Gaussian Neighborhood Descriptors for Brain Segmentation**
Henrik Skibbe, Marco Reisert, Hans Burkhardt (Germany)

Session 4: Poster Session 1 (15:00 - 16:30)

(Motion, 3D, Recognition, Feature)

4-1 **Trajectory Generation for 1000 fps Direct Visual Servoing**
Roel Pieters, Pieter Jonker, Henk Nijmeijer (Netherlands)

4-2 **Motion Estimation for Hybrid Cameras Using Point and Line Feature Fusion**
Sang Ly, Cédric Demonceaux, Pascal Vasseurand, Claude Pégard (France)

4-3 **A Quick Browsing System for Surveillance Videos**
Cheng-Chieh Chiang, Ming-Nan Tsai, Huei-Fang Yang (Taiwan)

4-4 **Evaluation of Synchronization Accuracy between High Speed Cameras in Infrared and Visible Spectrums**
Senya Polikovsky, Yoshinari Kameda, Yuichi Ohta (Japan)

4-5 **Bottlenecks and Tradeoffs in High Frame Rate Visual Servoing : A Case Study**
Zhenyu Ye, Yifan He, Roel Pieters, Bart Mesman, Henk Corporaal, Pieter Jonker (Netherlands)

4-6 **Image Driven Generation of Pose Hypotheses for 3D Model-based Tracking**
Martim Brandão, Alexandre Bernardino, Jose Santos-Victor (Portugal)

4-7 **Sequential Particle Filter for Multiple Object Tracking**
Nam Trung Pham, Karianto Leman, Teck Wee Chua (Singapore)

4-8 **Multi-Class Co-training Learning for Object and Scene Recognition**
Xian-Hua Han, Yen-Wei Chen, Xiang Ruan (Japan)

4-9 **Similar Partial Copy Recognition for Line Drawings Using Concentric Multi-Region Histograms of Oriented Gradients**
Weihan Sun, Koichi Kise (Japan)

4-10 **Segmentation of Images with Insufficient Dynamical Range**
Zujun Hou, How Lung Eng, Yue Wang, Ruijiang Luo (Singapore)

4-11 **Inhibition of Return in the Bayesian Strategy to Active Visual Search**
Kai Welke, Tamim Asfour, Rüdiger Dillmann (Germany)

4-12 **Query-by-Sketch Image Retrieval Using Edge Relation Histogram**
Yoshiki Kumagai, Toru Arikawa, Gosuke Ohashi (Japan)

4-13 **Object Category Recognition by Bag-of-Features Using Co-Occurrence Representation by Foreground and Background Information**
Tomoyuki Nagahashi, Hironobu Fujiyoshi (Japan)

4-14 **Common Visual Pattern Detection by Mixture Particle Filtering**
Kota Aoki, Hiroshi Nagahashi (Japan)

4-15 **Estimation of Minimum Quantization Levels by Using Reconstructed Histogram**
Munetoshi Numada, Hiroyasu Koshimizu (Japan)

4-16 **Fast Combined Separability Filter for Detecting Circular Objects**
Yasuhiro Ohkawa, Chendra Hadi Suryanto, Kazuhiro Fukui (Japan)

4-17 **Direct Shape Carving: Smooth 3D Points and Normals for Surface Reconstruction**
Kazuki Matsuda, Norimichi Ukita (Japan)

4-18 **3D Object Reconstruction from Image Sequences with a One Line Search Method**
Jian Zhang, Graziano Chesi, Y. S. Hung (China)

4-19 **Optimal Computation of 3-D Rotation under Inhomogeneous Anisotropic Noise**
Hirotaka Niitsuma, Kenichi Kanatani (Japan)

4-20 **A Free-Viewpoint TV System**
Yuichi Yaguchi, Takashi Matsuzaki, Toshimitsu Suzuki, Yukihiro Yoshida, Yuichi Okuyama, Kazuaki Takahashi, Ryuichi Oka (Japan)

4-21 **Alignment of 3D Shape Data by Hashing Sets of Feature Points**
Yuka Kohno, Osamu Yamaguchi, Toshio Sato, Bunpei Irie (Japan)

4-22 **Slant-invariant Stagger Grid Pattern Projection with Error-tolerant Decoding Technique for One-shot Shape Measurement**
Tetsuri Sonoda, Shinichiro Uno, Kenji Saitoh, Shinji Uchiyama (Japan)

4-23 **Facades Modeling from a Ground-View Video with Map Constraints**
Liu Ruijun, Myriam Servières, Guillaume Moreau (France)

4-24 **Object Reconstruction and Recognition leveraging an RGB-D Camera**
Nicolas Burrus, Mohamed Abderrahim, Jorge Garcia, Luis Moreno (Spain)

4-25 **A Level Set Method for Joint 3-D Motion Estimation and Segmentation in Range Image Sequences**
Abderrahman Hmimia, Amar Mitiche (Canada)

4-26 **Accurate 3-D Measurement System Using the Pico Projector-based Phase Shifting Techniques**
Ja Myoung Koo, Tai-Hoon Cho (Korea, South)

4-27 **Auto-Determination of Camera Parameters for Scenario Simulations in Visual Surveillance Applications**
Richard Chang, Nam Trung Pham, Karianto Leman, Wang Yue (Singapore)

4-28 **Dense 3D Measurement of the Near Surroundings by Fisheye Stereo**
Nobuyuki Kita (Japan)

4-29 **Controlled Illumination for the Object Recognition with Projector Camera Feedback**
Toshiyuki Amano, Kazuki Osamura, Makoto Fujisawa, Jun Miyazaki, Hirokazu Kato (Japan)

4-30 **Superpixel Based Inpainting for Interactive 3D Indoor Modeler**
Kalaivani Thangamani, Takeshi Kurata, Tomoya Ishikawa (Japan)

4-31 **Range Camera for Simple behind Display Interaction**
Anton Treskunov, Seung Wook Kim, Stefan Marti (United States of America)

4-32 **Dense Stereo Disparity Maps - Real-Time Video Implementation by the Sparse Feature Sampling**
Kunio Takaya (Canada)

Break (16:30 - 16:50)

Session 5: MVA Award candidates 2 (16:50 - 18:30)
Chairs: James M. Rehg and Hideo Saito

5-1 **Fast Focus Mechanism Using a Pair of Convergent and Divergent Lenses Differentially for Three-dimensional Imaging**
Akira Ishii (Japan)

5-2 **Spectral-Differential Feature Matching and Clustering for Multi-Body Motion Estimation**
Anton N. Averkin, Igor P. Gurov, Maxim V. Peterson, Alexey S. Potapov (Russia)

5-3 **Stabilizing Omnidirectional Videos Using 3D Structure and Spherical Image Warping**
Mostafa Kamali, Atsuhiko Banno, Jean-Charles Bazin, In So Kweon, Katsushi Ikeuchi (Japan)

5-4 **Color Prior for Feature-based 3D Head Tracking**
Jixia Zhang, Franck Davoine, Haibo Wang, Chunhong Pan (China)

5-5 **A Head-Wearable Short-Baseline Stereo System for the Simultaneous Estimation of Structure and Motion**
Hernan Badino, Takeo Kanade (United States of America)

Tuesday, June 14, 2011

Session 6: Feature based Techniques (9:30 - 10:50)
Chairs: Guillaume Moreau and Shuji Senda

6-1 **MCM: An Efficient Geometric Constraint Method for Robust Local Feature Matching**
Kai Chen, Yi Zhou, Qi Zheng, Xiaokang Yang, Li Song (China)

6-2 **Keypoint Recognition Using Two-Stage Randomized Trees**
Shoichi Shimizu, Hironobu Fujiyoshi (Japan)

6-3 **Image Colorization Using Discriminative Textural Features**
Michal Kawulok, Jolanta Kawulok, Bogdan Smolka (Poland)

6-4 **Multi-Class Labeling Improved by Random Forest for Automatic Image Annotation**
Motofumi Fukui, Noriji Kato, Wenyuan Qi (Japan)

Break (10:50 - 11:10)

Session 7: Inviter Talk 2 (11:10 - 12:10)
Chair: Yasuyo Kita

Model Guided Multimodal Imaging and Visualization for Computer Assisted Interventions
Prof. Nassir NAVAB
(Technical University of Munich)

Lunch (12:10 - 13:40)

Session 8: Inspection (13:40 - 15:00)
Chairs: Aurelio Campilho and Hisae Shibuya

8-1 **Semisynthetic Ground Truth for Dirt Particle Counting and Classification Methods**
Nataliya Strokina, Aki Mankki, Tuomas Eerola, Lasse Lensu, Jari Käyhkö, Heikki Kalviainen (Finland)

8-2 **One-Class Classification for Anomaly Detection in Wire Ropes with Gaussian Processes in a Few Lines of Code**
Erik Rodner, Esther-Sabrina Wacker, Michael Kemmler, Joachim Denzler (Germany)

8-3 **On-Line Detection of Imperfections in Laser-brazed Joints**
Daniel Fecker, Volker Märgner, Tim Fingscheidt (Germany)

8-4 **3D Free-Form Object Material Identification by Surface Reflection Analysis with a Time-of-Flight Range Sensor**
Md. Abdul Mannan, Hisato Fukuda, Lu Cao, Yoshinori Kobayashi, Yoshinori Kuno (Japan)

Session 9: Poster Session2 (15:00 - 16:30)

(Application, Character, Image Processing, ITS)

9-1 **New Ridge Flux Analysis for Fingerprint Minutiae Detection**
Tomohiko Ohtsuka (Japan)

9-2 **A Statistical Shape Model and SVMs Based Scheme for Visual Inspection of Microdrill Bits in PCB Production**
Guifang Duan, Yen-wei Chen (Japan)

9-3 **A Multi-Neural Network Approach to Image Detection and Segmentation of Gas Meter Counter**
Angelo Nodari, Ignazio Gallo (Italy)

9-4 **Automatic Road Extraction from Printed Maps**
Sébastien Callier, Hideo Saito (Japan)

9-5 **Development of Inspection System for Wooden Chopsticks**
Takeshi Saitoh (Japan)

9-6 **Camera Based Lumber Strength Classification System**
Riku Hietaniemi, Jari Hannuksela, Olli Silvén (Finland)

9-7 **Quantifying Rotations of Spheric Objects**
Alexander Szep (Austria)

9-8 **Color Recognition by Extended Color Space Method for 64-Color 2-D Barcode**
Takuma Shimizu, Mariko Isami, Kenji Terada, Wataru Ohyama, Tetsushi Wakabayashi, Fumitaka Kimura (Japan)

9-9 **Extraction Method of Scallop Areas Using Shelly Rim Features Considering Bottom Sediment of Sand**
Koichiro Enomoto, Masashi Toda, Yasuhiro Kuwahara (Japan)

9-10 **Scene Analysis Based on Horse Vision System**
Hanchao Jia, Shigang Li (Japan)

9-11 **Cooking Support System Utilizing Built-in Cameras and Projectors**
Shunsuke Morioka, Hirotada Ueda (Japan)

9-12 **Daily Clothes Observation from Visible Surfaces Based on Wrinkle and Cloth-Overlap Detection**
Kimitoshi Yamazaki, Kotaro Nagahama, Masayuki Inaba (Japan)

9-13 **Automated Vision-based System for Inspecting Glue Route Quality in Harddisk Drive Top Cover Assembly**
Wirat Rajchawong, Pakorn Kaewtrakulpong (Thailand)

9-14 **A Technique for Clustering Individual Defects from Images of Steel Strips with Periodical Defects**
Francisco G. Bulnes, Daniel F. Garcia, Ruben Usamentiaga, Julio Molleda (Spain)

9-15 **Fast Color Matching Using Weighted Subspace on Medicine Package Recognition**
Kenjiro Sugimoto, Sei-ichiro Kamata (Japan)

9-16 **A Method for Fast Composing of Images Captured from Deformed Documents by a Quadocular Scanner Setup**
Marco Körner, Herbert Suesse, Wolfgang Ortmann, Joachim Denzler (Germany)

9-17 **Off-Line Signature Verification Using Two Step Transitional Features**
Elias Zois, Konstantinos Tselios, Athanasios Nassiopoulos, Elias Siores, George Economou (Greece)

9-18 **Binary Tree-based Accuracy-keeping Clustering Using CDA for Very Fast Japanese Character Recognition**
Yohei Sobu, Hideaki Goto (Japan)

9-19 **Optical Character Verification of Print on Pharmaceutical Capsules**
Miha Mozina, Dejan Tomazevic, Franjo Pernus, Bostjan Likar (Slovenia)

9-20 **Extraction of Character String Regions from Scenery Images Based on Contours and Thickness of Characters**
Tomohiro Nishino, Kimitoshi Yamazaki, Kei Okada, Masayuki Inaba (Japan)

9-21 **A New Method for Ranking of Word Hypotheses generated from OCR: The Application on the Arabic Word Recognition**
Houda Gaddour,Hanène Guesmi ,Fouad Slimane, Slim Kanoun, Jean Hennebert (Tunisia)

9-22 **A Lossless Data-hiding Technique Based on Wavelet Transform**
Hui-Yu Huang, Shih-Hsu Chang (Taiwan)

9-23 **Fast Polar Cosine Transform for Image Description**
Zhuo Yang, Sei-ichiro Kamata (Japan)

9-24 **Histogram Enhancement Using Adaptive Segmentation Algorithm**
Chung-Cheng Chiu, Sheng-Yi Chiu, Han-Ni Yang, Ching-Tung Lo (Taiwan)

9-25 **A Grayscale Image Authentication Method with a Pixel-Level Self-recovering Capability against Image Tampering**
Che Wei Lee, Wen Hsiang Tsai (Taiwan)

9-26 **Study on Stimulation Effects for Driver Based on Fragrance Presentation**
Mariko Yoshida, Chie Kato, Yuki Kakamu, Mikiko Kawasumi, Hatsuo Yamasaki, Shin Yamamoto, Tomoaki Nakano, Muneo Yamada (Japan)

9-27 **Real-Time Video Stabilization for Unmanned Aerial Vehicles**
Yue Wang, ZuJun Hou, Karianto Leman, Richard Chang (Singapore)

9-28 **UAV Motion Estimation Using Hybrid Stereoscopic Vision**
Damien Eynard, Cédric Demonceaux, Pascal Vasseur, Vincent Fremont (France)

9-29 **Robust vSLAM for Dynamic Scenes**
Jun Shimamura, Masashi Morimoto, Hideki Koike (Japan)

9-30 **Vision-based Automatic Flight Control for Small UAVs**
Chung-Cheng Chiu, Ching-Tung Lo, Chung-Hsieh Tsai, Sheng-Yi Chiu (Taiwan)

9-31 **Quadrotor Helicopter Flight Control Using Hough Transform and Depth Map from a Microsoft Kinect Sensor**
John Ross Stowers, Michael Hayes, Andrew Bainbridge-Smith (New Zealand)

9-32 **On-Road Obstacle Detection by Comparing Present and Past In-Vehicle Camera Images**
Haruya Kyutoku, Daisuke Deguchi, Tomokazu Takahashi, Yoshito Mekada, Ichiro Ide, Hiroshi Murase (Japan)

9-33 **An Efficient Algorithm for UAV Indoor Pose Estimation Using Vanishing Geometry**
Yuxiang Wang (Singapore)

Break (16:30 - 16:50)

Session 10: 3D Reconstruction and Retrieval (16:50 - 18:10)
Chairs: Alexey Potapov and Takeshi Masuda

10-1 **Reconstructing 3D Land Surface from a Sequence of Aerial Images**
Shinya Mizoe, Yuichi Yaguchi, Kazuaki Takahashi, Kazuhiro Ota, Ryuichi Oka (Japan)

10-2 **Augmenting Depth Camera Output Using Photometric Stereo**
Robert Anderson, Björn Stenger, Roberto Cipolla (United Kingdom)

10-3 **A Globally Convergent Algorithm for Range Image Registration Based on Consistency Evaluation of Rigid Transformation of Correspondences**
Shingo Yamada, Ikuko Shimizu (Japan)

10-4 **Skeleton Features Distribution for 3D Object Retrieval**
Tomoki Hayashi, Benjamin Raynal, Vincent Nozick, Hideo Saito (Japan)

Banquet (19:00 - 21:00)

Wednesday, June 15, 2011

Session 11: Basic Techniques (9:30 - 10:50)
Chairs: Bryan Scotney and Yutaka Satoh

11-1 **Finite Element Laplacian Feature Detector**
Dermot Kerr, Sonya Coleman, Bryan Scotney (United Kingdom)

11-2 **A Parallelization Method for Multiview Stereo**
Masaru Fukushi, Naoki Sekiguchi, Toru Abe (Japan)

11-3 **An Adaption of the Lucy-Richardson Deconvolution Algorithm to Noncentral Chi-Square Distributed Data**
Fabian Diewald, Jens Klappstein, Juergen Dickmann, Klaus Dietmayer (Germany)

11-4 **KNN Kernel Shift Clustering with Highly Effective Memory Usage**
Makoto Hirohata, Tomoyuki Shibata, Kazunori Imoto, Toshimitsu Kaneko (Japan)

Break (10:50 - 11:10)

Session 12: Invited Talk 3 (11:10 - 12:10)
Chair: Keiji Yamada

Stereo Vision System on Automobile for Collision Avoidance
Prof. Keiji SANEYOSHI
(Tokyo Institute of Technology)

Lunch (12:10 - 13:40)

Session 13: Face Analysis (13:40 - 14:40)
Chairs: Franck Davoine and Yoshihisa Ijiri

13-1 **Eye and Nose Fields Detection from Gray Scale Facial Images**
M. Hassaballah, Kenji Murakami, Shun Ido (Japan)

13-2 **Facial Feature Detection Using Generalized LVQ and Facial Shape Model**
Yusuke Morishita, Hitoshi Imaoka (Japan)

13-3 **Identifying Important People in Broadcast News Videos**
Hua Gao, Hazim Kemal Ekenel, Rainer Stiefelhagen (Germany)

Session 14: Poster Session 3 (14:40 - 16:10)

(Face, Human, Gesture, Pedestrian, Medical)

14-1 **Robust Facial Feature Localization Using Improved Active Shape Model and Gabor Filter**
Hui-Yu Huang, Shih-Hang Hsu (Taiwan)

14-2 **Kernel-based Speaker Verification Using Spatio-temporal Lip Information**
Chi Ho Chan, Budhaditya Goswami, Josef Kittler, William Christmas (United Kingdom)

14-3 **A Face Identification Method of Non-Native Animals for Intelligent Trap.**
Mayumi Kouda, Masakazu Morimoto, Kensaku Fujii (Japan)

14-4 **Edge-based Facial Feature Extraction Using Gabor Wavelet and Convolution Filters**
Rosdiyana Samad, Hideyuki Sawada (Japan)

14-5 **Online Rapid Prototyping of 3D Objects Using GPU-Based 3D Cloud Computing: Application to 3D Face Modelling**
Minh N'guyen, Patrice Delmas, Georgy Gimel'farb, Y.H. Chan, Alfonso Gastelum Strozzi, Alexander Woodward (New Zealand)

14-6 **Face Super Resolution in Reduced Spaces by Using Shape and Texture**
Aydin Akyol, Muhittin Gökmen (Turkey)

14-7 **Research on Far-Field Face Detection for Recognition**
Zhifei Wang, Zhenjiang Miao (China)

14-8 **Facial Analysis Aided Human Gesture Recognition for Human Computer Interaction**
Dan Luo, Hua Gao, Hazim Kemal Ekenel, Jun Ohya (Japan)

14-9 **Detection of Swimmer Based on Joint Utilization of Motion and Intensity Information**
Kwok-Leung Chan (China)

14-10 **Motion Analysis for Broadcast Tennis Video Considering Mutual Interaction of Players**
Naoto Maruyama, Kazuhiro Fukui (Japan)

14-11 **Estimation of Human Body Orientation Using Histogram of Oriented Gradients**
Panachit Kittipanya-ngam, Soh Guat Ong, How Lung Eng (Singapore)

14-12 **Learning Multi-Feature Human Motion Patterns by Automated Near-Optimal Constrained Gravitational Clustering**
Zhuo Chen, Nelson H.C. Yung (China)

14-13 **Bottom-up Attention Improves Action Recognition Using Histograms of Oriented Gradients**
Go Tanaka, Yukie Nagai, Minoru Asada (Japan)

14-14 **Particle Filter-based Fingertip Tracking with Circular Hough Transform Features**
Martin Do, Tamim Asfour, Rüdiger Dillmann (Germany)

14-15 **Human Body Tracking and Joint Angle Estimation from Mobile-Phone Video for Clinical Analysis**
Jehoon Lee, Peter Karasev, Liangjia Zhu, Allen Tannenbaum (United States of America)

14-16 **Hand Gesture Recognition Using Histogram of Oriented Gradients and Partial Least Squares Regression**
Arindam Misra, Takashi Abe, Takayuki Okatani, Koichiro Deguchi (Japan)

14-17 **Memory Based Human Region Detection**
Ayaka Yamamoto, Yoshio Iwai, Hiroshi Ishiguro (Japan)

14-18 **Headdress Detection Based on Saliency Map for Thangka Portrait Image**
Lu Yin, Weilan Wang (China)

14-19 **Estimation of Thermal Comfort by Measuring Clo Value without Contact**
Hiroki Matsumoto, Yoshio Iwai, Hiroshi Ishiguro (Japan)

14-20 **Analysing Engineering Tasks Using a Hybrid Machine Vision and Knowledge Based System Application**
I*oannis Kaloskampis, Yulia Hicks, David Marshall* (United Kingdom)

14-21 **A Multi-staged System for Efficient Visual Person Reidentification**
Kai Juengling, Michael Arens (Germany)

14-22 **Human Skin Detection by Visible and Near-Infrared Imaging**
Yusuke Kanzawa, Yoshikatsu Kimura, Takashi Naito (Japan)

14-23 **Measurement of Human Stature from Surveillance Camera Based on Projective Geometry**
Takuya Inoue, Hideo Saito, Makoto Kimura (Japan)

14-24 **A Practical Video Digest Generation System Designed for Nursery Schools**
Yu Wang, Tomoya Ishikawa, Jien Kato, Kenichiro Ishii, Shigeki Yokoi (Japan)

14-25 **Pedestrian Head Detection and Tracking Using Skeleton Graph for People Counting in Crowded Environments**
Kheir-Eddine Aziz, Djamal Merad, Bernard Fertil, Nicolas Thome (France)

14-26 **Stereo-based Pedestrian Detection Using Two-stage Classifiers**
Manabu Nishiyama, Akihito Seki, Tomoki Watanabe (Japan)

14-27 **Integrate Sparse Depth Information into Pedestrians Detection**
Yu Wang, Jien Kato, Kenichiro Ishii (Japan)

14-28 **Towards an Automatic Blind Spot Camera: Robust Real-Time Pedestrian Tracking from a Moving Camera**
Kristof Van Beeck, Toon Goedemé, Tinne Tuytelaars (Belgium)

14-29 **Robust Human Tracking Using Occlusion-Free Images from Multiple Video Cameras**
Kentaro Tsuji, Mingxie Zheng, Eigo Segawa, Morito Shiohara, Takashi Morihara (Japan)

14-30 **Symmetrical Judgment and Improvement of Co-HOG Feature Descriptor for Pedestrian Detection**
Hirokatsu Kataoka, Yoshimitsu Aoki (Japan)

14-31 **Dual-Direction Measuring System of Near Infrared Optical Tomography Combined with X-Ray Mammography**
Hung-Chih Chiang, Jhao-Ming Yu, Liang-Yu Chen, Min-Chun Pan, Min-Cheng Pan, Ching-Tang Wu (Taiwan)

14-32 **Low-Bitrate Medical Image Compression**
Antonius Darma Setiawan, Andriyan Bayu Suksmono, Tati LR Mengko, Hendra Gunawan (Indonesia)

14-33 **Vessel Segmentation in Retinal Images Using Graph-Theoretical Vessel Tracking**
Suthit Rattathanapad, Bunyarit Uyyanonvara, Pradit Mittrapiyanuruk, Pakorn Kaewtrakulpong (Thailand)

14-34 **Dynamic Programming and Fuzzy Classification for the Automatic Segmentation of the Carotid in Ultrasound Images**
Rui Rocha, Jorge Silva, Aurélio Campilho (Portugal)

Break (16:10 - 16:30)

Session 15: Real-World Applications (16:30 - 17:30)
Chairs: Björn Stenger and Masaki Onishi

15-1 **Robust Image Acquisition for Vision-Model Coupling by Humanoid Robots**
David Israel Gonzalez-Aguirre, Tamim Asfour, Rüdiger Dillmann (Germany)

15-2 **An ID and Position Recognition Method employing Camera Motion Blur for Modulated LED Tube Lights**
Chang Li, Daisuke Iwai, Kosuke Sato (Japan)

15-3 **Towards Bendable Augmented Maps**
Sandy Martedi, Hideo Saito (Japan)

Closing Session (Best poster award ceremony) (17:30 - 17:50)

Important Notice

For all participants

Oral session site
Oral sessions will be held in Harmony Hall. Smoking, drinking, and eating are strictly prohibited inside Harmony Hall.

Poster session site
Poster sessions will be held at Harmony Hall Foyer.

Invited talks
Invited talk is planned to take place in Harmony Hall at 11:10 on Monday, Tuesday and Wednesday, respectively. The time assigned for the talk is 60 minutes including discussions.

Exhibitions
Exhibitions will be held at Harmony Hall Entrance on June 14. The following companies will demonstrate their products:

- Raytrix (Japanese distributor: ARGO): 4D lightfield cameras
- Viewplus: Micro lens array systems
- Nikon: Confocal Microscopes
- NEC: Retina display
- Microvision: Micro video projectors

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.

Drinks
Coffee and soft drink will be served during the conference. The drink service area is on the 4th floor, and please do not drink anything out of this area.

Banquet
The conference banquet will be held at Hotel Nikko Nara from 19:00 on Tuesday, June 14. Further information will be available in the registration area.

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

Award
Award Candidates Sessions will be held in the afternoon of Monday, June 13. The winners of MVA2011 Best Paper Award and MVA2011 Best Application will be announced and commended at the conference banquet.
The Best Poster Award is given to the best poster presenter. Award selection is based on votes by all participants. Three voting sheets shall be found in the conference bag. Each participant votes his/her best presentation in the respective poster sessions. The ballot box will be closed when Session 15 starts. The winner will be announced and commended at the conference closing.

For presenters in oral sessions

All oral presentations will be given in a single track. The oral sessions are planned to take place in Harmony Hall. Presenters are requested to observe the following points:

1) Each oral presenter is given 20 minutes including 15 minutes for presentation and 5 minutes for questions and answers.
2) A PC projector will be made available at Harmony Hall. Laptop computers can be used with this projector. Presenters are asked to bring a laptop computer which has a DB15HD port for external display and can run on 100V AC through a two-prong-socket.
3) Presenters should go to Harmony Hall 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

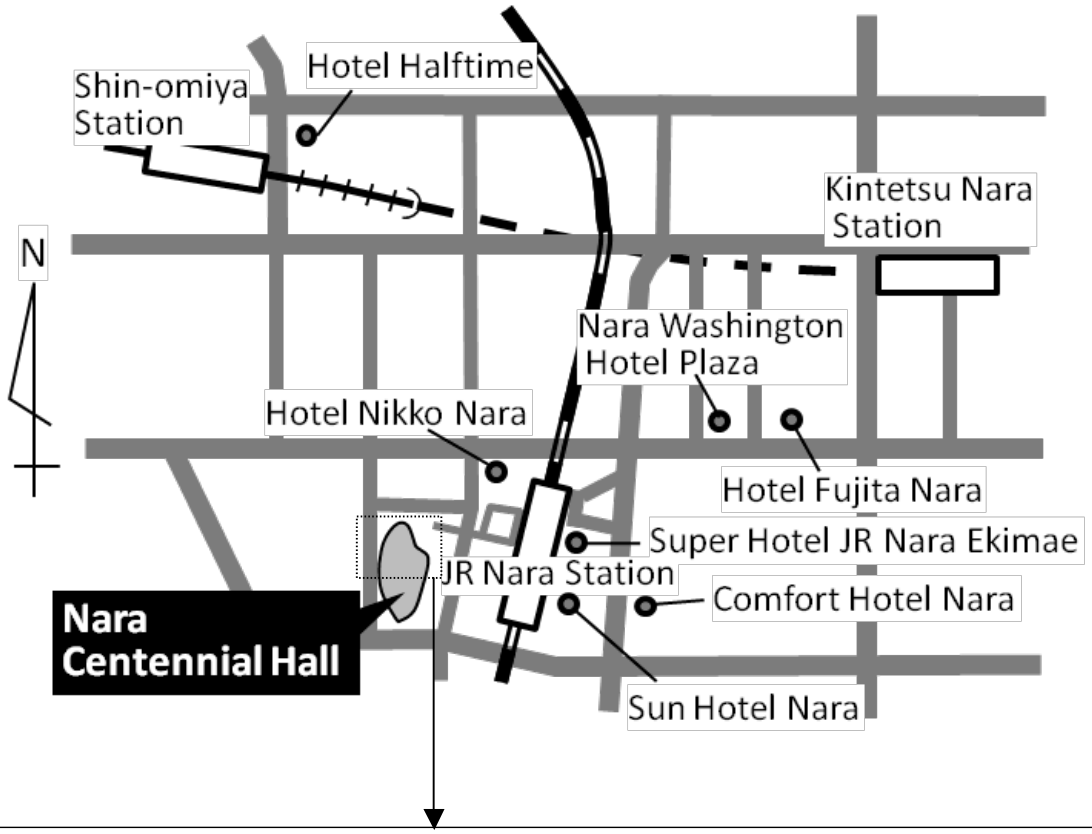
The poster session will be held at Harmony Hall Foyer from 15:00 to 16:30 on Monday and Tuesday, and from 14:40 to 16:10 on Wednesday. Presenters are encouraged to spend most of the time at their poster during their 90-minute-session. Presenters are requested to observe the following points:

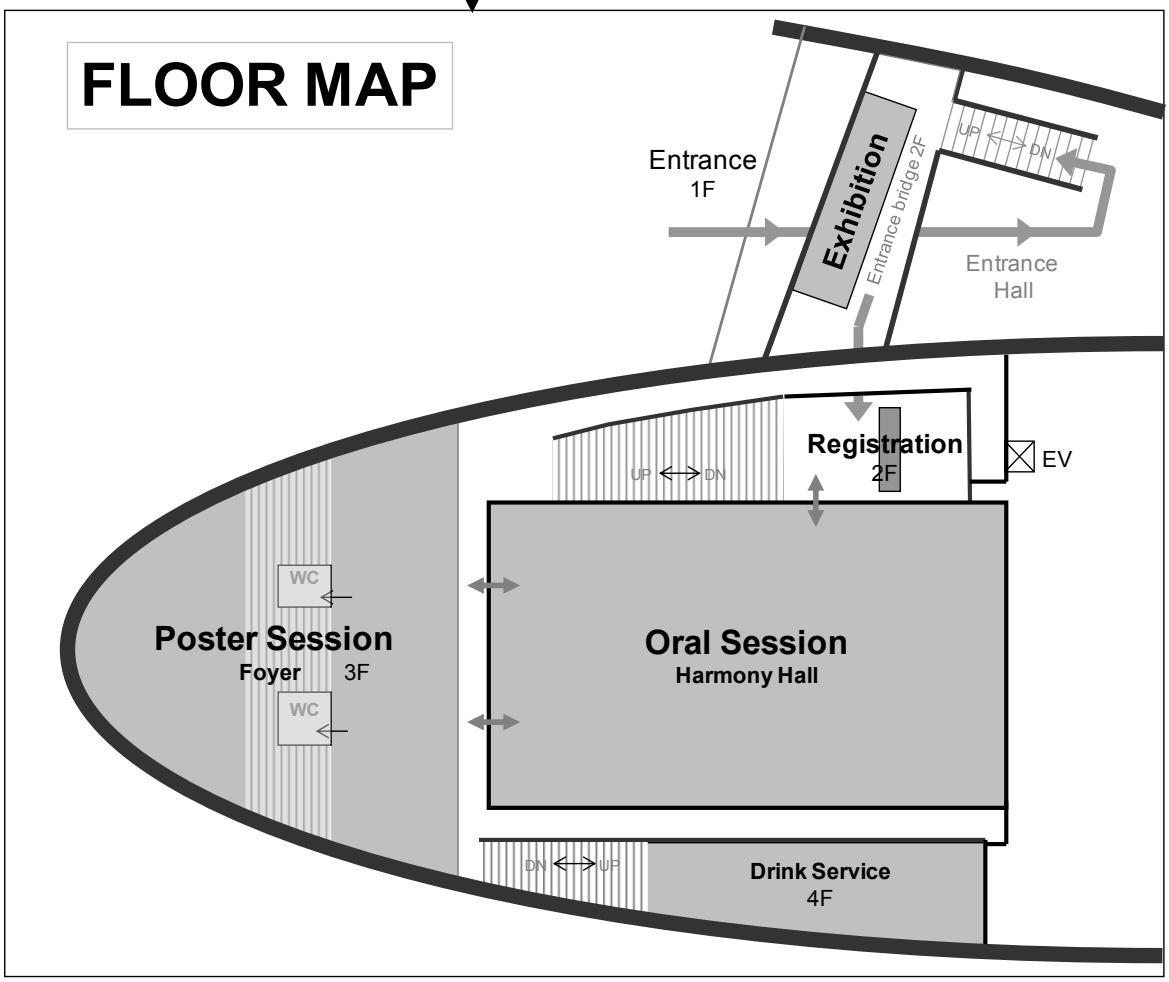
1) A poster board of the size of 1,800-mm (width) x 1,200-mm (height) will be provided to each poster presenter. Pictures and labels should be large enough to be read at a distance of approximately 2 meters. To find your board, look for your paper number in the final program attached on the board. We will provide thumbtacks (drawing pins) 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 Harmony Hall 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.

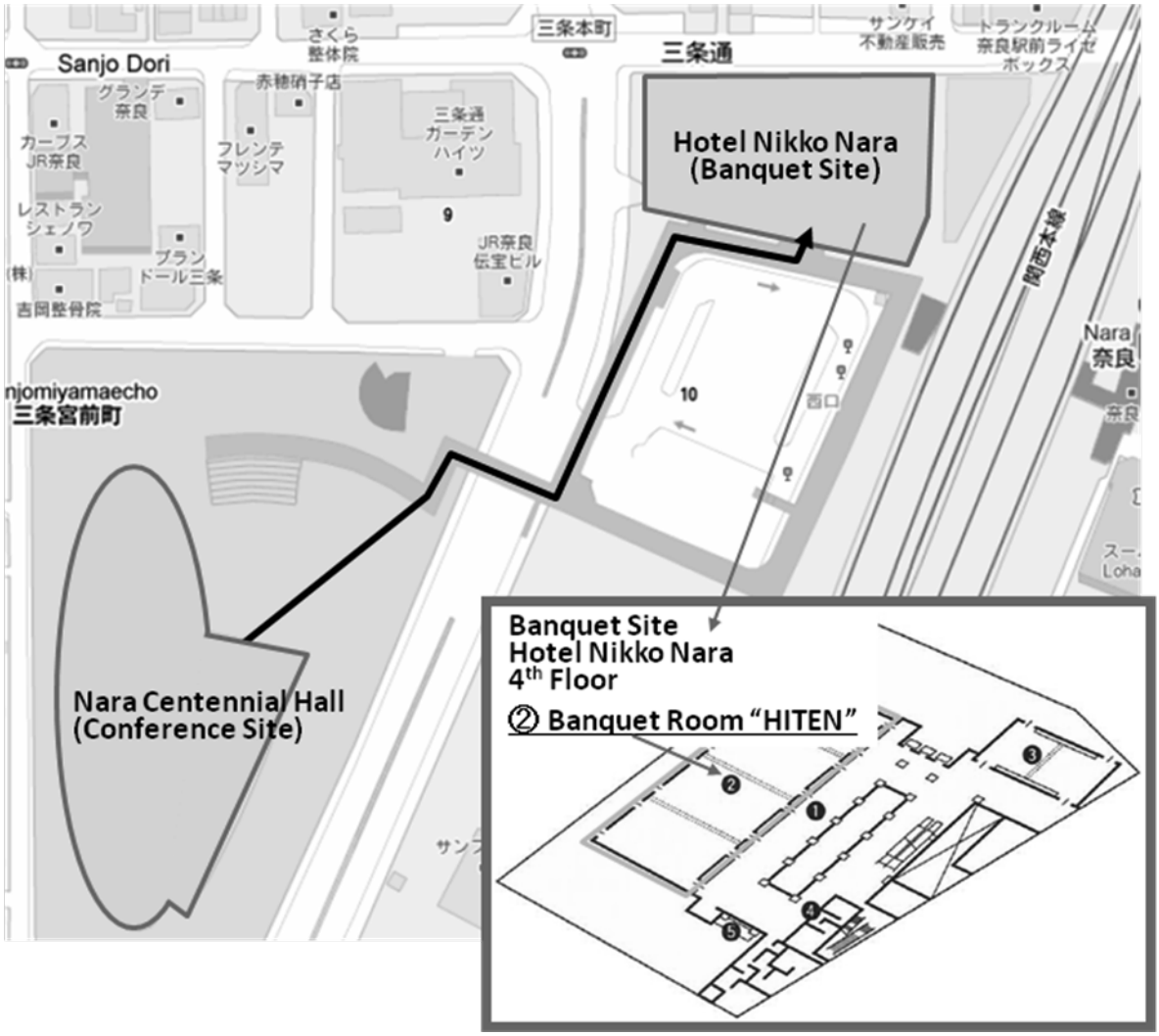
Access to Conference Site





Access to Banquet Site

June 14, 19:00～
Large Banquet Room “HITEN”
4th Floor in Hotel Nikko Nara



Call for Papers

Special Section on Machine Vision and its Applications

The IEICE (Institute of Electronics, Information and Communication Engineers) Transactions on Information and Systems announces a forthcoming Special Section on Machine Vision Applications to be published in **July 2012**.
The Twelfth IAPR Conference on Machine Vision Applications was held at Nara Centennial Hall, Japan, from June 13 through 15, 2011. The special section consists of the papers published in the MVA 2011 as well as new contributions with related topics. The submitted papers are expected to be related to Machine Vision and its Applications, that include the following topics:

- Algorithms
  Feature Extraction, Surface Reconstruction, Range Data and 3D Analysis, Motion and/or Image Sequence Analysis, Color Image Analysis, Neural Networks, Pattern Recognition, and related technologies
- Architectures
  Vision Chips, Vision Sensors with New Optical Systems, Architectures for 3D and/or Motion Processing, Image Processing Systems, Cooperative Distributed Systems, Software Environments for Image Processing and Analysis, and related technologies
- Applications
  •Factory Automation: Inspection, Diagnosis, Assembly
  •Intelligent Transport Systems: Traffic Monitoring, Traffic Control, Driving Safety Assistance, Electric Toll Collection
  •Robots: Home Robots, Mobile Robots, Service Robots, Space Robots
  •Security Systems: Surveillance, Alarm Systems, Biometrics and Personal Identification, Home Security and Monitoring Systems, Forensic Systems
  •Medical Systems: Medical Examination Assistance, Remote Medicine, Image-guided Surgery and Intervention, Analysis of 2D/3D Biomedical Images
  •Geographic Information Systems: Map Processing, 3D Reconstruction from Photographs or Maps
  •Multimedia: Image Retrieval, Document and Drawing Analysis, Digital Archiving, Multimedia Databases and Analysis
  •Action Analysis and Recognition: Gesture Recognition, Behavior Recognition
  •Human Computer Interaction: Face Recognition, Wearable Computing, Multi-modal Interface, Personal Imaging
  •Vision and Graphics: Augmented and Mixed Reality
  •Others: Applications to Civil and Construction Engineering, Agriculture, Forestry, Fishery, etc

Guideline for paper submission

Prospective authors are encouraged to submit a PDF and **electronic source files (TeX/Word files, figures, authors' photos and biography)** of an original, unpublished manuscript in to the following address by **November 7, 2011.**

IEICE online submission URL: https://review.ieice.org/regist_e.aspx

1. Authors should choose the "[Special-ED] Machine Vision and its Applications" as a "Type of Issue (Section)/Transactions" on the online screen. Do not choose "[Regular-ED] Information and Systems" or other special sections.
2. Send "Signed Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" to the following contact person by postal mail, FAX or E-mail until **November 7, 2011**. We cannot start the review process without them, even if we receive the manuscript.

Manuscript should be prepared according to the guideline given in the "Information for Authors." http://www.ieice.org/eng/shiori/mokuji_iss.html. It is recommended that the lengths of a paper and a letter for this special section are within 8 and 2 printed pages, respectively. The manuscript must be augmented from the one published in the conference proceedings.
 Please note that if accepted, all authors, including authors of invited papers, should pay for the page charges covering partial cost of publication. Authors will receive 50 copies of the reprint.

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Inquiry on this special section

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[Important Notice]

*At least one of the authors must be an IEICE member when the manuscript is submitted for review. We recommend that authors unaffiliated with IEICE apply for membership.
For membership applications, please visit the web-page, http://www.ieice.org/eng/member/OM-appli.html
*Due to the copyright issue, it is prohibited to resubmit a manuscript published in the proceedings of MVA to other conferences and journals without any revision. Please reinforce your manuscript with detailed explanation and/or apt experimental results for submission to our special section.

MVA2011 Session table

13 (Mon.)		14 (Tue.)		15 (Wed.)	
9:10 Registration					
9:40	Opening Session	9:30	**Session6:OS Feature based Techniques** Chairs: Guillaume MOREAU , Shuji SENDA	9:30	**Session11:OS Basic Techniques** Chairs: Bryan SCOTNEY , Yutaka SATOH
9:50	**Session1: Video Analysis** Chairs: Hernan BADINO , Kyoko SUDO				
10:50	Break	10:50	Break	10:50	Break
11:10	**Session2:** Invited Talk 1 Behavior Imaging: Using Computer Vision to Study Autism **Prof. James M. REHG** Chair: Katsushi IKEUCHI	11:10	**Session7:** Invited Talk 2 Model Guided Multimodal Imaging and Visualization for Computer Assisted Interventions **Prof. Nassir NAVAB** Chair: Yasuyo KITA	11:10	**Session12:** Invited Talk 3 Stereo Vision System on Automobile for Collision Avoidance **Prof. Keiji SANEYOSHI** Chair: Keiji YAMADA
12:10	Lunch	12:10	Lunch	12:10	Lunch
13:40	**Session3: Award Candidates 1** Chairs: Nassir NAVAB , Yoichi SATO	13:40	**Session8: Inspection** Chairs: Aurelio CAMPILHO , Hisae SHIBUYA	13:40	**Session13: Face Analysis** Chairs: Franck DAVOINE , Yoshihisa IJIRI
14:40	**Session14:** Poster Session 3 **Face, Human, Gesture, Pedestrian, Medical**				
15:00	**Session4:** Poster Session 1 **Motion, 3D, Recognition, Feature**	15:00	**Session9:** Poster Session 2 **Application, Character, Image Processing, ITS**		
16:10	Break				
16:30	Break	16:30	Break	16:30	**Session15: Real-world Applications** Chairs: Björn STENGER , Masaki ONISHI
16:50	**Session5: Award Candidates 2** Chairs: James M. REHG , Hideo SAITO	16:50	**Session10: 3D Reconstruction and Retrieval** Chairs: Alexey POTAPOV , Takeshi MASUDA	17:30	**Closing Session** (Best Poster Award Ceremony)
18:30		18:10		17:50	
		19:00 21:00	Banquet		