

Advance Program and Call for Participation

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IAPR CONFERENCE ON MACHINE VISION APPLICATIONS

May 16-18, 2005
Tsukuba Science City, JAPAN

Topics

Machine Vision and its Applications

Algorithms / Architectures / Applications
Factory Automation / Intelligent Transport Systems / Multimedia /
Medical / Geographic Information Systems /
Human Computer Interaction / Wearable Computing / Security /
Robots / Digital Home Automation / Others

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Katsuhiko SAKAUE (AIST)
Mikio TAKAGI (Shibaura Institute of Technology)

Program Co-Chairs

Yoshinori KUNO (Saitama University)
In So KWEON (KAIST)

Sponsored by

MVA Conference Committee
IAPR TC-8

National Institute of Advanced Industrial Science and Technology (AIST)

In cooperation with

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Advance Program

Monday, May 16, 2005

Registration (8:30 — 9:00)

Opening Session (9:00 — 9:20)
Announcement of MVA Award

Session 1: Motion Analysis (9:20 — 10:40)

- 1-1 **Solving Motion Planes by Projection and Ring Integration**
Gaspard Petit and Sebastien Roy, Canada
- 1-2 **3-D Object Tracking with the Adaptive Hyperplane Approach Using SIFT Models for Initialization**
Christoph Graessl, Timo Zinsser, Ingo Scholz and Heinrich Niemann, Germany
- 1-3 **Fusing Color and Contour in Visual Tracking**
Pham Nam Trung, Wu Jian Kang and Ong Sim Heng, Singapore
- 1-4 **Appearance Tracker Based on Sparse Eigentemplate**
Takeshi Shakunaga, Yasuharu Matsubara and Kiyoshi Noguchi, Japan

Break (10:40 — 11:00)

Session 2: Invited Talk 1 (11:00 — 12:00)

Towards Flexible and Intelligent Vision Systems: From Thresholding to CHLAC
Prof. Nobuyuki Otsu
(AIST / University of Tokyo, Japan)

Lunch (12:00 — 13:00)

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

- 3-1 **A Hyper-Resolution Scheme for Enhancement on a Down-Sampled Image**
Min-Cheng Pan, Taiwan
- 3-2 **Object Tracking Based on Kinematics with Spatio-temporal Blob**
C. Achard, G. Mostafaoui and M. Milgram, France
- 3-3 **On Describing Human Motions in an Eigenspace**
Satoshi Homan, Takehito Ogata, Joo Kooi Tan and Seiji Ishikawa, Japan
- 3-4 **Generating a Triangular Mesh Adapted for Shape Reconstruction from Images**
Atsutada Nakatsuji, Yasuyuki Sugaya and Kenichi Kanatani, Japan
- 3-5 **Construction of 3-D Paper-made Objects from Crease Patterns**
Hiroshi Shimanuki, Jien Kato and Toyohide Watanabe, Japan
- 3-6 **Silhouette Extraction for Visual Hull Construction**
Youngbae Hwang, Jun-Sik Kim and In So Kweon, Korea
- 3-7 **Practical 3-D Measurement Technique Using Optimal Intensity-Modulated Projection and Intensity-Phase Analysis**
Genki Cho and Cunwei Lu, Japan
- 3-8 **A Goniophotometric System for Measuring Object Surface Reflection Using Robot Arms**
Akira Kimachi, Masataka Tatsumi, Norihiro Tanaka and Shoji Tominaga, Japan

- 3-9 **Calibration of HyperOmni Vision Based on Conic Curve**
Tomohiro Mashita, Yoshio Iwai and Masahiko Yachida, Japan
- 3-10 **Robust Invariant Features for Object Recognition and Mobile Robot Navigation**
Zhe Lin, Sungho Kim and In So Kweon, Korea
- 3-11 **Tree Segmentation from an Image**
Chin-Hung Teng, Yung-Sheng Chen and Wen-Hsing Hsu, Taiwan
- 3-12 **Shape-based Image Retrieval Using Support Vector Classification**
Wai-Tak Wong and Sheng-Hsun Hsu, Taiwan
- 3-13 **New Macroblock Engine Architecture for Video Processing**
Trio Adiono, Dani Fitriyanto, Akhmad Mulyanto, Sumek Wisayataksin, Kazumasa Takeichi, Dongju Li, Tati L.R. Mengko and Hiroaki Kunieda, Indonesia
- 3-14 **Fast Discrete Wavelet Transformation Daubechies-four Architecture**
Akhmad Mulyanto, Dani Fitriyanto, Tati L.R. Mengko and A.Z.R. Langi, Indonesia
- 3-15 **A New Automated Microtomy Concept for 3D Paper Structure Analysis**
Michael Donoser, Mario Wiltsche, Horst Bischof and Wolfgang Bauer, Austria
- 3-16 **A Heterodyning Range Imager**
M.,J. Cree, A.A. Dorrington and D.A. Carnegie, New Zealand
- 3-17 **Advanced Auto-optical Inspection System for OLED Panel**
Der-Baau Perng, Yen-Chung Chen and Meng-Kun Lee, Taiwan
- 3-18 **Quality Control of Nazel Nuts Using Thermographic Image Processing**
Christina Warmann and Volker Maergner, Germany
- 3-19 **Automatic Wear Measurement of Ti-based Coatings Milling via Image Registration**
Yu-Teng Liang, Yih-Chih Chiou and Chien-Jiong Louh, Taiwan
- 3-20 **An Approach for Defect Detection and Classification of the Yarn Ends for Splicing**
Khaled Issa and Hiroshi Nagahashi, Japan
- 3-21 **Multivariate Sparse Bayesian Regression and Its Application for Facial Feature Detection**
Yoshio Iwai and Roberto Cipolla, Japan
- 3-22 **Multi-view Human Head Detection in Static Images**
Maolin Chen, Gengyu Ma and Seokcheol Kee, China
- 3-23 **Face Recognition Using Local Features Based on Two-layer Block Model**
Wonjun Hwang, Ji-Yeun Kim and Seokcheol Kee, Korea
- 3-24 **Probabilistic Framework for Intelligent Filming by Switching Temporarily Locked Pan-Tilt Cameras**
Hicham Bouchnaif, Yoshinari Kameda, Yasuhiro Mukaigawa and Yuichi Ohta, Japan
- 3-25 **Interactive Retrieval in Facial Image Database Using Self-Organizing Maps**
Zhirong Yang and Jorma Laaksonen, Finland
- 3-26 **Fast Detection of Multi-View Face and Eye Based on Cascaded Classifier**
Jung-Bae Kim, Seok-Cheol Kee and Ji-Yeun Kim, Korea

- 3-27 **Combining Computer Graphics and Image Processing for Low Cost Realistic 3D Face Generation and Animation**
Alexander Mark Woodward and Patrice Delmas, New Zealand
- 3-28 **Road and Traffic Sign Color Detection and Segmentation – A Fuzzy Approach**
Hasan Fleyeh, Sweden
- 3-29 **Vehicle Speed Estimation from Single Still Images Based on Motion Blur Analysis**
Huei-Yung Lin and Kun-Jih Li, Taiwan
- 3-30 **Detection of Pedestrian Crossing Using Bipolarity and Projective Invariants**
Mohammad Shorif Uddin and Tadayoshi Shioyama, Japan
- 3-31 **Building Classification of Terrestrial Images by Generic Geometric Hierarchical Cluster Analysis Features**
Gerd Brunner and Hans Burkhardt, Germany
- 3-32 **A Localization System Using Invisible Retro-reflective Markers**
Yusuke Nakazato, Masayuki Kanbara and Naokazu Yokoya, Japan
- 3-33 **Scene Change Detection Using Multi-class Support Vector Machine with MPEG Encoding Information**
Mickael Pic and Takio Kurita, Japan
- 3-34 **A Novel Algorithm of Unsupervised Multiresolution Semantic Object Extraction**
Xing Qiang, Yuan Baozong and Tang Xiaofang, China
- 3-35 **Visual Speech Features Representation for Improved Japanese Lip-reading System**
Alaa Sagheer, Naoyuki Tsuruta, Rin-Ichiro Taniguchi and Sakashi Maeda, Japan
- 3-36 **Inter-modal Learning and Object Concept Acquisition**
Katsuhiko Ishiguro, Nobuyuki Otsu and Yasuo Kuniyoshi, Japan
- 3-37 **Laser-based People Recognition**
Katsuyuki Nakamura, Huijing Zhao and Ryosuke Shibasaki, Japan
- 3-38 **Restoration of Images Stained with Waterdrops on a Protection Glass Surface by Using a Stereo Image Pair**
Yuu Tanaka, Atsushi Yamashita, Toru Kaneko and Kenjiro T. Miura, Japan
- 3-39 **A Study of Visual Attention System Based on Recognition Feedback for Image Sequence**
Makoto Ito, Yoshikazu Yano and Shigeru Okuma, Japan
- 3-40 **Personal Authentication Based on Hands Natural Layout**
Miguel Adán, Antonio Adán, Roberto Torres, Andrés S. Vázquez and Gloria Bueno, Spain

Session 4: Feature Extraction (14:30 — 16:10)

- 4-1 **A Robust Active Contour Initialization and Gradient Vector Flow for Ultrasound Image Segmentation**
Clovis Tauber, Hadj Batatia and Alain Ayache, France
- 4-2 **Automatic Landmark Extraction from a Class of Hands Using Growing Neural Gas**
Anastasia Angelopoulou, José García and Alexandra Psarrou, UK
- 4-3 **Robust Active Shape Model Using AdaBoosted Histogram Classifiers**
Yuanzhong Li and Wataru Ito, Japan
- 4-4 **Genetic Algorithm Based Affine Point Pattern Matching Using Matrix Polar Decomposition**
Mehdi Ezoji, Karim Faez and Majid Ziaratban, Iran
- 4-5 **IPH: an Integrated Probabilistic Histogram for Measuring Image Similarity in HSV Color Space**
Tatsuyuki Kawamura, Takahiro Ueoka, Yutaka Kiuchi, Yasuyuki Kono and Masatsugu Kidode, Japan

Break (16:10 — 16:30)

Session 5: Range & 3D Analysis (16:30 — 18:10)

- 5-1 **Dynamic Light Field Reconstruction and Rendering for Multiple Moving Objects**
Ingo Scholz, Christian Vogelgsang, Joachim Denzler and Heinrich Niemann, Germany
- 5-2 **Statistical Optimization for 3-D Reconstruction from a Single View**
Kenichi Kanatani and Yasuyuki Sugaya, Japan
- 5-3 **Markov Chain Monte Carlo Algorithms for 3D Ranging and Imaging**
Sergio Hernandez Marin, Andrew M. Wallace and Gavin J. Gibson, UK
- 5-4 **Smooth Energy Auto-estimation for Graph Cuts Algorithm**
Haibing Ren, Jiali Zhao and Seokcheol Kee, China
- 5-5 **Photometric Linearization under Near Point Light Sources**
Satoshi Sato, Kazutoyo Takata and Kunio Nobori, Japan

Tuesday, May 17, 2005

Session 6: Applications in Industry (9:00 — 10:40)

- 6-1 **A Hierarchical Classification System for US Bank Notes**
Tatsuhiko Kagehiro, Hiroto Nagayoshi and Hiroshi Sako, Japan
- 6-2 **Visual Characterization of Paper Using Isomap and Local Binary Patterns**
Markus Turtinen and Matti Pietikäinen, Finland
- 6-3 **Forensic Retrieval of Striations on Fired Bullets by Using 3D Geometric Data**
Atsuhiko Banno, Tomohito Masuda and Katsushi Ikeuchi, Japan
- 6-4 **A Hybrid Structural/Statistical Classifier for Handwritten Farsi/Arabic Numeral Recognition**
Saeed Mozaffari, Majid Ziaratban and Karim Faez, Iran
- 6-5 **Recognition of Character Strings Printed with Large Alignment Error**
Minenobu Seki, Toshikazu Takahashi, Takeshi Nagasaki, Hiroshi Shinjo and Katsumi Marukawa, Japan

Break (10:40 — 11:00)

Session 7: Invited Talk 2 (11:00 — 12:00)

Cognitive Development in a Humanoid Robot
Prof. Giulio Sandini
(University of Genova, Italy)

Lunch (12:00 — 13:00)

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

- 8-1 **Real Time 2D Image Stabilization: Algorithmical Aspects and Parallel Implementation**
Fabio Dias, Jean-Pierre Derutin and Lionel Damez, France
- 8-2 **Template Matching for Target Tracking with SSE and GMMs**
Zhen Jia and Arjuna Balasuriya, Singapore
- 8-3 **View Distance Based Human Motion Analysis**
Murat Ekinci, Eyup Gedikli and Vasif Nabyev, Turkey
- 8-4 **Measuring the Shape of Sewer Pipes from Video**
Juhu Kannala and Sami S. Brandt, Finland
- 8-5 **Architectural Reconstruction from Single or Multiple Uncalibrated Images**
Huei-Yung Lin, Syuan-Liang Chen and Jen-Hung Lin, Taiwan
- 8-6 **Passive Specular Surface Measurements from Virtual Images of Pattern Boards**
Kazuya Nagamine, Yu Suzuki and Minoru Ito, Japan

- 8-7 **Feature Point Matching of Stereo Images by Using a Projective Invariant**
Yusuke Ishida, Toshimitsu Tanaka, Noboru Sugie and Yuji Sagawa, Japan
- 8-8 **Add Cartesian Differential Invariants to Minimum Description Length Shape Models**
Shaoyu Wang, Feihu Qi and Huaqing Li, China
- 8-9 **Thresholding Based Detection of Fine and Sparse Details**
A. Drobchenko, J. Vartiainen, J.-K. Kamarainen, L. Lensu and H. Kälviäinen, Finland
- 8-10 **Understanding Folding Process of Origami Drill Books Based on Graphic Matching**
Takashi Terashima, Hiroshi Shimanuki, Jien Kato and Toyohide Watanabe, Japan
- 8-11 **A New Scheme for Image Recognition Using Higher-Order Local Autocorrelation and Factor Analysis**
Naoyuki Nomoto, Yusuke Shinohara, Takayoshi Shiraki, Takumi Kobayashi and Nobuyuki Otsu, Japan
- 8-12 **A Real-time Conic Sections Detection Based on the Error Theory**
Yi Wei and Huazhong Xu, China
- 8-13 **A Technique for Computer-based Analysis of Retinal Images**
Toshiaki Kondo, Thailand
- 8-14 **Automated Detection of Unimpaired Joint Space for Knee OA Assessment**
Donny Danudirdjo, Tati L.R. Mengko, Rachmat G. Wachjudi and Andriyan B. Suksmo, Indonesia
- 8-15 **Vessel Segmentation in Angiograms Using Hysteresis Thresholding**
Alexandru Condurache and Til Aach, Germany
- 8-16 **An Artificial Emotion Imitator**
Do Hyoung Kim, Kwang Ho An and Myung Jin Chung, Korea
- 8-17 **Facial Expression Recognition in Continuous Videos Using Linear Discriminant Analysis**
Fadi Dornaika and Franck Davoine, Spain
- 8-18 **Novel Pose-Variant Face Detection Method for Human-Robot Interaction Application**
Taigun Lee, Sung-Kee Park and Mignon Park, Korea
- 8-19 **Head Pose Estimation Using Adaptive Scaling Template Matching**
Miki Yamada, Osamu Yamaguchi, Akiko Nakashima, Takeshi Mita and Kazuhiro Fukui, Japan
- 8-20 **Combining Model-based Classifiers for Face Localization**
R. Belaroussi, L. Prevost and M. Milgram, France
- 8-21 **Face Detection Using Hierarchical Integral Projections**
Ming Li, Baozong Yuan, Ming Liu, China
- 8-22 **Hand Gestures Expressing Numbers and Its Application to Personal Identification**
Norifumi Machida and Tetsuji Kobayashi, Japan
- 8-23 **Particle Filter for Visual Tracking Using Multiple Cameras**
Ya-Dong Wang, Jian Kang Wu and Ashraf A. Kassim, Singapore
- 8-24 **Pedestrian Detection and Identification Using Two Cameras**
Naoya Ohta and Anthony Dick, Australia
- 8-25 **Traffic Signs Color Detection and Segmentation in Poor Light Conditions**
Hasan Fleyeh, Sweden
- 8-26 **Extracting Roads from Aerial Images Using Feature-based Classifiers**
Fatih Porikli, Jie Saho and Hide Maehara, USA
- 8-27 **Fast Position Estimation for Autonomous Mobile Robot Navigation**
Shamsolah Saleman, Iran
- 8-28 **A Cognitive Vision System for Space Robotics**
Faisal Z. Qureshi, Demetri Terzopoulos and Piotr Jasiobedzki, Canada
- 8-29 **Object Recognition Using Environmental Cues Mentioned Explicitly or Implicitly in Speech**
Md. Altob Hossain, Rahamadi Kurnia, Akio Nakamura and Yoshinori Kuno, Japan
- 8-30 **Motion Stabilization of Biped Robot by Gaze Control**
Shota Takizawa, Shun Ushida, Takayuki Okatani and Koichiro Deguchi, Japan
- 8-31 **Real-Time Object Recognition through Visual and Textual Memory**
Matthew Johnson and Roberto Cipolla, UK
- 8-32 **Real-Time Transmission of 3D Video to Multiple Users via Network**
Takayoshi Koyama, Yasuhiro Mukaigawa, Yoshinari Kameda and Yuichi Ohta, Japan
- 8-33 **Regional Video Insertion through Robust Region Tracking in the Presence of Occluding Objects**
Chang-Hwan Lee, Dae-Woong Kim and Ki-Sang Hong, Korea
- 8-34 **Fast Cross-sectional Display of Large Data Sets**
V.J. Dercksen, S. Prohaska and H.-C. Hege, Germany
- 8-35 **A Preprint Dropout for Form Images Based on Line-elimination and Image-subtraction**
Yoshihiro Shima, Japan
- 8-36 **Adaptive Vector Quantization of Sequences of Local Blocks for Video Surveillance System**
Mickael Pic and Takio Kurita, Japan
- 8-37 **Extraction of Finger-vein Patterns Using Maximum Curvature Points in Image Profiles**
Naoto Miura, Akio Nagasaka and Takafumi Miyatake, Japan
- 8-38 **Personal Identification with Human Iris Recognition Based on Wavelet Transform**
Wen-Shiung Chen, Kun-Huei Chih, Sheng-Wen Shih and Chih-Ming Hsieh, Taiwan
- 8-39 **Thresholding, Noise Reduction and Skew Correction of Sinhala Handwritten Words**
M.L.M. Karunanayaka, C.A. Marasinghe and N.D. Kodikara, Sri Lanka
- 8-40 **Modeling and Visualization of Rock Carving Cultural Heritage Sites in Dazu**
Chen Junfeng, Li Bianru and Wang Purui, China
- Session 9: Sensors & Automation Systems**
(14:30 — 16:10)
- 9-1 **A 3D Measurement by Hand-Sweep Light Striping**
Tadashi Hyuga and Kosuke Sato, Japan
- 9-2 **High-Speed and Cost Effective Machine Vision System Within the Industry of Preserved Vegetables**
C. Fernandez, P.J. Navarro, J. Suardiaz, M. Jimenez and A. Iborra, Spain
- 9-3 **Contrast Optimization in a Multi-Windowing Image Processing Architecture**
F. Berry and P. Chalimbaud, France
- 9-4 **Detection of Irregularities in Regular Dot Patterns**
A. Sadovnikov, J. Vartiainen, J.-K. Kamarainen, L. Lensu and H. Kälviäinen, Finland
- 9-5 **Skeletons and Asynchronous RPC for Embedded Data- and Task Parallel Image Processing**
Wouter Caarls, Pieter Jonker and Henk Corporaal, Netherlands
- Break** (16:10 — 16:30)
- Session 10: Intelligent Transport Systems**
(16:30 — 18:10)
- 10-1 **On Road Simultaneous Vehicle Recognition and Localization by Model Based Focused Vision**
Noel Trujillo, Roland Chapuis, Frederic Chausse and Christophe Blanc, France

- 10-2 **Vehicle Occlusion Identification System by Perceptive Roadway Modeling**
Wen-Fong Hu, Yung-Sheng Chen and Jui-Wei Hsieh, Taiwan
- 10-3 **A Reliable and Robust Lane Detection System Based on the Parallel Use of Three Algorithms for Driving Safety Assistance**
Jerome Douret, Raphael Labayrade, Jean Laneurit and Roland Chapuis, France
- 10-4 **Pedestrian Detection by Boosting Soft-Margin SVM with Local-Feature Selection**
Kenji Nishida and Takio Kurita, Japan
- 10-5 **Estimation of FOE without Optical Flow for Vehicle Lateral Position Detection**
Tomoaki Teshima, Hideo Saito, Shinji Ozawa, Keiichi Yamamoto and Tohru Ihara, Japan

Wednesday, May 18, 2005

Session 11: Face Image Analysis (9:00 — 10:40)

- 11-1 **Face Recognition Using SVM Fed with Intermediate Output of CNN for Face Detection**
Masakazu Matsugu, Katsuhiko Mori and Takashi Suzuki, Japan
- 11-2 **Robust Face Identification under Various Illumination Conditions**
Atsushi Matsumoto and Yoshiaki Shirai, Japan
- 11-3 **3D Facial Feature Location with Spin Images**
Cristina Conde, Roberto Cipolla, Licesio J. Rodríguez-Aragón, Ángel Serrano and Enrique Cabello, Spain
- 11-4 **Generating High-Definition Facial Video for Shared Mixed Reality**
Masayuki Takemura and Yuichi Ohta, Japan
- 11-5 **JPEG Compression Effects on a Smart Card Face Verification System**
Thirimachos Bourlai, Josef Kittler and Kieron Messer, UK

Break (10:40 — 11:00)

Session 12: Invited Talk 3 (11:00 — 12:00)

CHIL - Computers in the Human Interaction Loop
Prof. Alex Waibel
(Carnegie Mellon University, USA)

Lunch (12:00 — 13:00)

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

- 13-1 **Cooperative Usage of Monocular Camera and Omnidirectional Camera for Segmenting Moving Humans**
Thatsaphan Suwannathat and Masahide Kaneko, Japan
- 13-2 **Two-Axial Subtraction of Estimated Background Integral Projections: Fast Method in Automatic Target Detection and Tracking**
Ali Karandish, Ali Mahmoodi and Farid Behazin, Iran
- 13-3 **Fast Global Motion Estimation via Modified ILSE Method**
Jia Wang, Hanqing Lu, Qingshan Liu and Gérard Eude, China
- 13-4 **Building Reconstruction Strategy from Raw Airborne Laser Data: a Normal Driven RANSAC Approach**
F. Bretar, J. Leprieur, M. Roux and M. Pierrot-Deseilligny, France
- 13-5 **3D Reconstruction of Manufactured Parts Using Bi-directional Stereovision-based Contour Matching and Comparison of Real and Synthetic Images**
A. Far, S. Kohler and E. Hirsch, France

- 13-6 **Automatic 3D Face Modeling with Single Image and Perspective Projection Model**
Haibing Ren, Kyung-ah Sohn and Seokcheol Kee, China
- 13-7 **Using Orientation Code Difference Histogram (OCDH) for Robust Rotation-invariant Search**
Takahiro Urano, Shun'ichi Kaneko, Takayuki Tanaka and Munetoshi Imada, Japan
- 13-8 **Using Non-negative Sparse Features in Hierarchical Object Recognition Networks**
Ingo Bax, Gunther Heidemann and Helge Ritter, Germany
- 13-9 **Image-based Rendering Using Sliding Planes Modelisation**
Vincent Nozick, Sylvain Michelin and Didier Arques, France
- 13-10 **Translation Invariants of Three-Dimensional Legendre Moments**
Lee-Yeng Ong, Chee-Way Chong and Rosli Besar, Malaysia
- 13-11 **Moment-derived Object Models for Vectorization**
Mingyan Shao and Robert P. Futrelle, USA
- 13-12 **Criterion for Automatic Selection of the Most Suitable Maximum-Likelihood Thresholding Algorithm for Extracting Object from Their Background in a Still Image**
G. Martinez, Costa Rica
- 13-13 **A Novel Growing Deformable Surface Patches Model for Analysis of Medical Images**
Xujian Chen and Eam Khwang Teoh, Singapore
- 13-14 **Computer-assisted Diagnosis and Monitoring of Periodontal Diseases**
C.C. Leung, K.Y. Zee, P.C.K. Kwok and F.H.Y. Chan, Hong Kong
- 13-15 **Higher-dimensional Segmentation by Minimum-cut Algorithm**
Hiroshi Ishikawa and Davi Geiger, Japan
- 13-16 **Fixed-Center Pan-Tilt Projector and Its Calibration Methods**
Ikuhisa Mitsugami, Norimichi Ukita and Masatsugu Kidode, Japan
- 13-17 **Detecting Faces in Low-resolution Images**
Shinji Hayashi and Osamu Hasegawa, Japan
- 13-18 **Hand Gesture Recognition Based on Tolerant Rough Set**
Teng Xiaolong, Yu Weiwei and Liu Chongqing, China
- 13-19 **A Novel Spatially Confined Non-Negative Matrix Factorization for Face Recognition**
H.F. Neo, B.J. Teoh and C.L. Ngo, Malaysia
- 13-20 **Hand Pose Detection for Vision-based Gesture Interfaces**
Luis Antón-Canalís, Elena Sánchez-Nielsen and M. Castrillón-Santana, Spain
- 13-21 **Vision-based Sign Language Processing Using a Predictive Approach and Linguistic Knowledge**
Boris Lenseigne and Patrice Dalle, France
- 13-22 **Preceding Vehicle Detection Using Stereo Images and Non-Scanning Millimeter-wave Radar**
Eigo Segawa, Morito Shiohara, Shigeru Sasaki, Norio Hashiguchi, Tomonobu Takashima and Masatoshi Tohno, Japan
- 13-23 **A Driver's Assistance System with Overhead-view Surveillance System**
Nobuyuki Ozaki, Japan
- 13-24 **Detection of the Road Area at the Ordinary Road**
Madoka Otsuka, Kenichi Kamino, and Tameharu Hasegawa, Japan
- 13-25 **An Approach of Vehicle Monitoring Using Single-row Laser Range Scanner**
Wei Li, Rong Zhang, Zhengkai Liu, Huijing Zhao and Ryosuke Shibasaki, China

- 13-26 **Fast Quality Measurement of a H263+ Video Stream for Teleoperating a HRP-2 Humanoid Robot**
Olivier Stasse, Neo Ee Sian, Kazuhito Yokoi, Gabriel Dauphin and Patrick Bonnin, Japan
- 13-27 **Self-organizing Maps for Visual Exploration**
Paolo Remagnino and Ndedi Monekosso, UK
- 13-28 **Robust Horizon and Peak Extraction for Vision-based Navigation**
Ji-Hwan Woo, Kwan-Sung Kim and In So Kweon, Korea
- 13-29 **Variable Pulse Mode Driving IR Source Based 3D Robotic Camera**
Sukhan Lee, Byungchan Jung, Seungsub Oh, Jeongtaek Oh, Changsik Choi, Jongmoo Choi and Hoonmo Kim, Korea
- 13-30 **Automatic Construction of the Motion Database which Allow to Search Contents by a Motion Name**
Takashi Yukawa, Naoko Obara and Hideo Tamamoto, Japan
- 13-31 **On Using Histograms of Local Invariant Features for Image Retrieval**
Alaa Halawani and Hans Burkhardt, Germany
- 13-32 **SVM-based Relevance Feedback in Image Retrieval Using Invariant Feature Histograms**
Lokesh Setia, Julia Ick and Hans Burkhardt, Germany
- 13-33 **High Dynamic Range Video through Fusion of Exposed-Controlled Frames**
Seung-Jun Youm, Won-Ho Cho and Ki-Sang Hong, Korea
- 13-34 **Efficient Block-based Motion Segmentation Method Using Motion Vectors Consistency**
Ronald H.Y. Chung, Kenneth K.Y. Wong, Francis Y.L. Chin, K.P. Chow and Henry S.K. Fung, Hong Kong
- 13-35 **Efficient Minutiae-based Fingerprint Matching**
Soenke Mueller, Gerald Eckert and Torsten Wiebesiek, Germany
- 13-36 **FPGA Realization of Partial Encryption for Compressed Images**
M.B.I. Reaz, F. Mohd-Yasin, S.L. Tan and H.Y. Tan, Malaysia
- 13-37 **An Image Watermarking Method Based on Mean-Removed Vector Quantization for Multiple Purposes**
Zhe-Ming Lu and Zhen Sun, China
- 13-38 **Performance Evaluation of Fractal Feature in Recognition of Postal Codes Using an RBF Neural Network and SVM Classifier**
Saeed Mozaffari, Karim Faez and Hamidreza Rashidy Kanan, Iran

- 13-39 **Adaptive Image Translation for Painterly Rendering**
Kenji Hara, Kohei Inoue and Kiichi Urahama, Japan

Session 14: Human Behavior (14:30 — 16:10)

- 14-1 **Human Activity Recognition Using Sequences of Postures**
Vili Kellokumpu, Matti Pietikäinen and Janne Heikkilä, Finland
- 14-2 **Unsupervised Abnormality Detection in Video Surveillance**
Takuya Nanri and Nobuyuki Otsu, Japan
- 14-3 **HHMM Based Recognition of Human Activity from Motion Trajectories in Image Sequences**
Daiki Kawanaka, Shu Ushida, Takayuki Okatani and Koichiro Deguchi, Japan
- 14-4 **Tracking from Multiple Soccer Videos and Recognizing Event**
Kyuhyoung Choi and Yongduck Seo, Korea
- 14-5 **Head Pose Estimation System Based on Particle Filtering with Adaptive Diffusion Control**
Kenji Oka, Yoichi Sato, Yasuto Nakanishi and Hideki Koike, Japan

Break (16:10 — 16:30)

Session 15: Outdoor Applications (16:30 — 17:50)

- 15-1 **Estimation of the Visibility Distance by Stereovision: a Generic Approach**
Nicolas Hautiere, Raphael Labayrade and Didier Aubert, France
- 15-2 **Uncertain RANSAC**
Ben Tordoff, UK
- 15-3 **Shadow Compensation in Color Images for Unstructured Road Segmentation**
Ramin Ghurchian and Satoshi Hashino, Japan
- 15-4 **Immersive Telepresence System with a Locomotion Interface Using High-resolution Omnidirectional Videos**
Sei Ikedai, Tomokazu Sato, Masayuki Kanbara and Naokazu Yokoya, Japan