

**Advance Program and Call for Participation**

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**IAPR**  **MVA2002**

*IAPR WORKSHOP ON MACHINE VISION APPLICATIONS*

**December 11-13, 2002**

**Nara-ken New Public Hall, Nara, JAPAN**

*Topics*

**Machine Vision and its Applications**

Algorithms / Architectures / Applications  
Factory Automation / Intelligent Transport Systems / Multimedia  
Medical / Geographic Information System /  
Human Computer Interaction / Wearable Computing / Security

*Workshop Co-chairs*

Masatsugu KIDODE (Nara Institute of Science and Technology)

Mikio TAKAGI (Science University of Tokyo)

*Program Chair*

Hiroyasu KOSHIMIZU (Chukyo University)

*Sponsored by*

IAPR MVA Organizing Committee  
Nara Institute of Science and Technology

*In cooperation with*

Information Processing Society of Japan  
Institute of Electrical Engineers of Japan  
Institute of Electronics, Information and Communication Engineers  
Institute of Image Electronics Engineers of Japan  
Institute of Image Information and Television Engineers  
Institute of Systems, Control and Information Engineers  
Japan Academy of Facial Studies  
Japanese Society for Artificial Intelligence  
Japanese Society for Non-destructive Inspection  
Japan Society for Precision Engineering  
Robotics Society of Japan  
Society of Instrument and Control Engineers  
Virtual Reality Society of Japan

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Masatsugu KIDODE (Nara Institute of Science  
and Technology)

Mikio TAKAGI (Science University of Tokyo)

### Program Chair

Hiroyasu KOSHIMIZU (Chukyo University)

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# Advance Program

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**Wednesday, December 11, 2002**

**Registration** (8:30 — 9:00)

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

**Session 1: Robot & FA** (9:20 — 10:20)

- 1-1 **Using Available Potentials of Vision-Based Robots by Converting Passive Watching into Active Seeing**  
Minh-Chinh Nguyen and Volker Graefe, Germany
- 1-2 **Pose Estimation for Insertion of Orbital Replacement Units Against Cluttered Background Using a Non-calibrated Camera**  
Chiun-Hong Chien, USA
- 1-3 **Practical Pattern Detection from Distributed Defect Points on a Semiconductor Wafer**  
Hisae Shibuya and Yuji Takagi, Japan

**Break** (10:20 — 10:40)

**Session 2: Color & Illumination** (10:40 — 12:20)

- 2-1 **Separating Diffuse and Specular Reflection Component Based-on Surface Color Ratio and Chromaticity**  
Robby T. Tan, Ko Nishino and Katsushi Ikeuchi, Japan
- 2-2 **Analysis of Human Skin Color Images for a Large Set of Color Space and for Different Camera Systems**  
Jean-Christophe Terrillon, Arnaud Pilpre, Yoshinori Niwa and Kazuhiko Yamamoto, Japan
- 2-3 **Determining Shape of Transparent Objects from Two Polarization Images**  
Daisuke Miyazaki and Katsushi Ikeuchi, Japan
- 2-4 **Calibration of Real Scenes for the Reconstruction of Dynamic Light Fields**  
Ingo Scholz, Joachim Denzler and Heinrich Niemann, Germany
- 2-5 **Natural Image Correction by Iterative Linear Projection onto Eigenspaces**  
Fumihiko Sakaue and Takeshi Shakunaga, Japan

**Lunch** (12:20 — 13:20)

**Session 3: Poster Session 1** (13:20 — 14:50)

- 3-1 **Nonlinear Refinement of Camera Parameters using an Endoscopic Surgery Robot**  
Jochen Schmidt, Florian Vogt and Heinrich Niemann, Germany
- 3-2 **A Detection Method of a White Road Line Using Jensen-Shannon divergence and Morphology**  
Naoki Tanaka, Japan
- 3-3 **Skin-color-Based Image Segmentation and Its Application in Face Detection**  
Quan Huynh-Thu, Mitsuhiko Meguro and Masahide Kaneko, Japan
- 3-4 **An Automatic Recording System of the Plays and Moves of SHOGI Games using Image-processing Technique**  
Ryouji Minehara, Tomoki matsumoto, Tsuyoshi Shinogi, Tomohiro Yoshikawa and Shinji Tsuruoka, Japan

- 3-5 **Non-contact Virtual Clay Modeling Interface using Multi-viewpoint Images**  
Etsuko Ueda, Yoshio Matsumoto and Tsukasa Ogasawara, Japan
- 3-6 **Robust Tracking Algorithm Based on Color and Edge Distribution for Real-time Video Based Motion Capture Systems**  
Yoshiaki Akazawa, Yoshihiro Okada and Koich Nijima, Japan
- 3-7 **Run Representation Based Minutiae Extraction in Fingerprint Image**  
Hui-Yeoun Hwang, Jung-Hwan Shin, Sung-Il Chien and Joon-Jae Lee, Korea
- 3-8 **Constituting Feasible Folding Operations Using Incomplete Crease information**  
Hiroshi Shimanuki, Jien Kato and Toyohide Watanabe, Japan
- 3-9 **Simultaneous Estimation of Head Pose and Shape by Hierarchical Control System**  
Junji Satake and Takeshi Shakunaga, Japan
- 3-10 **Adaptive Background Estimation for Object Tracking**  
Ryunosuke Itoh, Yoshio Iwai and Masahiko Yachida, Japan
- 3-11 **Removal of Adherent Waterdrops in Image by using Multiple Cameras**  
Masayuki Kuramoto, Atsushi Yamashita, Toru Kaneko and Kenjiro T.Miura, Japan
- 3-12 **A Functionally-Distributed Hand Tracking Method for Wearable Visual Interface and Its Applications**  
Takeshi Kurata, Takekazu Kato, Masakatsu Kourogi, Jung Keechul and Ken Endo, Japan
- 3-13 **Enhancing Character Recognition by Optimizing Focal Length**  
Takahiro Shimmura, Yoshinao Shiraki, Naoki Mukawa, Minako Sawai and Norichiro Hagita, Japan
- 3-14 **HySIM: A Hybrid-space Image Matching Method for a High Speed Location-Based Video Retrieval on a Wearable Computer**  
Tatsuyuki Kawamura, Norimichi Ukita, Yasuyuki Kono and Masatsugu Kidode, Japan
- 3-15 **Wearable Virtual Tablet: Fingertip Drawing Interface using an Active-Infrared Camera**  
Norimichi Ukita, Akihiro Terabe and Masatsugu Kidode, Japan
- 3-16 **Tracking Soccer Player Using Multiple Views**  
Sachiko Iwase, Hideo Saito, Japan
- 3-17 **A System for Locating License-plate Area from Images Taken under Complex Conditions**  
Sunghoon Kim, Changsub Park and Gyeonghwan Kim, Korea
- 3-18 **Identifying Body Parts of Multiple People in Multi-camera Image**  
Masafumi Tominaga, Hitoshi Hongo, Hiroyasu Koshimizu, Yoshinori Niwa and Kazuhiko Yamamoto, Japan
- 3-19 **An XML General Framework for Image Annotation, Storing and Retrieval**  
M.G.Albanesi, E.Benzi and M.Ferretti, Italy
- 3-20 **Hierarchical Combination of Face/Non-face Classifiers Based on Gabor Wavelet and Support Vector Machines**  
Young Hoon Sung, Tae-kyun Kim and Seok Cheol Kee, Korea
- 3-21 **Fingerprint Identification Using the Accidental Coincidence Probability**  
Akira Monden and Seiji Yoshimoto, Japan

- 3-22 **Detection of Foreign Bodies in Food by Thermal Imagery**  
G.Ginesu and D.Diusto, Italy
- 3-23 **Robustness of Gabor Feature Parameter Selection**  
J.-K. Kamarainen, V. Kyrki, H. Kälviäinen, Finland
- 3-24 **An Optimal Low Cost Solution for the 3D Free Form Object Recovering Pose Problem**  
Fakhreddine Ababsa, David Roussel and Malik Mallem, France
- 3-25 **Robust Object Recognition Based on Regular Framing and Depth Aspect Image**  
Tomoyuki Takeguchi and Shun'ichi Kaneko, Japan
- 3-26 **Plane-Based Camera Calibration: The Case of Pure Translation**  
Henrik Malm and Anders Heyden, Sweden
- 3-27 **Registration of Range Image Using Texture of High-Resolution Color Images**  
Kazushi Yoshida and Hideo Saito, Japan
- 3-28 **Detecting Moving Objects with an Omnidirectional Camera and Subtraction Whose Background Image is Renewed**  
Kazumasa Yamazawa and Naokazu Yokoya, Japan
- 3-29 **Pedestrian Tracking Using Single-row Laser Range Scanners**  
Huijing Zhao, Nobuaki Ishihara and Ryouzuke Shibasaki, Japan
- 3-30 **Recovering and Analyzing Wide Range Human Motions Based on Mobile Cameras**  
Tomonori Tabusa, Joo Kooi Tan and Seiji Ishikawa, Japan
- 3-31 **Shape from Silhouette and Neural Network Based Optimization**  
Haruki Kawanaka, Yuji Iwahori and Akira Iwata, Japan
- 3-32 **A Novel Feature Point Detection Algorithm Based on Strips**  
Chen Jingying and maylor Leung, Singapore
- 3-33 **Recognition of 3-D Free-form Objects using Distance-supported Shape Index**  
Dong-O Kim, Sang Wook Lee and Rae-Hong Park, Korea
- 3-34 **Variational Specular Separation Using Color and Polarization**  
Dae-wong Kim, Stephen Lin, Ki-Sang Hong and Heung-Yeung Shum, Korea
- 3-35 **Tinting Component Extraction from Gray-scale Image for Color Estimation**  
Shinya Koizumi and Takahiko Horiuchi, Japan
- 3-36 **Texture Analysis of Radiograph in the Assessment of Osteoporosis**  
Tati Rajab Mengko and J.Tjandra Pramudito, Indonesia
- 3-37 **Region-Based Mesh Simplification**  
Ye Jianhui, P.R.China
- 3-38 **A Novel Environment Fusion Checker for Developing Image Processing Applications**  
Hiroyasu Koshimizu and Makoto Toyotaka, Japan
- 3-39 **Fast Landmark Detection System Based on the Multi-resolution Image Matching Scheme for Home Robot Navigation**  
Shiraishi Atsushi and Sawasaki Naoyuki, Japan

**Session 4: Invited Talk 1** (14:50 — 15:50)  
**Computer Vision for Wearable Computing**  
Prof. Bernt Schiele  
(ETH Zurich)

**Break** (15:50 — 16:10)

**Session 5: HCI** (16:10 — 17:50)  
5-1 **Tracking Eyes using Shape and Appearance**  
Dan Witzner Hansen, Mads Nielsen, John Paulin Hansen, Anders Sewerin Johansen and Mikkel B. Stegman, Denmark

- 5-2 **A Remote Motion Capture System Based on Mobile Cameras**  
Joo Kooi Tan, Kouhei Tou and Seiji Ishikawa, Japan
- 5-3 **Detecting Scenes of Attention from Personal View Records-Motion Estimation Improvements and Cooperative Use of a Surveillance camera**  
Atsushi Kubota, Yuichi Nakamura and Yuichi Ohta, Japan
- 5-4 **Pedestrian Navigation Based on 3D Map and Mobile Interaction**  
Hideaki Maehara, Koji Wakimoto, Satoshi Tanaka, Sumio Usui and Kazuo Kamata, Japan
- 5-5 **Development of Immersive Teleoperating System for Unmanned Helicopter**  
Masanao Koeda, Yoshio Matsumoto and Tsukasa Ogasawara, Japan

**Thursday, December 12, 2002**

**Session 6: Human** (9:00 — 10:20)

- 6-1 **Human Spine Posture Estimation from 2D Frontal and Lateral Views Using 3D Physically Precise Spine Model**  
Daisuke Furukawa, Kensaku Mori and Yasuhiro Suenaga, Japan
- 6-2 **Invariant Gabor Features for Face Evidence Extraction**  
J.-K. Kamarainen, V. Kyrki, M. Hamouz, and J. Kittler, H. Kälviäinen, Finland
- 6-3 **Precise Pupil Contour Detection Based on Minimizing the Energy of Pattern and Edge**  
Mayumi Yuasa, Osamu Yamaguchi and Kazuhiro Fukui, Japan
- 6-4 **Adaptive Background Estimation and Shadow Removal in Indoor Scenes**  
Junya Morita, Yoshio Iwai and Masahiko Yachida, Japan

**Break** (10:20 — 10:40)

**Session 7: Medical** (10:40 — 12:00)

- 7-1 **Automated Calculation of Retinal Arteriovenous Ratio (for) Detection and Monitoring of Cerebrovascular Disease Based on Assessment of Morphological Changes of Retinal Vascular System**  
Radim Chràstek, Matthias Wolf, Klaus Donath, Georg Michelson and Heinrich Niemann, Germany
- 7-2 **Retinal Blood Vessel Extraction by using Multi-resolution Matched Filtering and Directional Region Growing Segmentation**  
Mitsutoshi Himaga, David Usher and James F. Boyce, Japan
- 7-3 **Contour Extraction in Medical Images Using B-Snake Model**  
Yue Wang, Eam Khwang Teoh and Dinggang Shen, Singapore
- 7-4 **Automatic Feature Extraction from non-uniform Finger Vein Image and its Application to Personal Identification**  
Naoto Miura, Akio Nagasaka and Takafumi Miyatake, Japan

**Lunch** (12:00 — 13:00)

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

- 8-1 **Development of Vision System for HRP-2P Humanoid**  
Yoshihiro Kawai, Yutaro Fukase, Yutaka Ishiyama, Ryouhei Ikeno and Fumiaki Tomita, Japan
- 8-2 **A Camera Revolver for Improved Image Stitching**  
Kei UTSUGI and Toshio MORIYA, Japan
- 8-3 **Lane Detection for Outdoor Autonomous Guided Vehicles Using Bayesian Shape model**  
Zhong Xue and Eam Khwang Teoh, USA

- 8-4 **Application to the Traffic Occlusion with Multiple Views**  
Tameharu Hasegawa and Heitoh Zen, Japan
- 8-5 **3D Muscle-Based Facial Image Construction Using Orthogonal Image Data**  
Hajime Sato, Yi-chih Liu, Jun Ohya and Nobuyoshi Terashima, Japan
- 8-6 **Improvement of Generalization Ability of Kernel-Based Fisher Discriminant Analysis for Recognition of Japanese Sign Language Hand Postures, "YUBI-MOJI", using K-means Method**  
Katsuya Yasumoto, Jun-ya Mizuno and Takio Kurita, Japan
- 8-7 **Detecting Faces in Color Image using an Adaptive Color Model and Salient Features**  
Hang-Bong Kang, Korea
- 8-8 **Entire Building Shape Recovery from Near Distance Images**  
Tsuyoshi Migita, Akira Amano and Naoki Asada, Japan
- 8-9 **PEG-Free Hand Geometry Recognition Using Hierarchical Geometry and Shape Matching**  
Alexandra L.N. Wong and Pengcheng Shi, Hong Kong
- 8-10 **3D Input Interface via Hand Motion Using Stereo Camera System for Wearable PC Environment**  
Eisaku Hori and Hideo Saito, Japan
- 8-11 **Multi-Cue Information Fusion for Robust Detection of Traffic Infrastructure**  
Lucas Paletta and Gerhard Paar, Austria
- 8-12 **Image Based Retrieval Method for Unrestricted Textline Direction Documents**  
Takakazu Noge and Takahiko Horiuchi, Japan
- 8-13 **Extraction of Character String Areas from Color Scenery Image using Extended Psychological Potential Field**  
Masanori Anegawa, Yukihiro Nagakura and Akira Nakamura, Japan
- 8-14 **Extraction of Face Regions and Eye Windows from a Set of Gray-scale Images with Different Face Orientations**  
Shigeya Sasane and Hideo Ogawa, Japan
- 8-15 **Co-Design of Reactive Embedded System for Motion Control in Hostile Environment**  
Narayanan Subramanian, Sunil Pandita and Rabi Mahapatra, USA
- 8-16 **Two-handed Gesture Tracking in the Case of Occlusion of Hands**  
Takanao Inaguma, Hitoshi Saji and Hiromasa Nakatani, Japan
- 8-17 **Automatic Extraction of Useful Sections for a Video Editing Support System**  
Masahito Kumano and Yasuo Arika, Japan
- 8-18 **Face Detection Using Scan-Line Based Hough Transform and MLP**  
Nam-kie Kim, Il Choi and Sung-Il Chien, Korea
- 8-19 **Extraction of Non Manual Features for Videobased Sign Language Recognition**  
Ulrich Canzler, Germany
- 8-20 **Decomposed Eigenface Method along with Image Correction for Robust Face Recognition**  
Takeshi Shakunage, Kazuma Shigenari and Fumihiro Sakaue, Japan
- 8-21 **Extraction of Moving Objects From Video Sequence Using Estimated Background Brightness**  
Tomiyasu Ishikawa, Shinji Fukui, Yuji Iwahori and Hidenori Itoh, Japan
- 8-22 **Advanced Image Retrieval Using Multi-resolution Image Content**  
Motohide Yoshimura, Hajime Kiyose and Shigeo Abe, Japan
- 8-23 **Boundary Representations in the Photoelastic Stress Analysis of Translucent Objects**  
A.Ghali, I.A.Jones, P.Wang and T.P.Pridmore, A.Becker, UK
- 8-24 **Probabilistic Model-Based Object Recognition using Local Zernike Moments**  
Sung-Ho Kim and In-So Kweon, Korea
- 8-25 **A Basic Consideration on Estimation of Robot Positions by Observing Unknown Environment**  
Keiji Gyohten, Koji Nagamura, Tsuyoshi Yoshikawa, Kazuhiko Sakamoto, Yoshiyuki Soma, Takashi Shimazaki and Tsuneo Kagawa, Japan
- 8-26 **Pose Estimation of Polygonal Object in Monocular Vision by Nonlinear Optimization**  
Mohamed Bénallal and Jean Meunier, France
- 8-27 **Joint Distribution of Local Image Features for Appearance Modeling**  
David Guillet and Baback Moghaddam, USA
- 8-28 **A Knowledge-Based Registration System using Radio-Frequency Identification**  
Mustapha Boukrra and Shigeru Ando, Japan
- 8-29 **A Method for Reconstructing Structure from Omnidirectional View Sequence without Feature Matching**  
Moldovan Daniel, Takahiro Miyashita and Hiroshi Ishiguro, Japan
- 8-30 **Character Recognition of Thick Books using a Stereo Vision System**  
Atsushi Kawarago, Atsushi Yamashita, Toru Kaneko and Kenjiro T.Miura, Japan
- 8-31 **Integration of Multi-view Panoramic Range Data using Global Features**  
Hidekazu Hirayu, Caihua Wang, Hideki Tanahashi, Yoshinori Niwa and Kazuhiro Yamamoto, Japan
- 8-32 **Global Motion Estimation Based on the Constrained Spatio-temporal Gradient Method in Model-Based Coding**  
YoungWook Sohn, Doo-Hyun Kim, Dong-O Kim and Rae-Hong Park, Korea
- 8-33 **Change Detection Using Multisensor Image Classification Based on PNN, EM Algorithm and Compound Classifier**  
Wawan Setiawan, Aniati Murni and Benjamin Kusumoputro, Indonesia
- 8-34 **A High-Quality Stereo Algorithm by Integrating SEA and EVL**  
Takashi Noguchi and Yuichi Ohta, Japan
- 8-35 **Precise and Reliable Image Shift Detection by a New Phase Difference Analysis Method**  
Isamu Kouduki, Masaaki Fujiyama, Tomonori Kaneko and Minoru Ito, Japan
- 8-36 **Auto-Surface Reconstruction with Alpha Shape**  
Xiaolong Xu, Koichi Harada, Japan
- 8-37 **1KHz Smart Camera with Image Processing Feature**  
Munenori Takumi, Haruyoshi Toyoda, Naohisa Mukozaka and Seiichiro Mizuno, Japan
- 8-38 **High Performance 3D laser sensors for the characterization of road surface defects**  
John Laurent, Canada
- 8-39 **Observation of Pedestrian with Multiple views**  
Tokuyuki Mahara, Tameharu Hasegawa and Heitoh Zen, Japan
- Session 9: Invited Talk 2 (14:30 — 15:30)**  
**Navigation Diagnosis and Augmented Endoscopy - Cooperative Use of Real and Virtual Human Body**  
Prof. Jun-ichiro Toriwaki  
(Nagoya University)
- Break (15:30 — 15:50)**

**Session 10: Motion & Image Sequence (15:50 — 17:30)**

- 10-1 **3-Dimensional Tracking of Multiple Object Motions from Multi-view Image by Mixed-state CONDENSATION Algorithm**  
Koichiro Deguchi, Koji Hamasaki, Taira Nakajima and Takayuki Okatani, Japan
- 10-2 **Automatic Camera Model Selection for Multibody Motion Segmentation**  
Yasuyuki Sugaya and Kenichi Kanatani, Japan
- 10-3 **Compression Performance of Computer Vision Based Coding**  
Franck Galpin, Luce Morin and Koichiro Deguchi, Japan
- 10-4 **Super-Resolved Image Synthesis from Uncalibrated Camera with Unknown Motion**  
Shinichiro Sei and Hideo Saito, Japan
- 10-5 **Mosaics of Japanese Picture Scrolls**  
Naoki Chiba, Japan

**Friday, December 13, 2002**

**Session 11: Pattern & Object Recognition (9:00 — 10:00)**

- 11-1 **A Multi-class Pattern Recognition Method by Combined Use of Multinomial Logit Model and K-Nearest Neighbor Rule**  
Osamu Hasegawa and Takio Kurita, Japan
- 11-2 **Generic Hierarchic Object Models and Classification Based on Probabilistic PCA**  
Christopher Drexler, Joachim Denzler and Frank Mattern, Germany
- 11-3 **A Study on Sea Surveillance System with Flapping Reference Image**  
Kazuya Takahashi, Miyuki Fujii, Toshimichi Okada, Naoyuki Shimbo and Wataru Ito, Japan

**Break (10:00 — 10:20)**

**Session 12: Background (10:20 — 12:00)**

- 12-1 **Improved Adaptive Mixture Learning for Robust Video Background Modeling**  
Dar-Shyang Lee, USA
- 12-2 **Realtime Estimation of Illumination Image using Illumination Eigenspace**  
Yasuyuki Matsushita, Ko Nishino, Katsushi Ikeuchi and Masao Sakauchi, Japan
- 12-3 **Adaptive Background Estimation**  
Mickael Pic, Luc Berthouze and Takio Kurita, Japan
- 12-4 **Region Extraction with Chromakey using Striped Backgrounds**  
Atsushi Yamashita, Toru Kaneko, Shinya Matsushita and Kenjiro T.Miura, Japan
- 12-5 **Reconstruction of Outdoor Sculptures from Silhouettes under Approximate Circular Motion of an Uncalibrated Hand-Held Camera**  
Kenneth Wong and Roberto Cipolla, Hong Kong

**Lunch (12:00 — 13:00)**

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

- 13-1 **Can Seam Diagnosis from Still Image Processing**  
Perfecto Mariño, César A. Sigüenza, Vicente Pastoriza, Miguel Santamaría, Emilio Martínez and Fernando Machado, Spain
- 13-2 **Reliable Detection of Obstacles on Staircases**  
Reinhold Huber, Christoph Nowak, Bernhard Spatzek and David Schreiber, Austria
- 13-3 **Extraction of Road Traffic Information from the Time Sequence of Aerial Images**  
Motoi Soga and Hitoshi Saji, Japan

**13-4 Locating Vehicles in a Parking Lot by Image Processing**

- Chihping Hsu, Toshimitsu Tanaka and Noboru Sugie, Japan
- 13-5 **A Method of Writer Verification without Keyword Registration using Feature Sequenced of Pressure of On-line Handwritten Sentence**  
Hiroshi Kameya, Shunji Mori and Ryuichi Oka, Japan
- 13-6 **A proposal of Facial Expression Analysis using a Face Plane**  
Hideyuki Negishi, Hiroyuki Hase, Masaaki Yoneda and Jien Kato, Japan
- 13-7 **A Set of Mesh Features for Automatic Visual Speech Recognition**  
Hyun-Hwa Oh, Young-Mi Jeoun and Sung-Il Chien, Korea
- 13-8 **Pose Detection of 3D Object by Genetic Algorithm**  
Kimiya Aoki, Toyohisa Kaneko, Japan
- 13-9 **A Watermarking Scheme to Multimedia Contents Using Simple-scrambler and Band Division.**  
Munetoshi Iwakiri, Shinji Ozawa and Kineo Matsui, Japan
- 13-10 **An Interactive Human Face Image Searching System using Sketch**  
Pong C Yuen and C H Man, Hong Kong
- 13-11 **Quantitative Evaluation of Damaged Areas of Big Earthquake Detected by Image Processing**  
Kensuke Shiraki, Masato Ishii, Takahiro Sugiyama and Keiichi Abe, Japan
- 13-12 **Improvement of 3D Caricature by using Gray Scale Image in combination with Range Image**  
Takayuki Fujiwara and Hiroyasu Koshimizu, Japan
- 13-13 **Robust Object Detection and Segmentation Based on Radial Reach Correlation**  
Yutaka Satoh, Hideki Tanahashi, Shunichi Kaneko, Yoshinori Niwa and Kazuhiro Yamamoto, Japan
- 13-14 **An Image rating system for filtering web pages inappropriate contents**  
Yoshinori Musha, Atsushi Hiroike, Yasutsugu Morimoto and Jyunichi Matsuda, Japan
- 13-15 **A Location Awareness System using Wide-angle Camera and Active IR-tag**  
Muneyuki Sakata, Yoshihiro Yasumuro, Masataka Imura, Yoshitsugu Manabe and Kunihiro Chihara, Japan
- 13-16 **Facial Parts Recognition by Hierarchical Tracking from Motion Image and Its application**  
Tsuyoshi Yamaguchi, Takuma Funahashi, Masafumi Tominaga and Hiroyasu Koshimizu, Japan
- 13-17 **Toward Automatic Painting Authentication**  
Guilherme N.Teixeira, Raul Q. Feitosa and Sidnei Parcioni, Brazil
- 13-18 **Road Observation System in Residential Areas for supporting Pedestrian**  
Kentaro Kayama, Ikuko Eguchi Yairi, Seiji Igi and Hiroshi Yoshimizu, Japan
- 13-19 **Centimetric localisation of a vehicle by combining vision and low cost GPS.**  
Roland Chapuis, Vincent Voisin, Frédéric Chausse and Jean Laneurit, France
- 13-20 **A Study on Correction Functions for On-Line Handwriting Entry of Mathematical Formulas**  
Naoya Yamada, Kenichi Toyozumi, Kensaku Mori and Yasuhito Suenaga, Japan
- 13-21 **Detection of Partially occluded face using Support Vector Machines**  
Sang Min Yoon and Seok Cheol Kee, Korea
- 13-22 **Epipolar Plane Range Image Analysis**  
Shintaro Ono, Masataka Kagesawa and Katsushi Ikeuchi, Japan
- 13-23 **Interest Points Detection in Color Images**  
B.Telle and M.-J.Aldon, France

- 13-24 **Spectral measurement of ambient lighting and its application to Image rendering**  
Shoji Tominaga and Norihiro Tanaka, Japan
- 13-25 **A Cooperative Method of SFM and Stereo for Motion and Depth Extraction**  
Jae-Hean Kim and Myung Jin Chung, Korea
- 13-26 **Region-Based Image Interpretation and Recall**  
Hui-Yu Huang, Yung-Sheng Chen and Wen-Hsing Hsu, R.O.C
- 13-27 **Estimation of Illuminant Position and Reflectance Properties Using Polarization and Perspective Projection**  
Kenji Hara, Ko Nishino, Atsushi Nakazawa and Katsushi Ikeuchi, Japan
- 13-28 **Abrupt Shot Boundary Detection from Video Sequence Using Motion Direction Histogram Feature**  
Ken-ichirou Suzuki, Masaomi Nakajima, Hitoshi Sakano, Yasuo Sambe and Sakuichi Ohtsuka, Japan
- 13-29 **The Scalable Model-Based Hand Posture Analysis System**  
Cheng-Chang Lien, R.O.C
- 13-30 **A Model of Calculating the Saliency from Both the Input Image and the Memory**  
Toshio Endoh, Makoto Goto and Takashi Toriu, Japan
- 13-31 **On the 3-D Reconstruction of Seabed Using Multiple Sidescan Sonar Imaged**  
Yuefeng Lu and Masaki Oshima, Japan
- 13-32 **Location Extraction and Discrimination of Similar Texture using Gabor Filter for Donut Recognition**  
Heng Cher Keng, Michio Miwa and Hidenobu Iida, Japan
- 13-33 **Contour Junction Extraction**  
Marielle Mokhtari and Robert Bergevin, Canada
- 13-34 **Cylindrical Panorama Using the Tilt of a camera**  
Takashi Iida and Naoki Chiba, Japan
- 13-35 **Image Inclination Measurement Based on Edge Directions and an Analysis of Relation between Visual Inclination**  
Hidekazu Ohmi and Fumihiko Saito, Japan
- 13-36 **FPGA Implementation of a Sub-pixel Correction Algorithm for Active Laser Range Finders**  
Dr.H.Khali and Dr.Y.Savariva, UAE
- 13-37 **Content-Based Image Retrieval and Completion in DSP**  
Xia Dingyuan, Zhou Manli, Xiang Zhengquan, Zhou Wenzhao and Xu Yiping, P.R.China
- 13-38 **A Real-Time Computer Vision System for Tracking of Underwater Benthic Larvas**  
Sylvain Comtois, Denis Laurendeau and Edwin Bourget, Canada
- Session 14: Invited Talk 3 (14:30 — 15:30)**  
**Current Machine Vision Research at the NLPR**  
Prof. Tieniu Tan  
(Chinese Academy of Sciences)
- Break (15:30 — 15:50)**
- Session 15: ITS (15:50 — 17:50)**
- 15-1 **A Novel Background Initialization Method in Visual Surveillance**  
Alessandro Bevilacqua, Italy
- 15-2 **A Vision System that Recognizes Objects on General Streets**  
Osamu Hasegawa, Takeo Kanade, Japan
- 15-3 **Robust and Fast Stereovision Based Road Obstacles Detection for Driving Safety Assistance.**  
Raphael Labayrade, Didier Aubert, France
- 15-4 **Robust Vehicle Detection Method For Rear and Side Surveillance System Under Environmental Influences**  
Osafumi Nakayama, Morito Shiohara, Shigeru Sasaki, Norio Hashiguchi and Tomonobu Takashima, Japan
- 15-5 **A 51.2GOPS Programmable Video Recognition Processor for Vision Based Intelligent Cruise Control Applications**  
Shorin Kyo, Japan
- 15-6 **Extraction of 3D Primitives from Stereopairs of Satellite Images for Automatic Reconstruction of Buildings**  
Nesrine Chehata, Marc Pierrot-Desseilligny, Franck jung and Georges Stamon, France