

TABLE OF CONTENTS

Wednesday, May 20, 2009

Session 1: Interaction & Virtual Reality

- 1-1 Indoor Map Display Method Using Mixed Reality 1
Satoshi Hisanaga and Takaaki Kase, Japan
- 1-2 Texture Overlay onto Flexible Object with PCA of Silhouettes and K-Means Method for Search into Database 5
Hiroshi Tanaka and Hideo Saito, Japan
- 1-3 Real-time Motion-based Gesture Recognition Using the GPU 9
Mark Bayazit, Alex Couture-Beil and Greg Mori, Canada

Session 2: Motion & Multiview

- 2-1 Automatic Gigapixel Mosaicing in Large Scale Unstructured Underground Environments 13
Daniela Craciun, Nicolas Papanoditis and Francis Schmitt, France
- 2-2 Image Rectification for Robust Matching of Car-mounted Camera Images 17
Naoko Enami, Norimichi Ukita and Masatsugu Kidode, Japan
- 2-3 Self Image Rectification for Uncalibrated Stereo Video with Varying Camera Motions and Zooming Effects 21
Chia-Ming Cheng, Shang-Hong Lai and Shyh-Haur Su, Taiwan
- 2-4 A New Method for Projector Calibration Based on Visual Servoing 25
J r mie Mosnier, Francois Berry and Omar Ait-Aider, France

Session 3: Poster Session 1

- 3-1 New System Implementation on SIMD Processor for Reliable Fingerprint Singularity Detection by Singular Candidate Method 30
Daisuke Tomizawa, Yuta Hasegawa, Tomohiko Ohtsuka and Hiroyuki Aoki, Japan
- 3-2 Detection of Abnormal Objects in a Scene Based on Local Features 34
Junya Kobayashi and Keiichi Yamada, Japan
- 3-3 Real-Time Uncharacteristic-Part Tracking Based on Points Tracking 38
Norimichi Ukita, Akira Makino and Masatsugu Kidode, Japan
- 3-4 Automatic Extraction of Layer Structure for Retina in OCT Image Using Morphological Operation and Active Net 42
Ai Yamakawa, Shinji Tsuruoka, Hiroharu Kawanaka, Fumio Okuyama and Toshiki Yagi, Japan
- 3-5 Human Behavior Analysis Using Multiple 2D Features and Multicategory Support Vector Machine 46
Hao-Cheng Mo, Jin-Jang Leou and Cheng-Shian Lin, Taiwan
- 3-6 Exploitation of 3D Information for Directing Visual Attention and Object Recognition 50
Oytun Akman and Pieter Jonker, Netherlands

| | | |
|------|---|-----|
| 3-7 | Inter Mode Decision Algorithm For Advanced Video Coding | 54 |
| | <i>Fang-Hsuan Cheng and Yea-Shuan Huang, Taiwan</i> | |
| 3-8 | Large-Scale Stereo for Improvement of 3D Measurement Accuracy in Gaze-Observation | 58 |
| | <i>Masafumi Nakagawa, Yoshihiro Kawai and Fumiaki Tomita, Japan</i> | |
| 3-9 | An Active Appearance Model with a Derivative-Free Optimization | 62 |
| | <i>Jixia Zhang, Franck Davoine and Chunhong Pan, China</i> | |
| 3-10 | Image Forgery Detection Based on Quantization Table Estimation | 66 |
| | <i>Guo-Shiang Lin, Min-Kuan Chang and You-lin Chen, Taiwan</i> | |
| 3-11 | A Binarization Method for Crack Detection in a Road Surface Image with the Fractal Dimension | 70 |
| | <i>Hiromi Yoshida and Naoki Tanaka, Japan</i> | |
| 3-12 | Building a Multi-Touch Display Based on Computer Vision Techniques | 74 |
| | <i>Damien Michel, Antonis Argyros, Dimitris Grammenos, Xenophon Zabulis and Thomas Sarmis, Greece</i> | |
| 3-13 | Synchronization of Full-View Image and GPS Data for Route Map Building | 78 |
| | <i>Ying Hai, Shigang Li and Yuto Mizuno, Japan</i> | |
| 3-14 | Study of Early Screening Method of Dementia and Its Systemization | 82 |
| | <i>Youhei Kondou, Mikiko Kawasumi, Osami Yamamoto, Muneo Yamada, Shin Yamamoto and Tomoaki Nakanno, Japan</i> | |
| 3-15 | Face Blurring for Privacy in Street-level Geoviewers Combining Face, Body and Skin Detectors | 86 |
| | <i>Alexandre Devaux, Nicolas Paparoditis, Frédéric Precioso and Bertrand Cannelle, France</i> | |
| 3-16 | Vision-Based Real-Time Monitoring on the Behavior of Fish School | 90 |
| | <i>Boon Fong Chew, How-Lung Eng and Myo Thida, Singapore</i> | |
| 3-17 | Design and Evaluation of Features That Best Define Text in Complex Scene Images | 94 |
| | <i>Navid Mavaddat, Tae-Kyun Kim and Roberto Cipolla, Australia</i> | |
| 3-18 | OCR Based Thresholding | 98 |
| | <i>Yves Rangoni, Faisal Shafait and Thomas M. Breuel, Germany</i> | |
| 3-19 | A 3.2 kHz, Stereo Sensing Module Using Two Profile Sensors | 102 |
| | <i>Yoshinori Matsui, Munenori Takumi, Haruyoshi Toyoda, Naohisa Mukozaka, Atsushi Ithori, Yukinobu Sugiyama and Seiichiro Mizuno, Japan</i> | |
| 3-20 | Video-Based Face Recognition Using a Probabilistic Graphical Model | 106 |
| | <i>Yi-Chia Chan, Cheng-Chieh Chiang, Kai-Ming Wang and Greg C. Lee, Taiwan</i> | |
| 3-21 | A Comparative Study of Hierarchical Matching Algorithms for Face Recognition | 110 |
| | <i>Hajar Momeni, Mohammad T. Sadeghi and Hamid R. Abutalebi, Iran</i> | |
| 3-22 | 1,000-fps Visual Feedback Control of an Active Vision System over a High-Load Network .. | 114 |
| | <i>Daisuke Wako, Shingo Kagami and Koichi Hashimoto, Japan</i> | |
| 3-23 | Image Based View Localization System Retrieving from a Panorama Database by SURF | 118 |
| | <i>Naoyuki Yazawa, Hideaki Uchiyama, Hideo Saito, Myriam Servières and Guillaume Moreau, Japan</i> | |
| 3-24 | Hand Shape Recognition Based on Kernel Orthogonal Mutual Subspace Method | 122 |
| | <i>Yasuhiro Ohkawa and Kazuhiro Fukui, Japan</i> | |

| | | |
|------|--|-----|
| 3-25 | Application of Co-Occurrence Frequency Image | 126 |
| | <i>Takayuki Fujiwara, Hiroyasu Koshimizu and Manabu Hashimoto, Japan</i> | |
| 3-26 | Improved Matching Accuracy in Traffic Sign Recognition by Using Different Feature Subspaces | 130 |
| | <i>Arihito Ihara, Hironobu Fujiyoshi, Masanari Takagi, Hiroaki Kumon and Yukimasa Tamatsu, Japan</i> | |
| 3-27 | Object Pose Estimation Using Patch-Duplet/SIFT Hybrids | 134 |
| | <i>Fredrik Viksten, Sweden</i> | |

Session 4: Invited Talk 1

| | | |
|-----|---|-----|
| 4-1 | Large Scale Image Search | 138 |
| | <i>Dr. Cordelia Schmid, INRIA, France</i> | |

Session 5: Visual Surveillance

| | | |
|-----|---|-----|
| 5-1 | Probabilistic BPRRC: Robust Change Detection against Illumination Changes and Background Movements | 148 |
| | <i>Kentaro Yokoi, Japan</i> | |
| 5-2 | People Re-Identification by Means of a Camera Network Using a Graph-Based Approach ... | 152 |
| | <i>Dung-Nghi Truong Cong, Louahdi Khoudour, Catherine Achard and Philippe Phothisane, France</i> | |
| 5-3 | Incident Detection Based on Dynamic Background Modeling and Statistical Learning Using Spatio-Temporal Features | 156 |
| | <i>Yasuhiro Murai, Hironobu Fujiyoshi and Masato Kazui, Japan</i> | |
| 5-4 | Human Head Tracking Based on Inheritance and Evolution Concept | 162 |
| | <i>Yi Hu and Tetsuya Takamori, Japan</i> | |
| 5-5 | Unsupervised Abnormal Behavior Detection for Real-Time Surveillance Using Observed History | 166 |
| | <i>Tsz-Ho Yu and Yiu-Sang Moon, Hong Kong</i> | |
| 5-6 | Abnormal Spatial Event Detection and Video Content Searching in a Multi-Camera Surveillance System | 170 |
| | <i>Chueh-Wei Chang, Ti-Hua Yang and Yu-Yu Tsao, Taiwan</i> | |

Thursday, May 21, 2009

Session 6: Feature Extraction & Pattern Recognition

| | | |
|-----|---|-----|
| 6-1 | Statistical Reach Feature Method and Its Application to Template Matching | 174 |
| | <i>Ryushi Ozaki, Yutaka Satoh, Kenji Iwata and Katsuhiko Sakaue, Japan</i> | |
| 6-2 | Design of Feature Extraction Operators for Use on Biologically Motivated Hexagonal Image Structures | 178 |
| | <i>Sonya Coleman, Bryan Scotney and Bryan Gardiner, United Kingdom</i> | |
| 6-3 | An Appearance Based Fast Linear Pose Estimation | 182 |
| | <i>Toshiyuki Amano and Toru Tamaki, Japan</i> | |

| | | |
|-----|---|-----|
| 6-4 | Semi-Supervised Spectral Mapping for Enhancing Separation between Classes | 187 |
| | <i>Weiwei Du and Kiichi Urahama, Japan</i> | |

Session 7: Object Recognition

| | | |
|-----|--|-----|
| 7-1 | Keypoint Extraction and Selection for Object Recognition | 191 |
| | <i>Maja Rudinac, Boris Lenseigne and Pieter Jonker, Netherlands</i> | |
| 7-2 | Scene Classification Using Generalized Local Correlation | 195 |
| | <i>Hideki Nakayama, Tatsuya Harada and Yasuo Kuniyoshi, Japan</i> | |
| 7-3 | Unsupervised Learning of Characteristic Object Parts from Videos | 199 |
| | <i>Henrik Skibbe, Alexandra Teynor and Hans Burkhardt, Germany</i> | |
| 7-4 | Color Image Classification Using Locally Linear Manifolds and Learning | 203 |
| | <i>Kazuki Kondo and Seiji Hotta, Japan</i> | |

Session 8: Poster Session 2

| | | |
|------|---|-----|
| 8-1 | Video Watermarking Algorithm Based on Pseudo 3D DCT and Quantization Index Modulation | 207 |
| | <i>Hui-Yu Huang, Cheng-Han Yang and Wen-Hsing Hsu, Taiwan</i> | |
| 8-2 | Overlap Vehicle Detection by Tracking Horizontal Lines | 211 |
| | <i>Kazunori Onoguchi, Japan</i> | |
| 8-3 | Measuring Conicity from Shape Boundaries | 215 |
| | <i>Milos Stojmenovic and Amiya Nayak, Canada</i> | |
| 8-4 | Image Based Search System Using Hierarchical Object Category Recognition Technique | 219 |
| | <i>Takuya Minagawa and Hideo Saito, Japan</i> | |
| 8-5 | Improvement of Particle Filtering for Intersection of Targets with Similar Patterns | 223 |
| | <i>Naoki Enda, Shinji Fukui, Yuji Iwahori and Robert J. Woodham, Japan</i> | |
| 8-6 | Voting Based Video Classification Using Clustering and Learning | 227 |
| | <i>Kei Kikuchi and Seiji Hotta, Japan</i> | |
| 8-7 | Algorithmic Considerations for Real-Time Stereo Vision Applications | 231 |
| | <i>Kristian Ambrosch, Christian Zinner and Wilfried Kubinger, Austria</i> | |
| 8-8 | Behavior Recognition with HMM and Feature Analysis using a Wide-view Camera and a PTZ camera | 235 |
| | <i>Norimichi Ukita, Akihito Kotera and Masatsugu Kidode, Japan</i> | |
| 8-9 | A Hardware Accelerator with Variable Pixel Representation & Skip Mode Prediction for Feature Point Detection Part of SIFT Algorithm | 239 |
| | <i>Jingbang Qiu, Tianci Huang, Yiqing Huang and Takeshi Ikenaga, Japan</i> | |
| 8-10 | Segmentation of Femoral Head from CT after Femoral Neck Fracture | 243 |
| | <i>Jan Horáček, Lukáš Maršálek, Martin Horák, Philipp Slusallek and Josef Pelikán, Czech Republic</i> | |
| 8-11 | Medial Features for Superpixel Segmentation | 248 |
| | <i>David Engel, Luciano Spinello, Rudolph Triebel, Roland Siegwart, Heinrich H. Bühlhoff and Cristóbal Curio, Germany</i> | |

| | | |
|------|--|-----|
| 8-12 | Face Recognition by Combining Complementary Matchings of Single Image and Sequential Images | 253 |
| | <i>Yea-Shuan Huang, Wei-Cheng Liu and Fang-Hsuan Cheng, Taiwan</i> | |
| 8-13 | Recognition of Lung Cancers on CT Using 3-D Object Models of Different Classes | 257 |
| | <i>Hotaka Takizawa, Shinji Yamamoto and Tsuyoshi Shiina, Japan</i> | |
| 8-14 | Model-Based 3D Object Tracking with Online Texture Update | 261 |
| | <i>Keisuke Tateno, Daisuke Kotake and Shinji Uchiyama, Japan</i> | |
| 8-15 | On a Technique for Evaluating Performance of Wipers Based on Forward Visibility..... | 265 |
| | <i>Takashi Kitayama, Masatoshi Sakai, Takashi Kato, Muneo Yamada, Tomoaki Nakano, Shin Yamamoto, Osami Yamamoto, Masahiko Yamanishi and Hiroshi Matsumoto, Japan</i> | |
| 8-16 | A Multicamera Vision System Supporting the Development of Wide-Area Exertainment Applications..... | 269 |
| | <i>Xenophon Zabulis, Thomas Sarmis, Dimitris Grammenos and Antonis A. Argyros, Greece</i> | |
| 8-17 | Multiple-Person Tracking for a Mobile Robot Using Stereo | 273 |
| | <i>Junji Satake and Jun Miura, Japan</i> | |
| 8-18 | Automatic Analysis of Fish Behaviors and Abnormality Detection | 278 |
| | <i>Myo Thida, How-Lung Eng and Boon Fong Chew, Singapore</i> | |
| 8-19 | Video Retrieval System Using Handwriting Sketch | 283 |
| | <i>Akihiro Sekura and Masashi Toda, Japan</i> | |
| 8-20 | Linear 3-D Object Pose Estimation with Dense Sample Images –Discussions about Limitation of Parameter Estimation Ability by the Linear Regressions–..... | 287 |
| | <i>Toshiyuki Amano and Toru Tamaki, Japan</i> | |
| 8-21 | Predicting Attainable Region of Vehicle Using Trajectory Clustering..... | 291 |
| | <i>Noritaka Sekiyama, Jien Kato and Toyohide Watanabe, Japan</i> | |
| 8-22 | A Sensor Based Navigation Algorithm for Moving Obstacles Assuring Convergence Property | 295 |
| | <i>Masaaki Tomita and Motoji Yamamoto, Japan</i> | |
| 8-23 | Static Estimation of the Meteorological Visibility Distance in Night Fog with Imagery | 300 |
| | <i>Romain Gallen, Nicolas Hautière and Eric Dumont, France</i> | |
| 8-24 | Machine Vision for Excess Gluing Inspection in Spindle Motor Assembly | 304 |
| | <i>Varunyou Buddhachan and Pakorn Kaewtrakulpong, Thailand</i> | |
| 8-25 | Chromosome Image Recognition with Local Band Patterns | 308 |
| | <i>Toru Abe, Chieko Hamada and Tetsuo Kinoshita, Japan</i> | |
| 8-26 | Comparison of Conventional US and Spatial Compound Imaging in Diagnostic Performances of Computer Aided Diagnosis System | 312 |
| | <i>Wei-Chih Shen, Ruey-Feng Chang and Woo Kyung Moon, Taiwan</i> | |
| 8-27 | Worker Behavior and Intension Modeling in Production Process | 316 |
| | <i>Takuma Funahashi, Takayuki Hoshino, Naoya Tokuda, Takayuki Fujiwara and Hiroyasu Koshimizu, Japan</i> | |
| 8-28 | Investigation of OCT Images Descriptions on the Base of Representational MDL Principle | 320 |
| | <i>Igor Gurov and Alexey Potapov, Russia</i> | |

- 8-29 Feature Level Clustering of Large Biometric Database324
Hummy Mehrotra, Dakshina R. Kisku, V. Bhawani Radhika, Banshidhar Majhi and Phalguni Gupta, India
- 8-30 3D Porous Media Liquid-Solid Interaction Simulation Using SPH Modeling and Tomographic Images328
Alfonso Gastelum Strozzi, Jorge Marquez, Flavio Trujillo, Celine Duwig, Blanca Prado, Pavan Gamage and Patrice Delmas, New Zealand

Session 9: Invited Talk 2

- 9-1 Focal Stack Photography: High-Performance Photography with a Conventional Camera332
Prof. Kyros Kutulakos, University of Toronto, Canada

Session 10: Human Sensing

- 10-1 Shape Measurement System of Foot Sole Surface from Flatbed Scanner Image338
Sandy Martedi, Hideo Saito and Myriam Servières, Japan
- 10-2 Extracting Appearance Information inside the Pupil for Cataract Screening342
Retno Supriyanti, Hitoshi Habe, Masatsugu Kidode and Satoru Nagata, Japan
- 10-3 Eye Detection Using Intensity and Appearance Information346
M. Hassaballah and Shun Ido, Japan
- 10-4 Eye Blink Based Fatigue Detection for Prevention of Computer Vision Syndrome350
Matjaž Divjak and Horst Bischof, Austria
- 10-5 Detection of Approaching Pedestrians from a Distance Using Temporal Intensity Patterns354
Siu-Ming Cheung and Yiu-Sang Moon, Hong Kong

Friday, May 22, 2009

Session 11: Industrial Applications

- 11-1 A New Flat Pattern Oriented Order Statistic Filter for Impulse Noise Reduction from Highly Corrupted Images358
Tomohiko Ohtsuka, Homare Sasaki, Masato Suzuki and Hiroyuki Aoki, Japan
- 11-2 Multiple Object Detection for Pick-and-Place Applications362
Paolo Piccinini, Andrea Prati and Rita Cucchiara, Italy
- 11-3 A Cloth Detection Method Based on Image Wrinkle Feature for Daily Assistive Robots366
Kimitoshi Yamazaki and Masayuki Inaba, Japan
- 11-4 Carbon Nanotube Detection by Scanning Electron Microscopy370
Tim Wortmann and Sergej Fatikow, Germany

Session 11: Geographic Information Systems

- 12-1 Automatic GIS Updating from High Resolution Satellite Images374
Nicolas Champion, Georges Stamon and Marc Pierrot-Deseilligny, France

- 12-2 Extracting 3D Polyhedral Building Models from Aerial Images Using a Featureless and Direct Approach378
Fadi Dornaika and Karim Hammoudi, France
- 12-3 AR GIS on a Physical Map Based on Map Image Retrieval Using LLAH Tracking382
Hideaki Uchiyama, Hideo Saito, Myriam Servières and Guillaume Moreau, Japan

Session 13: Poster Session 3

- 13-1 Probabilistic-Based Semantic Image Feature Using Visual Words386
Cheng-Chieh Chiang, Jia-Wei Wu and Greg C. Lee, Taiwan
- 13-2 A Block Matching Technique Using Unit Gradient Vectors390
Toshiaki Kondo and Waree Kongprawechnon, Thailand
- 13-3 An Easy Technique for Fisheye Camera Calibration394
Haijiang Zhu and Fuchao Wu, China
- 13-4 Robust Vision-Based Target Tracking Control System for an Unmanned Helicopter Using Feature Fusion398
Feng Lin, Ben M. Chen and Tong H. Lee, Singapore
- 13-5 Robust Background Segmentation Using Background Models for Surveillance Application402
Tianci Huang, Jingbang Qiu, Takahiro Sakayori and Takeshi Ikenaga, Japan
- 13-6 Motion Segmentation Using Divisive Graph Cuts406
Jong-Sung Kim and Il-Kwon Jeong, South Korea
- 13-7 A Novel Transducer: From Lip Motion to Voice Message410
Takeshi Saitoh, Tomoya Kato and Ryosuke Konishi, Japan
- 13-8 Proposal of Exaggeration Method Based on Shape and Positional Relations of Automotive Parts414
Hiroshi Fujimoto, Takuma Funahashi, Takayuki Fujiwara and Hiroyasu Koshimizu, Japan
- 13-9 Image Processing Architecture for Real-Time Micro- and Nanohandling Applications418
Tim Wortmann, Christian Dahmen, Robert Tunnell and Sergej Fatikow, Germany
- 13-10 Fitting Curves on Riemannian Manifolds Using Energy Minimization422
Chafik Samir, Pierre-Antoine Absil, Anuj Srivastava and Eric Klassen, Belgium
- 13-11 Classification of Spectators' State in Video Sequences by Voting of Facial Expressions and Face Directions426
Tetsu Matsukawa, Akinori Hidaka and Takio Kurita, Japan
- 13-12 A Hybrid Model for Multiple Object Category Detection and Localization431
Dipankar Das, Yoshinori Kobayashi and Yoshinori Kuno, Japan
- 13-13 Unsupervised Material Classification of Printed Circuit Boards Using Dimension-Reduced Spectral Information435
Abdelhameed Ibrahim, Shoji Tominaga and Takahiko Horiuchi, Japan
- 13-14 An Optical Video Cryptosystem with Adaptive Steganography439
Cheng-Hung Chuang and Guo-Shiang Lin, Taiwan

| | | |
|-------|---|-----|
| 13-15 | Development of System for Comprehensively Measuring Driving Ability for Elderly Safe Driving..... | 443 |
| | <i>Toshiaki Kasukabe, Masatake Hiraoka, Osami Yamamoto, Muneo Yamada, Tomoaki Nakano, Shin Yamamoto, Katsumi Matsuda and Mikiko Kawasumi, Japan</i> | |
| 13-16 | Generation of Overhead View Images by Estimating Intrinsic and Extrinsic Camera Parameters of Multiple Fish-Eye Cameras..... | 447 |
| | <i>Ryota Okutsu, Kenji Terabayashi, Yohei Aragaki, Noriko Shimomura and Kazunori Umeda, Japan</i> | |
| 13-17 | Image Processing in Retinal Angiography: Extracting Angiographical Features without the Requirement of Contrast Agents..... | 451 |
| | <i>Tati Rajab Mengko, Astri Handayani, Vanya Vabrina Valindria, Samekta Hadi and Iwan Sovani, Indonesia</i> | |
| 13-18 | A Human Fall Detection System Using an Omni-Directional Camera in Practical Environments for Health Care Applications..... | 455 |
| | <i>Yi-Chang Huang, Shaou-Gang Miaou and Tsung-Yen Liao, Taiwan</i> | |
| 13-19 | Intrinsic Color Acquisition By Active Color Lighting..... | 459 |
| | <i>Hisanaga Fujiwara, Japan</i> | |
| 13-20 | Large Area Video Surveillance System with Handoff Scheme among Multiple Cameras..... | 463 |
| | <i>Cheng-Chang Lien, Yue-Min Jiang and Lih-Guong Jang, Taiwan</i> | |
| 13-21 | Classification of Wet/Dry Area Based on the Mahalanobis Distance of Feature from Time Space Image Analysis..... | 467 |
| | <i>Tomoaki Teshima, Hideo Saito, Masayoshi Shimizu and Akinori Taguchi, Japan</i> | |
| 13-22 | Classification of In-Vivo Endomicroscopic Images of the Alveolar Respiratory System..... | 471 |
| | <i>Caroline Petitjean, Jonathan Benoist, Luc Thiberville, Mathieu Salaiin and Laurent Heutte, France</i> | |
| 13-23 | On Face Recognition Using Hierarchical Self-Organized Gabor Features..... | 475 |
| | <i>Saleh Aly, Naoyuki Tsuruta and Rin-ichiro Taniguchi, Japan</i> | |
| 13-24 | Scallop Detection from Gravel-Seabed Images for Fishery Investigation..... | 479 |
| | <i>Koichiro Enomoto, Masashi Toda, Yasuhiro Kuwahara, Masaaki Wada and Katsumori Hatanaka, Japan</i> | |
| 13-25 | Stereo Vision: A Java-Based Online Platform..... | 483 |
| | <i>Minh Nguyen, Georgy Gimel'farb and Patrice Delmas, New Zealand</i> | |
| 13-26 | Lavatable - A Software Framework for Computer Vision Research and Development..... | 487 |
| | <i>Kenji Iwata, Yutaka Satoh and Katsuhiko Sakaue, Japan</i> | |

Session 14: Invited Talk 3

| | | |
|------|---|-----|
| 14-1 | Integration of Earth Observation Data: Challenge of GEOSS (Global Earth Observation System of Systems)..... | 491 |
| | <i>Prof. Ryosuke Shibasaki, The University of Tokyo, Japan</i> | |

Session 15: Machine Vision for Transportation

| | | |
|------|---|-----|
| 15-1 | Automatic Extraction of Droppers in Catenary Scenes..... | 497 |
| | <i>Caroline Petitjean, Laurent Heutte, Régis Kouadio and Vincent Delcourt, France</i> | |

| | | |
|------|--|-----|
| 15-2 | Free Space Detection for Autonomous Navigation in Daytime Foggy Weather | 501 |
| | <i>Nicolas Hautière, Jean-Philippe Tarel and Didier Aubert, France</i> | |
| 15-3 | An Intelligent Night Vision System for Automobiles..... | 505 |
| | <i>Tsz-Ho Yu, Yiu-Sang Moon, Jiansheng Chen, Hung-Kwan Fung, Hoi-Fung Ko and Ran Wang, Hong Kong</i> | |
| 15-4 | A New Approach for In-Vehicle Camera Traffic Sign Detection and Recognition | 509 |
| | <i>Andrzej Ruta, Yongmin Li, Fatih Porikli, Shintaro Watanabe, Hiroshi Kage and Kazuhiko Sumi, United Kingdom</i> | |
| 15-5 | Recognition of Road Markings from In-Vehicle Camera Images by a Generative Learning Method..... | 514 |
| | <i>Masafumi Noda, Tomokazu Takahashi, Daisuke Deguchi, Ichiro Ide, Hiroshi Murase, Yoshiko Kojima and Takashi Naito, Japan</i> | |
| 15-6 | Vision Based Tangent Point Detection Algorithm, Evaluation and Validation | 518 |
| | <i>Romain Gallen and Sébastien Glaser, France</i> | |