Program at a Glance

January 13 (Tuesday)

<table>
<tr><th>Time</th><th>Room B</th><th>Room C</th></tr>
<tr><td>09:00–18:00</td><td colspan="2">Registration</td></tr>
<tr><td>10:00–</td><td rowspan="5">Workshop

10:00 Opening
10:05–11:05 Session 1
11:05–11:20 Break
11:20–12:20 Session 2
12:20–13:50 Lunch
13:50–15:10 Session 3
15:10–15:40 Break
15:40–16:40 Session 4
16:40–16:55 Break
16:55–17:55 Session 5
17:55 Closing</td><td></td></tr>
<tr><td>13:00–15:00</td><td>Tutorial 1</td></tr>
<tr><td>15:00–15:30</td><td>Coffee Break</td></tr>
<tr><td>15:30–17:30</td><td>Tutorial 2</td></tr>
<tr><td></td><td></td></tr>
<tr><td>18:00–20:00</td><td></td><td>Reception</td></tr>
</table>

January 14 (Wednesday)

<table>
<tr><th>Time</th><th>Room A</th><th>Room B</th><th>Room C</th><th>Room D</th></tr>
<tr><td>08:30–17:00</td><td colspan="3">Registration</td><td rowspan="5"></td></tr>
<tr><td>09:30–09:40</td><td>Opening</td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td>09:40–10:40</td><td>Keynote Lecture</td></tr>
<tr><td>10:40–11:00</td><td colspan="3">Coffee Break</td></tr>
<tr><td>11:00–12:30</td><td>OS1</td><td>OS2</td><td></td></tr>
<tr><td>12:30–14:00</td><td colspan="3">Lunch Break</td><td rowspan="3">Demos I
(by Leading Project)</td></tr>
<tr><td>14:00–15:30</td><td></td><td></td><td rowspan="2">Poster 1</td></tr>
<tr><td>15:30–16:00</td><td colspan="2">Coffee Break</td></tr>
<tr><td>16:00–17:30</td><td>OS3</td><td>OS4</td><td></td><td></td></tr>
</table>

January 15 (Thursday)

Time	Room A	Room B	Room C	Room D
08:30–17:30	Registration			
09:10–10:10	Invited Talk 1			
10:10–10:30	Coffee Break			
10:30–12:00	OS5	OS6		
12:00–13:30	Lunch Break			
13:30–15:00			Poster 2	Demos II
15:00–15:30	Coffee Break			
15:30–17:00	OS7	OS8		
17:30	Bus to the banquet venue			
19:00–21:00	Banquet at Chinzan-so			

January 16 (Friday)

Time	Room A	Room B	Room C	Room D
08:30–15:00	Registration			
09:10–10:10	Invited Talk 2			
10:10–10:30	Coffee Break			
10:30–12:30			Poster 3	Demos II
12:30–14:00	Lunch Break			
14:00–15:30	OS9	OS10		
15:30–15:35	Closing			

Tutorials

Tutorial 1 13:00-15:00, January 13, Room C

Lecturer: *Hiroshi Ishikawa*
Associate Professor
Graduate School of Natural Sciences, Nagoya City University

Title: A Practical Introduction to Graph Cut

Abstract:

Over the past decade, energy-minimization techniques utilizing the s-t mincut algorithm have become increasingly popular in vision, image processing, and computer graphics. Now generally called the "graph-cut" methods, they are used for many low-level problems such as stereo, segmentation, and image stitching. In some cases, graph cuts produce globally optimal solutions. More generally, there are iterative graph-cut based techniques that produce high-quality solutions in practice. In this introductory tutorial, we first describe the major techniques as well as delineating their applicability and limitations. Then we discuss the design of the energies for some problems that have been successfully solved by graph cuts.

Tutorial 2 15:30-17:30, January 13, Room C

Lecturers: *Cees G.M. Snoek*
Senior Researcher
Faculty of Science, University of Amsterdam

Marcel Worring
Associate Professor
Faculty of Science, University of Amsterdam

Title: Concept-Based Video Retrieval

Abstract:

The ease with which video can be captured has lead to a proliferation of video collections in all parts of society. Getting content-based semantic access to such collections is a difficult task, requiring techniques from image processing, computer vision, machine learning, knowledge engineering, and human computer interaction. The semantic gap between the low level information that can be derived from the visual data and the conceptual view the user has of the same data is a major bottleneck in video retrieval systems. It has dictated that solutions to image and video indexing could only be applied in narrow domains using specific concept detectors, e.g., "sunset" or "face". This leads to lexica of at most 10-20 concepts. The use of multimodal indexing, advances in machine learning, and the availability of some large, annotated information sources, e.g., the TRECVID benchmark, has paved the way to increase lexicon size by orders of magnitude (now 100 concepts, in a few years 1,000). This brings it within reach of research in ontology engineering, i.e. creating and maintaining large, typically 10,000+ structured sets of shared concepts. When this goal is reached we could search for videos in our home collection or on the web based on their semantic content, we could develop semantic video editing tools, or develop tools that monitor various video sources and trigger alerts based on semantic events. This tutorial lays the foundation for these exciting new horizons. It will cover basis video analysis techniques and explain the different methods for concept detection in video. From there it will explore how users can be given interactive access to the data. For both indexing and interactive access TRECVID evaluations will be considered. Finally, some more insight on the challenges ahead and how to meet them will be presented.

Workshop 10:00-18:00 January 13, Room B

Opening 10:00-10:05

WS1 10:05-11:05

Chair: Jean Martinet (University of Lille, France)

WS1-1 Matching Corresponding Points from Unannotated Images with Bayesian Methods
Miika Toivanen, Jouko Lampinen

WS1-2 Real-time Dense and Accurate Parallel Optical Flow using CUDA
Julien Marzat, Yann Dumortier, Andre Ducrot

WS1-3 Depth Estimation from Multi-view Sources Based on Full Search and Total Variation Regularization
Carlos Vázquez, Wa J. Tam

Break (11:05-11:20)

WS2 11:20-12:20

Chair: Carlos Vázquez (Communication Research Centre Canada, Canada)

WS2-1 Registration of Medical Volume Images and Its Visualization using VTK
Wanhyun Cho, Sunworl Kim, Myungeun Lee, Junsik Lim, Jonhhyun Park, Soonyoung Park, Changbu Jeong

WS2-2 Structure from Motion for Omni-directional Images using Efficient Factorization Method Based on Virtual Camera Rotation
Ryota Matsuhisa, Shintaro Ono, Hiroshi Kawasaki, Atsuhiko Banno, Katsushi Ikeuchi

WS2-3 Combinatorial Optimization for Fitting of Digital Line and Plane
Rita Zrour, Yukiko Kenmochi, Hugues Talbot, Ikuko Shimizu, Akihiro Sugimoto

Lunch (12:20-13:50)

WS3 13:50-15:10

Chair: Toru Tamaki (Hiroshima University, Japan)

WS3-1 Suspicious Object Detection Based on Appearance Frequency in Surveillance Videos
Keiko Sato, Naoko Nitta, Yoshimichi Ito, Noboru Babaguchi

WS3-2 Detection of Multiple Subevents in Space and Time for Video Analysis
Alexia Briassouli, Ioannis Kompatsiaris

WS3-3 On the Search Window Updating for Occlusion Handling in Object Tracking Applications
Mohammad Khansari, Hamid R. Rabiee, Mohammad H. Rohban, Mohammad Ghanbari

WS3-4 Human Identification in Surveillance Video Based on Tracking via Camera Footage and ID Updating via RFID Systems
Daisuke Nakashima, Yoshimichi Ito, Naoko Nitta, Noboru Babaguchi

Break (15:10-15:40)

WS4 15:40-16:40

Chair: Ioannis Kompatsiaris (Informatics and Telematics Institute, Greece)

WS4-1 A Hybrid Pre-classification and Post-classification Technique to Derive Training Samples for One-pass Land Cover Change Mapping
Huang Zhi, Xiuping Jia

WS4-2 Curve-based Image Lightness Enhancement Algorithm
Chiun-Li Chin, Kun-Ching Wang, Shuo-Min Chiou

WS4-3 Polygon Approximation for Snake Initialization in Noisy Image
Din-Yuen Chan, Roy C. Hsu, Jia-Ci Jhuo, Bin-Wen Kao, Cheng-Tin Liu

Break (16:40-16:55)

WS5 16:55-17:55

Chair: Xiuping Jia (University of New South Wales, Australia)

WS5-1 Illumination Invariant Face Recognition using Normalized Gabor Features
Saleh Aly, Naoyuki Tsuruta, Rin-ichiro Taniguchi

WS5-2 Virtual Camerawork beyond Original Framing with Longshot Video Generation
Kouichi Asano, Naoko Nitta, Noboru Babaguchi

WS5-3 Gaze Based Quality Assessment of Visual Media Understanding
Jean Martinet, Adel Lablack, Stanislas Lew, Chabane Djeraba

Closing 17:55-18:00

Keynote Lecture 9:40-10:40, January 14, Room A

Speaker:

Shmuel Peleg
Professor
School of Computer Science and Engineering
The Hebrew University of Jerusalem

Title:

Non-Chronological Video Editing and Video Synopsis

Abstract:

Powerful effects in video editing can be obtained when relaxing the chronological constraints: activities that occurred in different times can be shown simultaneously and vise versa. The description of non-chronological video editing effects and the simple methods to perform them will start this talk.

The non-chronological approach to video is also powerful in creating video summaries. In particular, a full day recorded by a video surveillance camera can be summarized in a few minutes without loss of any activity. It is estimated that 40 million surveillance cameras are being installed annually. But none of the video they record is ever watched: it is too time consuming. The presented video synopsis approach can provide access to the untapped resource of recorded surveillance cameras.

Invited Talks

Invited talk 1 9:10-10:10, January 15, Room A

Speaker:

Shigeo Morishima
Professor
School of Science and Engineering
Waseda University

Title:

Instant Casting System "Dive Into the Movie"

Abstract:

Our research project, Dive into the Movie (DIM) aims to build a new genre of interactive entertainment which enables anyone to easily participate in a movie by assuming a role and enjoying an embodied, first-hand theater experience. This is specifically accomplished by replacing the original roles of the precreated traditional movie with user created, high-realism, 3-D CG characters. DIM movie is in some sense a hybrid entertainment form, somewhere between a game and storytelling. We hope that DIM movies might enhance interaction and offer more dramatic presence, engagement, and fun for the audience. Our work on DIM is ongoing, but its initial version, Future Cast System (FCS), is up and running. In the initial version, we focus on creating audiences' highrealism 3-D CG characters with personal facial characteristics, replacing the original characters' faces in the original traditional (background) movie. The FCS system has two key features: First, it can full-automatically create a CG character in a few minutes

from capturing the facial feature of a user and generating her/his corresponding CG face, to inserting the CG face into the movie in real-time which do not cause any discomfort to the participant; Second, the FCS system makes it possible for multiple participants to take part in a movie at the same time in different roles, such as a family, a circle of friends, etc. The FCS system is not limited to academic research; 1.6 million people enjoyed a FCS entertainment experience at the Mitsui-Toshiba pavilion at the 2005 World Exposition in Aichi, Japan. I introduce this ongoing DIM project with new technologies and many impressive demos.

Invited talk 2 9:10-10:10, January 16, Room A

Speaker:

Takeo Igarashi
Associate Professor
Graduate School of Information Science and Technology
The University of Tokyo

Title:

Interactive "smart" computers

Abstract:

Current user interfaces are not very “smart” in that computers dumbly do what the user explicitly commands it to do via buttons or menus. As the computers become more capable and applications become complicated, more “smart” user interfaces are desired. We are exploring possible “smart” user interfaces in the domain of pen-based computing and interactive 3D graphics. The idea is to allow the user to intuitively express his/her intention by combining sketching and direct manipulation, and have the computer take appropriate actions without explicit commands. This talk consists of many live demonstrations to illustrate the idea of interactive “smart” interfaces. I plan to show 2D geometric drawing program, electronic whiteboard system, sketch-based 3D modeling, automatic zooming, clothing manipulation interfaces, and other interesting systems.

Oral Sessions

Keynote Lecture

9:40–10:40, January 14, Room A
Chair: Akihiro Sugimoto

Non-Chronological Video Editing and Video Synopsis
Shmuel Peleg

OS1: Faces and Pedestrians

11:00–12:30, January 14, Room A
Chair: Robby Tan

A Self-Tuning People Identification System from Split Face Components
Maria De Marsico, Michele Nappi, Daniel Riccio

A Method for Visualizing Pedestrian Traffic Flow using SIFT Feature Point Tracking
Yuji Tsuduki, Hironobu Fujiyoshi

Co-occurrence Histograms of Oriented Gradients for Pedestrian Detection
Tomoki Watanabe, Satoshi Ito, Kentaro Yokoi

Using Face Quality Ratings to Improve Real-Time Face Recognition
Karl Axnick, Ray Jarvis, Kim C. Ng

OS2: Panoramic Images

11:00–12:30, January 14, Room B
Chair: Huei-Yung Lin

Sensor Pose Estimation from Multi-Center Cylindrical Panoramas
Fay Huang, Reinhard Klette, Yun-Hao Xie

Monocular 3D Reconstruction of Objects Based on Cylindrical Panoramas
Ralf Haeusler, Reinhard Klette, Fay Huang

Omnidirectional Image Stabilization by Computing Camera Trajectory
Akihiko Torii, Michal Havlena, Tomáš Pajdla

OS3: Local Image Analysis

16:00–17:30, January 14, Room A
Chair: Wen-Nung Lie

Rotation and Scale Invariant Texture Analysis with Tunable Gabor Filter Banks
Xinqi Chu, Kap Luk Chan

Local Image Descriptors Using Supervised Kernel ICA
Masaki Yamazaki, Sidney Fels

Fast Simplex Optimization for Active Appearance Model
Yasser Aidarous, Renaud Séguier

LazySOM: Image Compression Using an Enhanced Self-Organizing Map
Cheng-Fa Tsai, Yu-Jiun Lin

OS4: Organization and Grouping

16:00–17:30, January 14, Room B
Chair: Noboru Babaguchi

Inverse Halftoning Based on Bayesian Theorem
Yun-Fu Liu, Jing-Ming Guo, Jiann-Der Lee

Live Video Segmentation in Dynamic Backgrounds Using Thermal Vision
Viet-Quoc Pham, Keita Takahashi, Takeshi Naemura

Image-Based Techniques for Shredded Document Reconstruction
Huei-Yung Lin, Wen-Cheng Fan-Chiang

Contour Grouping with Partial Shape Similarity
Chengqian Wu, Xiang Bai, Quannan Li, Xingwei Yang, Wenyu Liu

Invited Talk 1

9:10–10:10, January 15, Room A
Chair: Toshikazu Wada

Instant Casting System "Dive Into the Movie"
Shigeo Morishima

OS5: Multi-view Geometry

10:30–12:00, January 15, Room A
Chair: Yung-Chang Chen

Compact Fundamental Matrix Computation
Kenichi Kanatani, Yasuyuki Sugaya

Detecting Incorrect Feature Tracking by Affine Space Fitting
Chika Takada, Yasuyuki Sugaya

Outlier Removal by Convex Optimization for L-Infinity Approaches
Yongduek Seo, Hyunjung Lee, Sang Wook Lee

The Five Points Pose Problem: A New and Accurate Solution Adapted to Any Geometric Configuration
Mahzad Kalantari, Franck Jung, Jean-Pierre Guedon, Nicolas Paparodtis

OS6: Detection and Tracking

10:30–12:00, January 15, Room B
Chair: Kap Luk Chan

Vehicle Detection from Aerial Images using Local Shape Information
Jae-Young Choi, Young-Kyu Yang

Estimating 3D Flow for Driver Assistance Applications
Jorge A. Sánchez, Reinhard Klette, Eduardo Destefanis

A New Method for Moving Object Extraction and Tracking Based on the Exclusive Block Matching
Zhu Li, Kenichi Yabuta, Hitoshi Kitazawa

Visual Tracking Using Particle Filters with Gaussian Process Regression
Hongwei Li, Yi Wu, Hanqing Lu

OS7: Coding and Steganography

15:30–17:00, January 15, Room A
Chair: Yasushi Yagi

An Approach to Trajectory Estimation of Moving Objects in the H.264 Compressed Domain
Christian Käs, Henri Nicolas

Enhanced Side Information Generator with Accurate Evaluations in Block-Based Wyner-Ziv Video Coding
Chang-Ming Lee, Jui-Chiu Chiang, Zhi-Heng Chiang, Kuan-Liang Chen, Wen-Nung Lie

Watermarking of Raw Digital Images in Camera Firmware: Embedding and Detection
Peter Meerwald, Andreas Uhl

An Advanced Least-Significant-Bit Embedding Scheme for Steganographic Encoding
Yeuan-Kuen Lee, Graeme Bell, Shih-Yu Huang, Ran-Zan Wang, Shyong-Jian Shyu

OS8: Computational Photography and Forgeries

15:30–17:00, January 15, Room B
Chair: Reinhard Klette

Image Inpainting Considering Brightness Change and Spatial Locality of Textures and Its Evaluation
Norihiko Kawai, Tomokazu Sato, Naokazu Yokoya

A Digital Image Denoising Method with Edge Preservation Using Dyadic Lifting Schemes
Teruya Minamoto, Satoshi Fujii

A Self-Governing Hybrid Model for Noise Removal
Mohammad Reza Hajiaboli

Detecting Video Forgeries Based on Noise Characteristics
Michihiro Kobayashi, Takahiro Okabe, Yoichi Sato

Invited Talk 2

9:10–10:10, January 16, Room A
Chair: Fay Huang

Interactive "smart" computers
Takeo Igarashi

OS9: Reconstruction and Visualization

14:00–15:30, January 16, Room A
Chair: Hideo Saito

Shape Reconstruction by Combination of Structured-Light Projection and Photometric Stereo Using a Projector-Camera System: High Quality Reproduction of a Virtual Reflectance Property on a Real Object Surface
Tomoya Okazaki, Takayuki Okatani, Koichiro Deguchi

Image-based Rendering by Virtual 1D Cameras
Naoyuki Ichimura

Implicit Surface Reconstruction with an Analogy of Polar Field Model
Yuxu Lin, Chun Chen, Mingli Song, Jiajun Bu, Zicheng Liu

Dense Stereo Correspondence with Contrast Context Histogram, Segmentation-Based Two-Pass Aggregation and Occlusion Handling
Tianliang Liu, Pinzheng Zhang, Limin Luo

OS10: Recognition and Search

14:00–15:30, January 16, Room B
Chair: Andreas Uhl

Can Geotags Help Image Recognition ?
Keita Yaegashi, Keiji Yanai

Principal Component Hashing: An Accelerated Approximate Nearest Neighbor Search
Yusuke Matsushita, Toshikazu Wada

A Novel Visual Speech Representation and HMM Classification for Visual Speech Recognition
Dahai Yu, Ovidiu Ghita, Alistair Sutherland, Paul Whelan

Novel Approaches for Exclusive and Continuous Fingerprint Classification
Javier A. Montoya-Zegarra, João P. Papa, Neucimar J. Leite, Ricardo da Silva Torres, Alexandre X. Falcão

Poster Sessions

Poster I

14:00–16:00, January 14, Room C

I-1 SUBSMELL: Multimedia with a Simple Olfactory Display
Chomtip Pornpanomchai, Arinchaya Threekhunprapa, Krit Pongrasamiroj, Phichate Sukklay

I-2 Fixed-Coefficient Iterative Bilateral Filters for Graph-Based Image Processing
Chang Jian, Kohei Inoue, Kenji Hara, Kiichi Urahama

I-3 Texture Retrieval Effectiveness Improvement Using Multiple Representations Fusion
Noureddine Abbadeni

I-4 Recognizing Multiple Objects via Regression Incorporating the Co-occurrence of Categories
Takahiro Okabe, Yuhi Kondo, Kris M. Kitani, Yoichi Sato

I-5 An Adaptive and Efficient Selective Multiple Reference Frame Motion Estimation for H.264 Video Coding
Yu-Ming Lee, Yong-Fu Wang, Jia-Ren Wang, Yinyi Lin

I-6 A Framework for Suspicious Action Detection with Mixture Distributions of Action Primitives
Yoshio Iwai

I-7 Framework for Illumination Invariant Vehicular Traffic Density Estimation
Pranam Janney, Glenn Geers

I-8 Robust Facial Feature Location on Gray Intensity Face
Qiong Wang, Chunxia Zhao, Jingyu Yang

I-9 Error-Diffused Image Security Improving Using Overall Minimal-Error Searching
Jing-Ming Guo, Yun-Fu Liu

I-10 Automatic Segmentation of Non-rigid Objects in Image Sequences Using Spatiotemporal Information
Cheolkon Jung, Joongkyu Kim

I-11 Robust Simultaneous Low Rank Approximation of Tensors
Kohei Inoue, Kenji Hara, Kiichi Urahama

I-12 Video-Based Modeling of Dynamic Hair
Tatsuhisa Yamaguchi, Bennett Wilburn, Eyal Ofek

I-13 Optimal Pixel Matching between Images
Yuichi Yaguchi, Kenta Iseki, Ryuichi Oka

I-14 Moving Object Segmentation using Optical Flow and Depth Information
Jens Klappstein, Tobi Vaudrey, Clemens Rabe, Andreas Wedel, Reinhard Klette

I-15 Usefulness of Retina Codes in Biometrics
Thomas Fuhrmann, Jutta Hämmerle-Uhl, Andreas Uhl

I-16 Inclusion of a Second-Order Prior into Semi-Global Matching
Simon Hermann, Reinhard Klette, Eduardo Destefanis

I-17 Hardware Design of Shape-Preserving Contour Tracing for Object of Segmented Images
Roy Chaoming Hsu, Yaw-Yu Lee, Bin-Wen Kao, Din-Yuen Chan

I-18 Accelerating Face Detection by Using Depth Information
Haiyuan Wu, Kazumasa Suzuki, Toshikazu Wada, Qian Chen

I-19 Rotated Image Based Photomosaic Using Combination of Principal Component Hashing
Hideaki Uchiyama, Hideo Saito

Poster 2

13:30–15:30, January 15, Room C

II-1 A Stereo Self-adjustment Methodology for Resuming Active Camera Operation
Masafumi Nakagawa, Yoshihiro Kawai, Fumiaki Tomita

II-2 Combining Invariant and Corner-Like Features to Optimize Image Matching
Jimmy Addison Lee, Kin-Choong Yow

II-3 Integrated Expression-Invariant Face Recognition with Constrained Optical Flow
Chao-Kuei Hsieh, Shang-Hong Lai, Yung-Chang Chen

II-4 Automatic Eigentemplate Learning for Sparse Template Tracker
Keiji Sakabe, Tomoyuki Taguchi, Takeshi Shakunaga

II-5 Tracking without Background Model for Time-of-Flight Cameras
Luca Bianchi, Riccardo Gatti, Luca Lombardi, Paolo Lombardi

II-6 X-Ray Image Classification and Retrieval Using Ensemble Combination of Visual Descriptors
Jeong-Hee Shim, Ki-Hee Park, Byoung-Chul Ko, JaeYeal Nam

II-7 Video-based Motion Capturing for Skeleton-based 3D Models
Liang-Yu Shih, Bing-Yu Chen, Ja-Ling Wu

II-8 Player Detection and Tracking in Broadcast Tennis Video
Yao-Chuan Jiang, Kuan-Ting Lai, Chaur-Heh Hsieh, Mau-Fu Lai

II-9 Unsupervised Pedestrian Re-identification for Loitering Detection
Chung-Hsien Huang, Yi-Ta Wu, Ming-Yu Shih

II-10 A Fast Macroblock Mode Decision Algorithm for the Baseline Profile in the H.264 Video Coding Standard
Chang-Hsing Lee, Cheng-Chang Lien, Jau-Ling Shih, Ping-Yu Lin

II-11 Video Coding Using Spatially Varying Transform
Cixun Zhang, Kemal Ugur, Jani Lainema, Moncef Gabbouj

II-12 Comparison of Visible, Thermal Infra-Red and Range Images for Face Recognition
Ajmal Mian

II-13 Enhanced Sports Image Annotation and Retrieval Based upon Semantic Analysis of Multimodal Cues
Kraisak Kesorn, Stefan Poslad

II-14 Memory Efficient VLSI Architecture for QCIF to VGA Resolution Conversion
Asmar A. Khan, Shahid Masud

II-15 Towards an Interpretation of Intestinal Motility Using Capsule Endoscopy Image Sequences
Hai Vu, Tomio Echigo, Ryusuke Sagawa, Keiko Yagi, Masatsugu Shiba, Kazuhide Higuchi, Tetsuo Arakawa, Yasushi Yagi

II-16 On JPEG2000 Error Concealment Attacks
Thomas Stütz, Andreas Uhl

II-17 Upper-Body Contour Extraction Using Face and Body Shape Variance Information
Kazuki Hoshiai, Shinya Fujie, Tetsunori Kobayashi

II-18 Approximated Ground Truth for Stereo and Motion Analysis on Real-World Sequences
Zhifeng Liu, Reinhard Klette

II-19 Cooperative Surveillance System with Fixed Camera Object Localization and Mobile Robot Target Tracking
Chih-Chun Chia, Wei-Kai Chan, Shao-Yi Chien

Poster 3

10:30–12:30, January 16, Room C

III-1 On the Security of an MPEG-Video Encryption Scheme Based on Secret Huffman Tables
Shujun Li, Guanrong Chen, Albert Cheung, Kwok-Tung Lo, Mohan Kankanhalli

III-2 H.264/AVC Video Encoder Realization and Acceleration on TI DM642 DSP
Daw-Tung Lin, Chung-Yu Yang

III-3 Improved Two-Level Model Averaging Techniques in Drosophila Brain Modeling
Cheng-Chi Wu, Chao-Yu Chen, Hsiu-Ming Chang, Ann-Shyn Chiang, Yung-Chang Chen

III-4 Belief Propagation for Stereo Analysis of Night-Vision Sequences
Shushi Guan, Reinhard Klette, Young W. Woo

III-5 Region-Based Super Resolution for Video Sequences Considering Registration Error
Osama A. Omer, Toshihisa Tanaka

III-6 A High Performance H.264 Deblocking Filter
Vagner Rosa, Altamiro Susin, Sergio Bampi

III-7 Steganalysis of JPEG Images with Joint Transform Features
Zohaib Khan, Atif Bin Mansoor

III-8 Object Detection under Varying Illumination based on Adaptive Background Modeling Considering Spatial Locality
Tatsuya Tanaka, Atsushi Shimada, Daisaku Arita, Rin-ichiro Taniguchi

III-9 Weighted Threshold Secret Image Sharing
Shyong Jian Shyu, Chun-Chieh Chuang, Ying-Ru Chen, Ah-Fur Lai

III-10 Removal of Specular Reflection Component Using Multi-view Images and 3D Object Model
Shu-Kam Chow, Kwok-Leung Chan

III-11 An ROI/xROI Based Rate Control Algorithm in H.264|AVC for Video Telephony Applications
Changhee Kim, Taeyoung Na, Munchurl Kim, Jeongyeon Lim, Youngho Joo, Kimun Kim, Jaewoan Byun, Munchurl Kim

III-12 Simplifying the Rate Control Scheme for Distributed Video Coding by Flexible Slepian-Wolf Decoding
Ralph Hänsel, Erika Müller

III-13 Glass Partterns and Artistic Imaging
Giuseppe Papari, Nicolai Petkov

III-14 Classification of Similar 3D Objects with Different Types of Features from Multi-view Images
Hitoshi Niigaki, Kazuhiro Fukui

III-15 Recovery Rate of Clustering Algorithms
Fajie Li, Reinhard Klette

III-16 Multiple View Geometry of Projector-Camera Systems from Virtual Mutual Projection
Shuhei Kobayashi, Fumihiko Sakaue, Jun Sato

III-17 Automatic Appropriate Segment Extraction from Shots Based on Learning from Example Videos
Yousuke Kurihara, Naoko Nitta, Noboru Babaguchi

III-18 Localization of Lesions in Dermoscopy Images Using Ensembles of Thresholding Methods
M. Emre Celebi, Hitoshi Iyatomi, Gerald Schaefer, William V. Stoecker

III-19 Active Contour Tracking of Moving Objects Using Edge Flows and Ant Colony Optimization in Video Sequences
Dong-Xian Lai, Yuan-Hsiang Chang, Zhi-He Zhong

Demos and Exhibit

Demonstrations I (by Leading Project)

14:00–16:00, January 14, Room D

D-I-1 High Fidelity Digitization of Large-Scale and Intangible Cultural Assets
(Takashi Matsuyama, Katsushi Ikeuchi, Sonoko Okura, Yasuhide Okamoto, Tetsuya Kakuta, Rei Kawakami, Takeshi Oishi, Lyndon Hill, Hiromasa Yoshimoto, Tatsuhisa Yamaguchi, Takeshi Takai, Shohei Nobuhara)

D-I-2 Archiving Performances of Japanese Traditional Dramatic Arts with a Dynamic 3D Model — 3D Video Archiving of Traditional Performing Arts —
(K. Aizawa, Y. Iwadate, A. Utsumi, T. Yamasaki, M. Katayama, K. Tomiyama, K. Hisatomi, H. Yamazoe, S.R. Han, N.S. Lee, D. Kasai, S. Nakagawa)

D-I-3 Cross-Media Search Environments for Education — Software Technologies for Search and Integration across Heterogeneous Media Archives —
(K. Tanaka, Y. Kiyoki, J. Adachi, S. Oyama, T. Tezuka, H. Ohshima, N. Yoshida, S. Sasaki, Y. Itabashi, M. Kawamoto, Y. Takahashi, N. Kando, K. Aihara)

D-I-4 IMAGINE — Federated Associative Search for Spontaneous Learning
(Akihiko Takano, Shingo Nishioka, Yuzo Marukawa, Yuji Koike, Takeshi Morimoto, Shin'ichi Satoh, Norio Katayama, Hiroshi Mo, Fuminori Yamagishi)

Demonstrations II

13:30–15:30, January 15, Room D

10:30–12:30, January 16, Room D

D-II-1 A Real-Time Hand Gesture User Interface Using a Multi-Core Stream Processor
(Tsukasa Ike, Yasukazu Okamoto)

D-II-2 A Demonstration of Human Detection using Co-occurrence Histograms of Oriented Gradients Feature Descriptor
(Kentaro Yokoi, Tomoki Watanabe, Satoshi Ito)

D-II-3 Photometric Reconstruction in Real Time without SVD using GPU
(Tomoaki Teshima, Hideo Saito, Vincent Nozick, Venceslas Biri)

D-II-4 MapBook AiR: AR City Representation System on a Physical Map using Topological Information
(Hideaki Uchiyama and Hideo Saito, Vivien Nivesse, Myriam Servières, Guillaume Moreau)

D-II-5 Real-Time Video-Based Rendering from Uncalibrated Cameras Using Plane-Sweep Algorithm
(Songkran Jarusirisawad, Vincent Nozick, Hideo Saito)

D-II-6 Global Lab: an Interaction, Simulation, and Experimentation Platform based on "Second Life" and "OpenSimulator"
(Anette von Kapri, Sebastian Ullrich, Boris Brandherm, Helmut Prendinger)

D-II-7 Digital Typhoon: Emergency Information System Enabled By Ranking and Sharing of Multimedia Data
(Asanobu Kitamoto)

D-II-8 Video-rate face detection and tracking using active stereo-camera
(Kazumasa Suzuki, Hiroshi Oike, Haiyuan Wu, and Toshikazu Wada)

D-II-9 Panoramic Video Rendering and Display System Using Probability Mapping Method
(Megumi Isogai, Yutaka Kunita, Hideaki Kimata, and Yoshimitsu Ohtani)

D-II-10 Virtual 3DCG of the Citadel of Bam
(M.R.Matini, E.Andaroodi, H.Y.Yoon, N.Abe, A. Kitamoto, T.Kawai, K.Ono)

D-II-11 Augmented Reality for Non-Rigid Surfaces
(Julien Pilet, Vincent Lepetit, Pascal Fua)

D-II-12 Telepresence System for Outdoor Scene with Glassless Stereoscopic Display
(Maiya Hori, Masayuki Kanbara, Naokazu Yokoya)

Exhibit

E-1 LTU Technologies