

IWAIT 2008 Program Overview

January 7 (Monday), 2008			
Time \ Place	Meeting Room A – Chalucet Castle level RF	Meeting Room D – Chalucet Castle level RF	Meeting Room B – Chalucet Castle level RF
08:00 – 09:00	Registration (Apollo Ballroom – Leith Castle level B1)		
09:00 – 09:10	Opening (Apollo Ballroom – Leith Castle level B1)		
09:10 – 09:50	Keynote Speech I (Apollo Ballroom – Leith Castle level B1)		
09:50 – 10:30	Keynote Speech II (Apollo Ballroom – Leith Castle level B1)		
10:30 – 11:00	Coffee Break		
11:00 – 12:20	Session A1 Image Processing	Session B1 Pattern Recognition	Poster Session P1 One-Minute Presentation & Poster Display
12:20 – 13:40	Lunch		
13:40 – 15:20	Session A2 Image Processing	Session B2 Multimedia Systems	Poster Session P2 One-Minute Presentation & Poster Display
15:20 – 15:40	Coffee Break		
15:40 – 17:40	Session A3 Image & Video Compression	Session B3 Multimedia Technologies	Poster Session P3 One-Minute Presentation & Poster Display
18:30 – 21:00	Banquet (Versaille Ballroom – Leith Castle level B1)		

January 8 (Tuesday), 2008			
Time \ Place	Meeting Room A – Chalucet Castle level RF	Meeting Room D – Chalucet Castle level RF	
08:00 – 08:30	Registration (Lobby – Chalucet Castle level RF)		
08:30 – 10:10	Session A4 Computer Vision	Session B4 Computer Graphics & Animation	
10:10 – 10:30	Coffee Break		
10:30 – 12:10	Session A5 Computer Vision	Session B5 Multimedia Technologies	
12:10 – 13:30	Lunch		
13:30 – 15:10	Session A6 Computer Vision	Session B6 Multimedia Technologies	
15:10 – 15:30	Coffee Break		
15:30 – 16:50	Session A7 Medical Application	Session B7 Multimedia Technologies	
16:50 – 17:00	Closing (Meeting Room A – Chalucet Castle level RF)		

Technical Program

Keynote Speech I

Chairperson: Prof. Masayuki Nakajima, Tokyo Institute of Technology, Japan

Speaker: Dr. Kazumasa Enami

Affiliation: National Institute of Information and Communications Technology, Japan

Title: Research on Ultra-Realistic Communications

Keynote Speech II

Chairperson: Prof. Zen-Chung Shih, National Chiao Tung University, Taiwan

Speaker: Prof. Tong-Yee Lee

Affiliation: National Cheng Kung University, Taiwan

Title: Researches on Stylized Rendering and Animations

Session A1 Image Processing

Chairperson: Dr. Shinichi Sakaida, NHK, Japan

A1-1 Defocusing Blur Restoration Using Shift-Invariant Wavelet Transform

Hisanaga FUJIWARA, Zhong ZHANG, Tetsuo MIYAKE, Akio MIWA

A1-2 Reconstruction of an All-In-Focus Image Using Hierarchical Segmentation and Blur Estimation

Hwa-young Kim, Rae-Hong Park

A1-3 Color Edge Detector Based on the Human Visual System

Bongjoe Kim, Minsung Kang, Kwanghoon Sohn

A1-4 Fast INTRA-Mode Decision for H.264/AVC Using Inverse Tree-Structure

Hyunsuk Ko, Kiwon Yoo, Jungdong Seo, Kwanghoon Sohn

Session B1 Pattern Recognition

Chairperson: Prof. Hiroshi Yoshikawa, Nihon University, Japan

B1-1 Fast Training of Large Data Set on SOM-SVM for Pattern Recognition

Kohei Miyamoto, Tomoharu Nagao

B1-2 Proposal of Pattern Matching Using Log Autocorrelation on Radon Transform - Evaluation of Recognition Performance

Makoto HASEGAWA

B1-3 Recognition and Description of Simple Graphics

Shin-ichi Murakami, Akifumi Shiono

B1-4 Finding Optimized Object Alphabet Using GA

Kenji Saiki, Ryoji Ohira, Tomoharu Nagao

Poster Session P1

Chairperson: Dr. Kazuto Kamikura, Nippon Telephone and Telegraph Corporation, Japan

P1-01 Rapid and Precise Detection of Rotation Center Positions in Rotated Images

Tomomichi Kusajima, Issei Matsunaga, Minoru Ito

P1-02 A New Approach for Precise and Stable Detection of Image Scaling Changes

Issei Matsunaga, Tomomichi Kusajima, Minoru Ito

P1-03 Extraction of Unmark Roads Used Aerial Images Together Numeric Road Map

Go KOUTAKI, Takumi UEMRA, Keiichi UCHIMURA, Zhencheng HU

P1-04 A Mapping Method of Shadow and Weather Effects in 3D Digital Map System

Junichiro Shuto, Mitsunori Makino

P1-05 A Study on Clustering of Huge Polygon Models with Distributed Shape Reference Algorithms

Yutaro Higashi, Kouichi Konno, Yoshimasa Tokuyama

P1-06 Color Recognition of Images Using a Categorical Color Perception Model

Noriko Yata, Tomoharu Nagao, Keiji Uchikawa

P1-07 A Visualization and Interactive Manipulation of 3D Digital Map on Immersive Display System

Taiki Kanai, Mitsunori Makino

P1-08 Estimation Method of Light Source Environment

Yoshitsugu Manabe, Toshiyuki Muraoka, Kunihiro Chihara

P1-09 A Study of a Method for Immersive Projection Display Using one PC and Creating Animation

SUMA Noji, TAKASHI Saito, AKIRA Nagata

P1-10 Event Detection from Picture Observations

WeiQi Yan, Ramesh Jain

P1-11 Texture Synthesis Using Genetic Algorithms

Chin-Chen Chang, Yen-Ting Kuo, Yun-Wen Wang, Wen-Kai Tai

P1-12 Object-Based 3D Audio Service System Using Preset Audio Scenes

Jae-hyoun Yoo, Yong Ju Lee, Taejin Lee, Dae-young Jang, Kyeongok Kang

P1-13 Distinctive Behavioral Phenotype Detection for Thread-Shape Microscopic Organism

Bai-Tao Zhou, Jae-Hong Min, Joong-Hwan Baek

P1-14 RTL Design of DFE Equalizer for ATSC DTxR System

Sung-Hoon Kim, Sung-Ik Park, Heung-Mook Kim, Jong-Soo Lim, Yong-Seok Kim, Ki-Doo Kim

P1-15 Examination of Radiometric compensation for Projected Images on Any Surface

Mie Sato, Makiko Sembon, Naoki Hashimoto, Masao Kasuga

Session A2 Image Processing

Chairperson: Prof. Thumrongrat Amornraksa, King Mongkut's University of Technology Thonburi, Thailand

A2-1 Estimation of the Rotation, Translation and Scaling Based on Random Sampling of Sector Region Luminosity Correlation Motion Vectors

Kyota AOKI

A2-2 Low-Complexity and Accurate Image Interpolation Method Based on Local Gradient Features

Hyuk Lee, Taeyang Kim, Soonjong Jin, Jechang Jeong

A2-3 Edge Directed Interpolation Based on Covariance Adaptation

Dongyoung Lim, Soonjong Jin, Jechang Jeong

A2-4 Adaptive Linear Interpolation Using New Distance Weights and Local Patterns

Taeyang Kim, Yeonggyun Jeon, Seyoung Lee, Jechang Jeong

A2-5 Multiwavelet Watermarking Using Number of Zerotrees

W. Pijayanan, S. Tachaphetpiboon, T. Amornraksa

Session B2 Multimedia Systems

Chairperson: Prof. Supavadee Aramvith, Chulalongkorn University, Thailand

B2-1 A Proposal of Communication Robot Considering Personal Space

Satoshi Yamaura, Takayuki Kojima, Kazuhiko Yamamoto, Kunihito Kato

B2-2 Experimental Performance Evaluation of Caricature Generation System Picasso-2 Exhibited at Expo2005 and some Improvements

Naoya Tokuda, Takayuki Fujiwara, Hiroyasu Koshimizu

B2-3 Presentation Method of Weather Forecast on a Small Car Display

Takamitsu Saito, Ichiro Yuyama, Hiroshi Hasegawa, Yu Watanabe

B2-4 3D Image Analysis for Evaluating Internal Deformation/Fracture Characteristics of Materials

Mitsuru Nakazawa, Yoshimitsu Aoki, Hiroyuki Toda, Masakazu Kobayashi, Yuji Kawai

B2-5 Design and Implementation of Interactive Multi-View Visual Contents Authoring System Based on MPEG-4

Injae Lee, Jinsoo Choi, Seyoon Jeong, Kyungae Moon

Poster Session P2

Chairperson: Dr. Isao Miyagawa, Nippon Telephone and Telegraph Corporation, Japan

P2-01 A Web-Based Translation System from MusicXML to Braille Music Scores

Reiko MINAMIKAWA-TACHINO, Toshiyuki GOTOH, Naoyoshi TAMURA

P2-02 An Interactive Visual System of Visibility with Searching Better Viewpoint

Jun Otsuka, Mitsunori Makino

P2-03 Observation Microbes Using the General Digital Camera

Ken-ichi Tanaka, Yuta Senokuchi

P2-04 Visualization of Under Water Microbe Using High Depth of Field

Ken-ichi Tanaka, Yuta Fujita, Jun-ichi Sakatou

P2-05 Finger Pointer: an Image-Based Human-Computer Interaction System

Takayuki Omori, Tsubasa Saito, Kazuhiro Yamada, Shigeru Akamatsu

P2-06 An Automatic Tracking System Using a Single PTZ Camera

Kimitsugu KON, Shigeru AKAMATSU

P2-07 An Input System of Characters Using a Web Camera and Fingertip's Traces

Takashi Ozeki, Keisuke NAITO, Yuya FUKUNAGA, Fujio KOBAYASHI

P2-08 Direct Camera Calibration Based on Optical Path Analysis

Koichi Kawabata, Kenji Ueno, Minoru Ito

P2-09 A Digital Watermarking of Pseudo Hologram Using Complex Hadamard Transform

Ken-ichi Tanaka, Ryouta Isoi

P2-10 Recognition of Reconstructed Images from Computer-Generated Hologram Used in Digital Watermarking

Ken-ichi Tanaka, Jun-ichi Sakato

P2-11 Relationship Between Error Diffusion Coefficients and Object Position for Computer-Generated Hologram

Ken-ichi Tanaka, Susumu Nishi

P2-12 A Robust Digital Image Watermarking Method Based on Singular Value Decomposition and Discrete Cosine Transform

Daisuke SUZUKI, Akio KIMURA, Takashi WATANABE

P2-13 A Visual Simulation of Effectiveness of Security Cameras

Sayaka Isozaki, Mitsunori Makino

P2-14 Computer-Generated Pseudo Hologram with Complex Hadamard Transform and Improvement of Image Reconstruction

Ken-ichi Tanaka, Yasuhito Fujita

P2-15 Re-defined Significant Pass for FGS in Scalable Video Coding

Bae-Keun Lee

Session A3 Image & Video Compression

Chairperson: Prof. Jiro Katto, Waseda University, Japan

A3-1 The Optimum Running Approximation of FIR Filter Bank and Its Application to Multicast Emergency System

Yuichi Kida, Takuro Kida

A3-2 A Fast Calculation Method of the Optimum running interpolation of vector signals on multi-dimensional fir filter banks

Yuichi Kida, Takuro Kida

A3-3 Arithmetic Coding of Video Signals Based on Iteration of Motion Compensation and Matching Pursuit

Masahito Ishikawa, Tsutomu Yamamoto, Ichiro Matsuda, Susumu Itoh

A3-4 Adaptive Residual Coding in Spatial/Frequency Domains Based on Adaptive Spatial Quantization

Yu-Na Kim, Dong-Gyu Sim

A3-5 DCT Sign Only Image and Its Application to Phase Only Correlation

Izumi ITO, Hitoshi KIYA

A3-6 Improved Intra Prediction Using Multiple Reference Lines

Shohei Matsuo, Seishi Takamura, Kazuto Kamikura, Yoshiyuki Yashima

Session B3 Multimedia Technologies

Chairperson: Prof. Wen-Kai Tai, National Dong Hwa University, Taiwan

B3-1 Generation of Multiple Depth Images from a Single Depth Map Using Multi-Baseline Information

Eun-Kyung Lee, Seung-Uk Yoon, Yo-Sung Ho

B3-2 High-Quality TVML Content by Using Post-Recording Processing and Emotion in Speech

Mamoru DOKE, Hiroyuki KANEKO, Narichika HAMAGUCHI, Seiki INOUE, Masanori IDESAWA, Yukio IWAHANA, Masaki HAYASHI

- B3-3** Horizontal Parallax Distortion in TOED-IN Camera Using Wide-Angle Lens for Mobile Device
Hoonjong Kang, Hiroshi Yoshikawa
- B3-4** Morphological Image Tamper Detecting Method Considering Robustness Against Compression
Mirei KIHARA, Masaaki FUJIYOSHI, Hitoshi KIYA
- B3-5** Computer Simulation of Reconstructed Image from Huge Size Rainbow Hologram
Masato Tsumuta, Takeshi Yamaguchi, Hiroshi Yoshikawa
- B3-6** Designing a Vision-based 3D Wand Interaction Interface Based on Individual 2D Image Frames
Chang-Hong Tsai, Yu-En Wu, Zhi-Wei Chen, Cheng-Chin Chiang

Poster Session P3

Chairperson: Prof. Chin-Chen Chang, National United University, Taiwan

- P3-01** Improvement of Color Images Halftoning with Simulated Annealing
Ken-ichi Tanaka, Yoshiaki Takahashi
- P3-02** Inverse Halftoning Using Kalman Filtering
Ken-ichi Tanaka, Ipppei Takagi
- P3-03** Development of AVC/h.264 Codec System for Super Hi-Vision
Shinichi Sakaida, Nao Nakajima, Kazuhisa Iguchi, Seiichi Gohshi, Kimihiko Kazui, Akira Nakagawa, Kiyoshi Sakai
- P3-04** Evaluation of Sensitivity of Integer DCTs
Sakol UDOMSIRI, Masahiro IWAHASHI
- P3-05** Performance Improvement of the Lossless Video Coding Scheme by Adapting the Number of 3D Predictors Frame by Frame
Akira Minezawa, Shuma Okazaki, Ichiro Matsuda, Susumu Itoh, Sei Naito, Atsushi Koike
- P3-06** Related Pre and Post-Processing for Motion Picture Coding
Shohei Moriya, Kenji Sugiyama, Naoya Sagara
- P3-07** Spatial Direction Adaptive Processing for Motion Compensated Interpolation of De-Interlacing
Yoshiyuki Yamada, Naoya Sagara, Kenji Sugiyama
- P3-08** Performance Efficient Harmonic Patching Broadcasting Scheme for VoD Services
Hee Jeong, Sang-seok Jung, Ju-han Lee, Sung-kwon Park
- P3-09** Absolute Estimation Method of Block Artifact Quantity
Kazuhiko Yokoyama, Naoya Sagara, Kenji Sugiyama
- P3-10** Parallel DPCM Algorithms for Multicore Processors
Akiyoshi Wakatani

- P3-11** Quality Estimation of Fractal Coded Images Based on Image Features
Megumi Takezawa, Hirofumi Sanada, Kazuhisa Watanabe, Miki Haseyama
- P3-12** An Alternative Approach to Deblocking Filtering for Reducing Decoding Load in H.264
Yoku Takahashi, Koichi Takagi, Akio Yoneyama, Yoshinori Hatori
- P3-13** Secure Biometrics with Intronization
Qinghai Gao, Xiangdong Li, Lin Leung, Michael Anshel
- P3-14** The Synthesis of Intraframe Character Animation in a Comic
Yun-Feng Chou, Zen-Chung Shih
- P3-15** Horizon Occlusion Culling for 3D Navigation
Yun-Feng Chou, Yu-Ting Wu, Shiang-Chun Chang, Mu-Heng Li, IChen Lin, Zen-Chung Shih, Rung-Ren Lin

Session A4 Computer Vision

Chairperson: Prof. Yo-Sung Ho, Gwangju Institute of Science and Technology, Korea

- A4-1** Robust Projective Factorization in the Presence of Missing or Uncertain Data
Eiji Shibusawa, Wataru Mitsuhashi
- A4-2** Shape Matching with Bayesian Belief Propagation Using Deformable Template
Kedkarn Chaiyakhun, Suthep Madarasmii
- A4-3** Simultaneous Projective Reconstruction of Visual Primitives with Bundle Adjustment
Daisuke Uesu, Wataru Mitsuhashi
- A4-4** Retrieval of Similar Motion by Feature of Body
Yusuke Takebayashi, Koji Nishio, Ken-ichi Kobori
- A4-5** Self-Correcting Handheld Projectors inside Cluttered Environment
Thitirat Siriborvornratanakul, Masanori Sugimoto

Session B4 Computer Graphics & Animation

Chairperson: Prof. Feng Tian, Nanyang Technological University, Singapore

- B4-1** An Implementation of Multi-Bounce Refractions for Multi-Layered Structures
Chun-Min Lin, Chun-Yen Huang, Wen-Kai Tai, Chin-Chen Chang
- B4-2** Smoothup: an Easy Way to Sketch-up
Jing Wang, Feng Tian, Hock Soon Seah

B4-3 Combining Stereo Positions and Reflectance Properties for 3D Surface Reconstruction

Wen-Xing Zhang, I-Chen Lin, Jia-Ru Lin, Wen-Chih Tai, Shian-Jun Chiou

B4-4 Multi-Purpose Recursive Mapping Method for Animating Large-Scale Cumulonimbus Clouds

Mamat ABDUKADIR, Mamtimin GENI, Tadahiro FUJIMOTO, Norishige CHIBA

B4-5 Layer Composition for Line Drawings In 2D Animation

Jie Qiu, Hock Soon Seah, Feng Tian, Quan Chen, Zhongke Wu

Session A5 Computer Vision

Chairperson: Dr. Seishi Takamura, Nippon Telephone and Telegraph Corporation, Japan

A5-1 An Adaptive Optimization Technique and Its Application to Posture Estimation

Rina Takahashi, Tomoharu Nagao

A5-2 Binarization Technique of Gabor Coefficient for Mesh Material Inspection

Di WU, Shinji FUKUMA, Norihiro OGATA, Tetsuma SAKURAI

A5-3 Contour Extraction and Tracking of Nonrigid Objects Using Mean Shift Algorithm and Level Set Methods

Shintaro Kawamoto, Wataru Mitsuhashi

A5-4 An Analysis of Facial Movement by Taste Stimulation

Noriaki Kishimoto, Kunihito Kato, Kazuhiko Yamamoto

A5-5 Tracking Object by Region-Wise Linear Subspace Representations in Particle Filter

Ming-Che Ho, Ying-Yu Su, Cheng-Chin Chiang

Session B5 Multimedia Technologies

Chairperson: Prof. Zen-Chung Shih, National Chiao Tung University, Taiwan

B5-1 A Novel Rectification Method for Two-Dimensional Camera Array by Parallelizing Locus of Feature Points

Norishige FUKUSHIMA, Tomohiro YENDO, Toshiaki FUJII, Masayuki TANIMOTO

B5-2 Free Viewpoint Image Generation Using Estimated Depth at Camera Viewpoints

Yuji MORI, Tomohiro YENDO, Toshiaki FUJII, Masayuki TANIMOTO

B5-3 3D Shape Measurement of Transparent Objects Using Slit-Pattern Reflection

Hiromi Tsujimura, Yuuki Uranishi, Muneyuki Sakata, Yoshitsugu Manabe, Kunihito Chihara

B5-4 Free Viewpoint Image Generation in Circular Camera Setup

Takeshi Uemori, Tomohiro YENDO, Toshiaki FUJII, Masayuki TANIMOTO

B5-5 High Accurate Geometric Correction for NOAA AVHRR Data Considering the Relationship Between Errors and the Variation of Elevation

An Ngoc Van, Mitsuru Nakazawa, Yoshimitsu Aoki

Session A6 Computer Vision

Chairperson: Dr. Ichiro Matsuda, Science University of Tokyo, Japan

A6-1 Jaw Shape Estimation Method by Analytical Curve Fitting

Takayuki Hoshino, Takayuki Fujiwara, Hiroyasu Koshimizu, Yasuyo Hatano

A6-2 Moving Object Tracking Based on Region Label Assignment

Masaya IKEDA, Kan OKUBO, Norio TAGAWA

A6-3 Improvement of Gradient Method for Optical Flow Detection Based on Correction of Intensity Differentials

Zhilin CAI, Kan OKUBO, Norio TAGAWA

A6-4 Estimation of Multi Resolutional Optical Flow Based on Dynamic Bayesian Network

Shoichi Naganuma, Norio Tagawa

A6-5 Continuous Person Tracking across Multiple Cameras with Color Calibration

N. Bumrungrat, S. Aramvith, T.H. Chalidabhongse

Session B6 Multimedia Technologies

Chairperson: Prof. I-Chen Lin, National Chiao Tung University, Taiwan

B6-1 Light Beam Reconstructing 3D Display Using Light Shutter

Junya YAMAMOTO, Tomohiro YENDO, Toshiaki FUJII, Masayuki TANIMOTO

B6-2 Adjustment of Multiple Camera Alignment Using Camera Calibration

Seibe HORIO, Tomohiro YENDO, Toshiaki FUJII, Masayuki TANIMOTO

B6-3 High-Speed Image Processing System for Road-to-Vehicle Visible Light Communication

Shinya Iwasaki, Tomohiro Yendo, Toshiaki Fujii, Masayuki Tanimoto, Yoshikatsu Kimura

B6-4 Book Management System Using Various Sensor Network

Yuuki Uranishi, Muneyuki Sakata, Ismail Arai, Yoshitsugu Manabe, Hideki Sunahara, Kunihiro Chihara

B6-5 Transmission of Holographic 3D Moving Picture Employed Infrared Network

Kunihiko Takano, Mikihiro Noguchi, Syunsuke Hochido, Yuta Kabutoya, Lan Tian, Koki Sato, Kenji Muto

Session A7 Medical Application

Chairperson: Prof. Kosin Chamnongthai, King Mongkut's University of Technology Thonburi, Thailand

A7-1 A FPGA Based Tonsillitis Detection System

Pranithan Phensadsaeng, Pinit Kumhom, Kosin Chamnongthai

A7-2 Subjective Evaluation of Comfortableness of Wet Cotton and Paper Hand Towels "OSHIBORI"

Yasuhiro Soeta, Takuma Kitamoto, Hiroshi Hasegawa, Masao Kasuga

A7-3 High-resolution Magnetic Resonance Image Reconstruction Using Phase-Scrambling Fourier Imaging Technique

N. Liu, S. Ito, Y. Yamada, M. Kasuga

A7-4 Image Measurement of Hand Dimensions Based on Anatomical Structure and Creases

Takuya TAKAHASHI, Yoshimitsu AOKI, Masaaki MOCHIMARU, Makiko KOUCHI

Session B7 Multimedia Technologies

Chairperson: Mr. Mamoru Doke, NHK Engineering Services, Inc., Japan

B7-1 Proposal of IRIS Tracking Method for Coping with Roll Rotation of Face

Takuma Funahashi, Takayuki Fujiwara, Hiroyasu Koshimizu

B7-2 Improvement of holography system using smoke 3D screen

Hongming ZHAO, Koki SATO, Kunihiko TAKANO

B7-3 Extraction of Illumination Effects from Natural Images with Color Transition Model

Hiroaki Nishihara, Tomoharu Nagao

B7-4 An Improved Image Hash Computation Method

Hyoung Joong Kim, So Young Kim, Hana Kwon, Ali Hosseini Khayat, Yong Soo Choi