ISVC5

International Symposium on Visual Computing

Final Program
International Symposium on Visual Computing (ISVC05)

December 5-7, 2005, Lake Tahoe, Nevada, USA

Symposium Overview

	Monday 5th	Tuesday 6th	Wednesday 7th
08:00 am – 09:00 am	*Breakfast* (Sand Harbor II)		
09:00 am – 09:55 am	*Keynote (*Sand Harbor I)		
10:00 am – 11:00 am	**Parallel Sessions** (Sand Harbor I & Tahoe A and B)		
11:00 am – 11:30 pm	*Coffee Break*		
11:30 am – 12:30 am	**Parallel Sessions** (Sand Harbor I & Tahoe A and B)		
12:30 pm – 02:00 pm	*Lunch Break*		
02:00 pm – 03:30 pm	**Keynote** (Sand Harbor I)	**Poster Session** (Sand Harbor III)	**Single Session** (Sand Harbor I)
03:30 pm – 04:00 pm	*Coffee Break*		
04:00 pm – 06:00 pm	**Parallel Sessions** (Sand Harbor I & Tahoe A and B)		
06:30 pm – 09:30 pm	*Banquet Dinner* (Sand Harbor II)		

- Symposium reception: **Sunday, December 4th**, from 6:30pm to 9:30pm
  (**Top of the Wheel**, 12th floor, at Harveys)

- The registration desk will be open daily from 8am to 5:30pm and on Sunday, December 4th, from 6pm to 9pm.

Monday, December 5th

08:00-09:00		Breakfast	
09:00-10:00		Keynote (Mohan Trivedi, University of California, San Diego)	
10:00-12:30		**Computer Graphics** Chair: Lijun Yin	**Medical Imaging** Chair: Bharam Parvin
	10:00	Direct Point Rendering on GPU. *Hiroaki Kawata and Takashi Kanai*	Retinal Image Registration for NIH's ETDRS. *Thitiporn Chanwimaluang and Guoliang Fan.*
	10:20	Active View Optimization for Viewing Objects in Motion. *Matt Berger, Lijun Yin and Jason Moore.*	Using multimodal MR data for segmentation and topology recovery of the cerebral superficial venous tree. *N. Passat, C. Ronse, J. Baruthio, J.-P. Armspach, M. Bosc and J. Foucher.*
	10:40	Adding Hand Motion to the Motion Capture Based Character Animation. *Ge Jin and James Hahn.*	Loop Removal from Colon Central Path through Skeleton Scale-Space Tracking. *Julien Lamy, Christian Ronse, and Luc Soler.*
11:00-11:30		Coffee Break	
	11:30	Oversimplified Euler Operators for a Non-Oriented, Non-Manifold B-Rep Data Structure. *Frutuoso G. M. Silva and Abel J. P. Gomes.*	Multiscale Segmentation of HRCT Images using Bipolar Incoherent Filtering. *Aamir Saeed Malik and Tae-Sun Choi*
	11:50	The number of gaps in binary pictures. *Valentin E. Brimkov, Angelo Maimone, Giorgio Nordo, Reneta P. Barneva and Reinhard Klette.*	Building Statistical Atlas of White Matter Fiber Tract based on Vector/Tensor Field Reconstruction in Diffusion Tensor MRI. *Yoshitaka Masutani, Shigeki Aoki, Osamu Abe, Mariko Yoshida, Haruyasu Yamada, Harushi Mori, Kenji Ino and Kuni Ohtomo.*
	12:10	Video Codec for Classical Cartoon Animations with Hardware Accelerated Playback. *Daniel Sykora, Jan Burianek and Jiri Zara.*	Interactive 3D Heart Chamber Partitioning with A New Marker-Controlled Watershed Algorithm. *Xinwei Xue*
12:30-14:00		Lunch	
14:00-15:30		Keynote (Anil Deane, Department of Energy)	
15:30-16:00		Coffee Break	
16:00-17:40		**ST: Computer Vision Methods for Ambient Intelligence** Chair: P. Remagnino	**ST: Virtual Reality and Medicine** Chair: Richard Boyle
	16:00	Inferring Cause/Effect Relationships in Multi-sensor Ambient Intelligence Systems. *S. Piva and C.S. Regazzoni.*	A Three-Level Graph Based Interactive Volume Segmentation System. *Runzhen Huang and Kwan-Liu Ma.*
	16:20	Toward A Unified Probabilistic Framework for Object Recognition and Segmentation. *Huei-Ju Chen, Kuang-Chih Lee, Erik Murphy-Chutorian and Jochen Triesch.*	Self-organizing Deformable Model : New Method for Fitting Mesh Model to Given Object Surface. *Ken'ichi Morooka and Hiroshi Nagahashi.*
	16:40	Distributed Multi-Camera Surveillance for Aircraft Servicing Operations. *David Thirde, Mark Borg, James Ferryman, Josep Aguilera and Martin Kampel.*	Image-Based Deformation of Objects in Real Scenes. *Han-Vit Chung and In-Kwon Lee.*
	17:00	Mining paths of complex crowd scenes. *B.Zhan, P.Remagnino and S.A.Velastin.*	Comparing Sphere-Tree Generators and Hierarchy Updates for Deformable Objects Collision Detection. *M. Garcia, S. Bayona, P. Toharia and C. Mendoza.*
	17:20	Geometric and Photometric Analysis for Interactively Recognizing Multicolor or Partially Occluded Objects. *Md. Altab Hossain, Rahmadi Kurnia and Yoshinori Kuno.*	Simulating Complex Organ Interactions: valuation of a Soft Tissue Discrete Model. *Maud Marchal, Emmanuel Promayon and Jocelyne Troccaz.*

Tuesday, December 6th

08:00-09:00	Breakfast		
09:00-10:00	Keynote (Tieniu Tan, CAS Institute of Automation, China)		
10:00-12:30	**ST: Pattern Analysis and Recognition Applications in Biometrics** Chair: S. Prabhakar		**Visualization** Chair: Ken Tobin
	10:00	Face Verification in Polar Frequency Domain: a Biologically Motivated Approach. *Yossi Zana, Roberto M. Cesar-Jr, Rogerio S. Feris and Matthew Turk.*	Hifocon: Object and Dimensional Coherence and Correlation in Multidimensional Visualization. *Soon Tee Teoh and Kwan-Liu Ma.*
	10:20	Face Alignment and Adaptive Weight Assignment for Robust Face Recognition. *Satyanadh Gundimada and Vijayan Asari.*	Efficient Compression of Visibility Sets. *Christian Bouville, Isabelle Marchal and Loic Bouget.*
	10:40	Face Detection in Low-resolution Images. *Shinji Hayashi and Osamu Hasegawa.*	Rendering Optimizations Guided by Head-Pose Estimates and their Uncertainty. *Javier Martinez, Ali Erol, George Bebis, Richard Boyle and Xander Twombly.*
11:00-11:30	Coffee Break		
	11:30	The Impact of Face Categorization on Recognition. *K. Veropoulos, G. Bebis and M. Webster*	Acceptance of visual search interfaces for the Web - design and empirical evaluation of a book search interface. *Olaf Thiele and Gunnar Mau.*
	11:50	A Novel Approach on Silhouette Based Human Motion Analysis for Gait Recognition. *Murat Ekinci and Eyup Gedikli.*	Distributed and Collaborative Biomedical Data Exploration. *Zhiyu He, Jason Kimball and Falko Kuester.*
	12:10	A Hybrid HMM/DPA Adaptive Gesture Recognition Method. *Stjepan Rajko and Gang Qian.*	Image database navigation: a globe-al approach. *Gerald Schaefer and Simon Ruszala.*
12:30-14:00	Lunch		
14:00-15:30	Poster Session		
15:30-16:00	Coffee Break		
16:00-18:00	**ST: Mediated Reality** Chair: Fatih Porikli		**ST: Visual Surveillance in Challenging Environments** Chairs: *How-Lung Eng* and *Wei-Yun Yau*
	16:00	Viewpoint Interpolation using an Ellipsoid Head Model for Video Teleconferencing. *Na-Ree Yoon and Byung-Uk Lee.*	Background Updating for Visual Surveillance. *Kyungnam Kim, David Harwood and Larry S. Davis.*
	16:20	Real-time Video Annotations for Augmented Reality. *Edward Rosten, Gerhard Reitmayr, and Tom Drummond.*	Pattern Discovery for Video Surveillance. *Yunqian Ma, Pradeep Buddharaju and Mike Bazakos.*
	16:40	A Tree-Structured Model of Visual Appearance Applied to Gaze Tracking. *Jeffrey B. Mulligan.*	Real-Time Crowd Density Estimation Using Images. *A. N. Marana, M. A. Cavenaghi, R. S. Ulson and F. L. Drumond.*
	17:00	Emotional Expression in Virtual Agents through Body Language. *Vishal Nayak and Matthew Turk.*	Automatic Robust Background Modeling Using Multivariate Non-Parametric Kernel Density estimation for Visual Surveillance. *Alireza Tavakkoli, Mircea Nicolescu and George Bebis.*
	17:20	Visual Tracking for Seamless 3D Interactions in Augmented Reality. *C. Yuan.*	Recognition of complex human behaviors in pool environment using foreground silhouette. *How-Lung Eng, Kar-Ann Toh, Wei-Yun Yau and Tuan-Kiang Chiew.*
	17:40	ARISupport - Interaction Support for Augmented Reality Systems. *Luiz Fernando Braga Lopes, Antonio Carlos Sementille, José Remo Ferreira Brega, Fátima L. S. Nunes Marques and Ildeberto Aparecido Rodello.*	Adaptive Background Subtraction with Multiple Feedbacks for Video Surveillance. *Liyuan Li, Ruijiang Luo, Weimin Huang, Karianto Leman and Wei-Yun Yau.*
18:30-21:30	Banquet Dinner (Speaker: Amitabh Varshney, University of Maryland)		

Wednesday, December 7th

08:00-09:00	*Breakfast*		
09:00-10:00	*Keynote* (Bill Sherman, Desert Research Institute)		
10:00-12:30	**Low Level Vision / Encoding / Compression** Chair: Mircea Nicolescu		**Segmentation / Recognition / Reconstruction** Chair: Ali Erol
	10:00	A Vectorial Self-Dual Morphological Filter based on Total Variation Minimization. *Jer omeDarbon and Sylvain Peyronnet.*	Geometric Approach To Segmentation and Protein Localization In Cell Cultured Assays. *S. Raman, B. Parvin, C. Maxwell and M.H. Barcellos-Hoff.*
	10:20	Toward Real Time Fractal Image Compression Using Graphics Hardware. *Ugo Erra*	Multi-level Thresholding using Entropy-based Weighted FCM Algorithm in Color Image. *Jun-Taek Oh, Hyun-Wook Kwak, Young-Ho Sohn and Wook-Hyun Kim.*
	10:40	One-Point Hexagonal Inner Search for Fast Motion Estimation. *Chorng-Yann Su and Cheng-Tao Chang.*	Adaptive Robust Structure Tensors for Orientation Estimation and Image Segmentation. *Sumit K. Nath and Kannappan Palaniappan*
11:00-11:30	*Coffee Break*		
	11:30	Self-describing Context-based Pixel Ordering. *Abdul Itani and Manohar Das.*	Structural and Textural Skeletons for Noisy Shapes. *Wooi-Boon Goh and Kai-Yun Chan.*
	11:50	Lossless compression of CCD sensor data. *Gerald Schaefer and Joanna Obstoj.*	Accurate and Efficient Computation of High Order Zernike Moments. *Gholamreza Amayeh, Ali Erol, George Bebis and Mircea Nicolescu*
	12:10		3D Model Generation from Image Sequences using Global Geometric Constraint. *Masayuki Mukunoki, Kazutaka Yasuda and Naoki Asada.*
12:30-14:00	*Lunch*		
14:00-15:20	**Motion / Segmentaion / Retrieval** Chair: Konstantinos Veropoulos		
	14:00	Efficient Shot Boundary Detection for Action Movies Using Blockwise Motion-Based Features. *Min-Ho Park, Rae-Hong Park and Sang Wook Lee*	
	14:20	Text Localization and Extraction from Complex Color Images. *S. Sabari Raju, P. B. Pati and A. G. Ramakrishnan.*	
	14:40	Using Linguistic Models for Image Retrieval. *Brian Zambrano, Rahul Singh and Bibek Bhattarai*	
	15:00	Graph Regularization For Image Smoothing and Segmentation. *Sebastien Bougleux and Abderrahim Elmoataz*	
15:30-16:00	*Coffee Break*		
16:00-17:20	**ST: Intelligent Vehicles and Autonomous Navigation** Chair: A. Nefian		**ST: Visualization Techniques Geophysical Sciences** Chair: D. Koracin
	16:00	Multi-aspect Target Tracking in Image Sequences Using Particle Filters. *Li Tang, Vijay Bhaskar Venkataraman and Guoliang Fan.*	Large-Scale Geospatial Indexing for Image-Based Retrieval and Analysis. *Kenneth W. Tobin, Budhendra L. Bhaduri, Eddie A. Bright, Anil Cheriyadat, Thomas P. Karnowski, Paul J. Palathingal, Thomas E. Potok and Jeffery R. Price.*
	16:20	Segmentation and Recognition of Traffic Signs using Shape Information. *Jun-Taek Oh, Hyun-Wook Kwak, Young-Ho Sohn, and Wook-Hyun Kim.*	An Interactive Visualization Method for Integrating Digital Elevation Models and Geographic Information Systems Vector Layers. *J. Stuart, J. Jaquish, S. Bassett, F. Harris and W. Sherman.*
	16:40	Detection and Tracking Multiple Pedestrians from a Moving Camera. *Jong Seok Lim and Wook Hyun Kim.*	Splines Interpolation in High Resolution Satellite Imagery. *Jose A. Malpica.*
	17:00	Event detection in underground stations using multiple heterogeneous surveillance cameras. *Andrea Cavallaro.*	Tools for Storm Analysis Using Multiple Data Sets. *Robert M. Rabin and Tom Whittaker.*

Poster Session
Tuesday, December 6, 2005 (2:00pm-3:30pm)

3D modeling and adaptation for virtual heritage system. *Minh Tuan Le, Hae-Kwang Kim and Yong-Moo Kwon*
An NPR Technique for Pointillistic and Mosaic Images with Impressionist Color Arrangement. *Linlin Jing, Kohei Inoue and Kiichi Urahama.*
An Artistic Portrait Caricature Model. *V. Boyer*
Capturing and View-Dependent Rendering of Billboard Models. *Oliver Lee, Anusheel Bhushan, Pablo Diaz-Gutierrez and M. Gopi*
Error-bounded Solid Voxelization For Polygonal Model Based on Heuristic Seed Filling. *Jianguang Weng, Yueting Zhuang and Hui Zhang*
Riemannian Mean Curvature Flow. *Raul San Jose Estepar, Steve Haker and Carl-Fredrik Westin*
3D shape from unorganized 3D point clouds. *George Kamberov, Gerda Kamberova and Amit Jain*
3D Hand Pose Reconstruction With ISOSOM. *Haiying Guan and Matthew Turk*
A Motion Capture System for Sign Language Synthesis: Overview and Related Issues. *Laszlo Havasi and Helga M. Szabo*
Dynamic Visualization of Spatially Referenced Information. *Wu Quan and Mao Lin Huang*
WYSIWYG-Tool Tips: Enhancing Tool Tips with Translucent Preview Bitmaps. *Heiko Drewes and Albrecht Schmidt*
Motion Visualization of Ultrasound Imaging. *Dong C. Liu, Longlong Hou and Paul S. Liu*
Two Novel Complete Sets of Similarity Invariants. *Hongchuan Yu and Mohammed Bennamoun*

Poster Session (cont'd)
Tuesday, December 6, 2005 (2:00pm – 3:30pm)

Detection of Text Region and Segmentation from Natural Scene.   *Jonghyun Park and Soonyoung Park*
ARM Based Microcontroller for Image Capturing in FPGA Design.   *Chi-Jeng Chang, Wu-Ting Wu, Hui-Ching Su, Zen-Yi Huang and Hsin-Yen Li*
Contraction Mapping Calibration.   *Nicolas Guilbert and Anders Heyden*
Discrimination of Natural Contours by Means of Time-Scale-Frequency Decompositions.   *Leandro A. Loss and Clesio L. Tozzi*
Color and Edge Refinement Method for Content Based Image Retrieval.   *Taesu Park, Minhyuk Chang and Jongan Park*
An automatic relevance feedback in image retrieval using belief functions   *Said Kharbouche, Patrick Vannorenberghe, Christele Lecomte, and Pierre Miche*
A fast full search algorithm for variable block-based motion estimation of H.264.   *Chan Lim, Hyun-Soo Kang, Tae-Yong Kim and Kook-Yeol Yoo*
Adaptive Switching Linear Predictor for Lossless Image Compression.   *Abdul Itani and Manohar Das*
Wavelet Transform Based Gaussian Point Spread Function Estimation.   *Qing-Chuan Tao, Xiao-Hai He, Hong-Bin Deng, Ying Liu and Jia Zhao.*
Motion Based Segmentation Using MPEG Streams and Watershed Method.   *Renan Coudray and Bernard Besserer*
Efficient Depth Edge Detection Using Structured Light.   *Jiyoung Park, Cheolhwon Kim, Juneho Yi and Matthew Turk*
Content-Based Image Retrieval via Vector Quantization.   *Ajay H. Daptardar and James A. Storer.*