7th International Symposium on Visual Computing (ISVC’11)
September 26-28, 2011, Las Vegas, Nevada, USA
Contents

SYMPOSIUM OVERVIEW .................................................................................................................................2
MONDAY, SEPTEMBER 26th ..................................................................................................................................3
TUESDAY, SEPTEMBER 27th ..................................................................................................................................5
WEDNESDAY, SEPTEMBER 28th ..........................................................................................................................7
POSTER SESSION .............................................................................................................................................9
Keynote Speakers ...............................................................................................................................................12
Steering Committee/Area Chairs .......................................................................................................................18
International Program Committee .....................................................................................................................19
Special Tracks ...................................................................................................................................................26
SPONSORS .....................................................................................................................................................28
Final Program
7th International Symposium on Visual Computing (ISVC’11)
September 26-28, 2011, Las Vegas, Nevada, USA

Symposium Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday 26th</th>
<th>Tuesday 27th</th>
<th>Wednesday 26th</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30 am – 9:30 am</td>
<td>Keynote <em>(Ballrooms 1-2)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:40 am – 10:40 am</td>
<td>Parallel Sessions <em>(Ballrooms 1-2, 3, 4)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:40 am – 11:10 am</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:10 am – 12:10 am</td>
<td>Parallel Sessions <em>(Ballrooms 1-2, 3, 4)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:10 pm – 1:30 pm</td>
<td>Lunch Break <em>(on your own)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:30 pm – 2:30 pm</td>
<td>Keynote <em>(Ballrooms 1-2)</em></td>
<td>Poster Session * <em>(Ballrooms 1-2)</em></td>
<td>Keynote <em>(Ballrooms 1-2)</em></td>
</tr>
<tr>
<td>2:40 pm – 3:40 pm</td>
<td>Parallel Sessions <em>(Ballrooms 1-2, 3, 4)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:40 pm – 4:10 pm</td>
<td></td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>4:10 pm – 6:00 pm</td>
<td>Parallel Sessions <em>(Ballrooms 1-2, 3, 4)</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Registration Desk hours:  Sunday, Sept 25th 5:30pm -8:30pm
Monday, Sept 26th – Wednesday, Sept 28th: 8:00am – 5:30pm
Banquet Dinner:  Tuesday, Sept 27th: 7:00pm – 9:30pm (Ballroom 5)

*The poster session runs from 1:30pm to 3:30pm.
### Monday, September 26th

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:30</td>
<td>Keynote: Dorin Comaniciu, Siemens Corporate Research, USA (Ballrooms 1-2)</td>
</tr>
<tr>
<td>9:40-12:10</td>
<td><strong>Parallel Sessions</strong></td>
</tr>
<tr>
<td>9:40</td>
<td>ST: Computational Bioimaging</td>
</tr>
<tr>
<td></td>
<td>Chair: Adele Peskin (Ballroom 4)</td>
</tr>
<tr>
<td>9:40</td>
<td>EM+TV Based Reconstruction for Cone-Beam CT with Reduced Radiation</td>
</tr>
<tr>
<td></td>
<td>Ming Yan, Jianwen Chen, Luminita A. Vese, John Villasenor, Alex Bui and Jason Cong</td>
</tr>
<tr>
<td>10:00</td>
<td>A Localization Framework under Non-Rigid Deformation for Robotic Surgery</td>
</tr>
<tr>
<td></td>
<td>Xiang Xiang</td>
</tr>
<tr>
<td>10:20</td>
<td>Global Image Registration by Fast Random Projection</td>
</tr>
<tr>
<td></td>
<td>Hayato Itoh, Shuang Li, Tomoya Sakai and Athyushi Imiya</td>
</tr>
<tr>
<td>10:40-11:10</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:10</td>
<td>EM-Type Algorithms for Image Reconstruction with Background Emission and Poisson Noise</td>
</tr>
<tr>
<td></td>
<td>Ming Yan</td>
</tr>
<tr>
<td>11:30</td>
<td>Region-Based Segmentation of Parasites for High-throughput Screening</td>
</tr>
<tr>
<td></td>
<td>Asher Moody-Davis, Laurent Mennillo and Rahul Singh</td>
</tr>
<tr>
<td>11:50</td>
<td>Motion and Tracking I</td>
</tr>
<tr>
<td></td>
<td>Chair: Xenophon Zabulis (Ballrooms 1-2)</td>
</tr>
<tr>
<td>9:40</td>
<td>Segmentation-Free, Area-Based Articulated Object Tracking</td>
</tr>
<tr>
<td></td>
<td>Daniel Mohr and Gabriel Zachmann</td>
</tr>
<tr>
<td>10:00</td>
<td>Distortion Compensation for Movement Detection Based on Dense Optical Flow</td>
</tr>
<tr>
<td></td>
<td>Josef Maier and Kristian Ambrosch</td>
</tr>
<tr>
<td>10:20</td>
<td>From Saliency to Eye Gaze: Embodied Visual Selection for a Pan-Tilt-Based Robotic Head</td>
</tr>
<tr>
<td></td>
<td>Matei Mancas, Fiora Pirri and Matia Pizzoli</td>
</tr>
<tr>
<td>10:40-11:10</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>11:10</td>
<td>Adaptive Two-Step Adjustable Partial Distortion Search Algorithm for Motion Estimation</td>
</tr>
<tr>
<td></td>
<td>Yonghoon Kim, Dookyung Lee and Jechang Jeong</td>
</tr>
<tr>
<td>11:30</td>
<td>Feature Trajectory Retrieval with Application to Accurate Structure and Motion Recovery</td>
</tr>
<tr>
<td></td>
<td>Kai Cordes, Oliver Muller, Bodo Rosenhahn and Jorn Ostermann</td>
</tr>
<tr>
<td>11:50</td>
<td>An Attempt to Segment Foreground in Dynamic Scenes</td>
</tr>
<tr>
<td></td>
<td>Xiang Xiang</td>
</tr>
<tr>
<td>12:10-1:30</td>
<td>Lunch (on your own)</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>1:30-2:30</td>
<td><strong>Keynote:</strong> Robert Geist, Clemson University, USA (Ballrooms 1-2)</td>
</tr>
<tr>
<td>2:40-5:30</td>
<td><strong>Segmentation</strong></td>
</tr>
<tr>
<td>2:40</td>
<td>Free Boundary Conditions Active Contours with Applications for Vision</td>
</tr>
<tr>
<td></td>
<td>Michal Shemesh and Ohad Ben-Shahar</td>
</tr>
<tr>
<td>3:00</td>
<td>Evolving content-driven superpixels for accurate image representation</td>
</tr>
<tr>
<td></td>
<td>Richard J. Lowe and Mark S. Nixon</td>
</tr>
<tr>
<td>3:20</td>
<td>A Parametric Active Polygon for Leaf Segmentation and Shape Estimation</td>
</tr>
<tr>
<td></td>
<td>Guillaume Cerutti, Laure Tougue, Antoine Vacavant and Didier Coquin</td>
</tr>
<tr>
<td>3:40-4:10</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>4:10</td>
<td>Avoiding Mesh Folding in 3D Optimal Surface Segmentation</td>
</tr>
<tr>
<td></td>
<td>Christian Bauer, Shanhui Sun and Reinhard Beichel</td>
</tr>
<tr>
<td>4:30</td>
<td>High Level Video Temporal Segmentation</td>
</tr>
<tr>
<td></td>
<td>Ruxandra Tapu and Titus Zaharia</td>
</tr>
<tr>
<td>4:50</td>
<td>Embedding Gestalt Laws on Conditional Random Field for Image Segmentation</td>
</tr>
<tr>
<td></td>
<td>Olfa Besbes, Nozha Boujemaa and Ziad Belhadj</td>
</tr>
<tr>
<td>5:10</td>
<td>Higher Order Markov Networks for Model Estimation</td>
</tr>
<tr>
<td></td>
<td>Toufiq Parag and Ahmed Elgammal</td>
</tr>
<tr>
<td>2:40-5:30</td>
<td><strong>ST: 3D Mapping, Modeling and Surface Reconstruction I</strong></td>
</tr>
<tr>
<td>2:40</td>
<td>Towards Realtime Handheld MonoSLAM in Dynamic Environments</td>
</tr>
<tr>
<td></td>
<td>Samunda Perera and Ajith Pasqual</td>
</tr>
<tr>
<td>3:00</td>
<td>Registration of 3D Geometric Model and Color Images Using SIFT and Range Intensity Images</td>
</tr>
<tr>
<td></td>
<td>Ryo Inomata, Kenji Terabayashi, Kazunori Umeda and Guy Godin</td>
</tr>
<tr>
<td>3:20</td>
<td>Denoising Time-Of-Flight Data with Adaptive Total Variation</td>
</tr>
<tr>
<td></td>
<td>Frank Lenzen, Henrik Schafer and Christoph Garbe</td>
</tr>
<tr>
<td>3:40-4:10</td>
<td><strong>Coffee Break</strong></td>
</tr>
<tr>
<td>4:10</td>
<td>Efficient City-sized 3D Reconstruction from Ultra-High Resolution Aerial and Ground Video Imagery</td>
</tr>
<tr>
<td>4:30</td>
<td>Non-Parametric Sequential Frame Decimation for Scene Reconstruction in Low-Memory Streaming Environments</td>
</tr>
<tr>
<td></td>
<td>Daniel Knoblauch, Mauricio Hess-Flores, Mark A. Duchaineau, Kenneth I. Joy and Falko Kuester</td>
</tr>
<tr>
<td>4:50</td>
<td></td>
</tr>
<tr>
<td>5:10</td>
<td></td>
</tr>
</tbody>
</table>
### Tuesday, September 27th

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Chair(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:30</td>
<td><strong>Keynote:</strong> Klaus Mueller, Stony Brook University, USA (Ballrooms 1-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:40-12:10</td>
<td><strong>Biomedical Imaging</strong></td>
<td>Ballroom 4</td>
<td>Toufiq Parag</td>
</tr>
<tr>
<td>9:40</td>
<td>Ground Truth Estimation by Maximizing Topological Agreements in Electron Microscopy Data</td>
<td></td>
<td>Huei-Fang Yang and Yoonsuck Choe</td>
</tr>
<tr>
<td>10:00</td>
<td>Segmentation and Cell Tracking of Breast Cancer Cells</td>
<td></td>
<td>Adele P. Peskin, Daniel J. Hoeppner, Christina H. Stuelten</td>
</tr>
<tr>
<td>10:20</td>
<td>Registration for 3D Morphological Comparison of Brain Aneurysm Growth</td>
<td></td>
<td>Carl Lederman, Luminita Vese, Aichi Chien</td>
</tr>
<tr>
<td>11:10</td>
<td>An Interactive Editing Framework for Electron Microscopy Image Segmentation</td>
<td></td>
<td>Huei-Fang Yang and Yoonsuck Choe</td>
</tr>
<tr>
<td>9:40-12:10</td>
<td><strong>Computer Graphics II</strong></td>
<td>Ballroom 3</td>
<td>Michael Jones</td>
</tr>
<tr>
<td>9:40</td>
<td>High-quality Shadows with Improved Paraboloid Mapping</td>
<td></td>
<td>Juraj Vanek, Jan Navrati, Adam Herout, Pavel Zemcik</td>
</tr>
<tr>
<td>10:00</td>
<td>Terramechanics Based Terrain Deformation for Real-time Off-Road Vehicle Simulation</td>
<td></td>
<td>Ying Zhu, Xiao Chen, G. Scott Owen</td>
</tr>
<tr>
<td>10:20</td>
<td>An Approach to Point Based Approximate Color Bleeding With Volumes</td>
<td></td>
<td>Christopher J. Gibson, Zoe J. Wood</td>
</tr>
<tr>
<td>10:40-11:00</td>
<td><strong>Coffee Break</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:10</td>
<td>Supporting Display Scalability by Redundant Mapping</td>
<td></td>
<td>Axel Radloff, Martin Luboschik, Mike Sips, Heidrun Schumann</td>
</tr>
<tr>
<td>11:30</td>
<td>A New 3D Imaging System Using a Portable Two-camera Omni-imaging Device for Construction and Browsing of Human-reachable Environments</td>
<td></td>
<td>Yu-Tung Kuo, Wen-Hsiang Tsai</td>
</tr>
<tr>
<td>11:50</td>
<td>Physical Navigation to Support Graph Exploration on a Large High-Resolution Display</td>
<td></td>
<td>Anke Lehmann, Heidrun Schumann, Oliver Staadt, Christian Tominski</td>
</tr>
<tr>
<td>9:40-12:10</td>
<td><strong>ST: Interactive Visualization in Novel and Heterogeneous Display Environments</strong></td>
<td>Ballrooms 1-2</td>
<td>René Rosenbaum</td>
</tr>
<tr>
<td>9:40</td>
<td>An Extensible Interactive 3D Visualization Framework for N-dimensional Datasets used in Heterogeneous Software Display Environments</td>
<td></td>
<td>Nathaniel Rossol, Irene Cheng, John Berezowski, Iqbal Jamal</td>
</tr>
<tr>
<td>10:00</td>
<td>Improving Collaborative Visualization of Structural Biology</td>
<td></td>
<td>Aaron Bryden, George N. Phillips Jr., Yoram Griguer, Jordan Moxon, Michael Gleicher</td>
</tr>
<tr>
<td>10:20</td>
<td>Physical Navigation to Support Graph Exploration on a Large High-Resolution Display</td>
<td></td>
<td>Anke Lehmann, Heidrun Schumann, Oliver Staadt, Christian Tominski</td>
</tr>
<tr>
<td>10:40-11:00</td>
<td><strong>Coffee Break</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:10-1:30</td>
<td><strong>Lunch (on your own)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Chair</td>
<td>Session</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------</td>
<td>--------------------------------</td>
<td>----------------------------------------------</td>
</tr>
<tr>
<td>1:30-3:30</td>
<td><strong>Poster Session</strong> (Ballrooms 1-2)**</td>
<td></td>
<td><strong>Visualization II</strong> (Ballroom 3)</td>
</tr>
<tr>
<td>3:30-6:00</td>
<td><strong>Parallel Sessions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30</td>
<td><strong>Object Detection and Recognition I</strong></td>
<td>Kwok-Ping Chan (Ballroom 4)</td>
<td><strong>Visualization II</strong></td>
</tr>
<tr>
<td>3:30</td>
<td>Automated Fish Taxonomy using Evolution-</td>
<td>Kirt Lillywhite and Dah-Jye</td>
<td>Direct Spherical Parameterization of 3D</td>
</tr>
<tr>
<td></td>
<td>Constructed Features</td>
<td>Lee</td>
<td>Triangular Meshes Using Local Flattening</td>
</tr>
<tr>
<td>3:50</td>
<td>A Monocular Human Detection System based on</td>
<td>Yingdong Ma, Xiankai Chen, Liu</td>
<td>Segmentation and Visualization of multivariate</td>
</tr>
<tr>
<td></td>
<td>EOH and Oriented LBP Features</td>
<td>Jin and George Chen</td>
<td>Features using Feature-Local Distributions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:10-4:40</td>
<td><strong>Coffee Break</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4:40</td>
<td>Using the shadow as a single feature for real-</td>
<td>Dennis Rosebrock, Markus Rik,</td>
<td>Magic Marker: A Color Analytics Interface</td>
</tr>
<tr>
<td></td>
<td>time monocular vehicle pose determination</td>
<td>Jens Spehr and Friedrich M.</td>
<td>for Image Annotation</td>
</tr>
<tr>
<td>5:00</td>
<td>**Multi-Class Object Layout with Unsupervised</td>
<td>Ser-Nam Lim, Gianfranco</td>
<td>**BiCluster Viewer: A Visualization Tool for</td>
</tr>
<tr>
<td></td>
<td>Image Classification and Object Localization</td>
<td>Doretto and Jens Rittscher</td>
<td>Analyzing Gene Expression Data</td>
</tr>
<tr>
<td>5:20</td>
<td>**Efficient Detection of Consecutive Facial</td>
<td>Zakia Hammal</td>
<td>**Visualizing Translation Variation:</td>
</tr>
<tr>
<td></td>
<td>Expression Apices Using Biologically Based</td>
<td></td>
<td>Shakespeare's Othello</td>
</tr>
<tr>
<td></td>
<td>Log-Normal Filters</td>
<td></td>
<td>Zhao Geng, Robert S. Laramee, Tom</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cheesman, Alison Ehrmann, David M. Berry</td>
</tr>
<tr>
<td>5:40</td>
<td>**DTTM: A Discriminative Temporal Topic</td>
<td>Lifeng Shang, Kwok-Ping Chan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Model for Facial Expression Recognition</td>
<td>and Guodong Pan</td>
<td></td>
</tr>
<tr>
<td>7:00-9:30</td>
<td><strong>Banquet Dinner</strong> (Ballroom 5)</td>
<td></td>
<td><strong>Keynote:</strong> Thomas Huang, University of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Illinois at Urbana-Champaign, USA</td>
</tr>
</tbody>
</table>
### Wednesday, September 28th

**8:30-9:30**  
*Keynote: Sergio Velastin, Kingston University, UK*  
(Ballrooms 1-2)

#### Parallel Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Motion and Tracking II</th>
<th>ST: Immersive Visualization</th>
</tr>
</thead>
</table>
| **9:40-12:10** | **Collaborative Track Analysis, Data Cleansing, and Labeling**  
George Kamberov, Gerda Kamberova, Matt Burlick, Lazaros Karydas and Bart Luczynski | **Immersive Out-of-Core Visualization of Large-Size and Long-Timescale Molecular Dynamics Trajectories**  
John E. Stone, Kirby L. Vandivort and Klaus Schulten |
| 9:40     | **Time to Collision and Collision Risk Estimation from Local Scale and Motion**  
Shrinivas Pundlik, Eli Peli and Gang Luo | - |
| 10:00    | **Visual Tracking based on Log-Euclidean Riemannian Sparse Representation**  
Yi Wu, Haibin Ling, Erik Blasch, Li Bai and Genshe Chen | **Disambiguation of Horizontal Direction for Video Conference Systems**  
M. Zhang, S. Rotkin and J. Schulze |
| **10:40-11:10** | Coffee Break | - |
| 11:10    | **Panoramic Background Generation and Abnormal Behavior Detection in PTZ Camera Networks**  
Sang-Hyun Cho and Hang-Bong Kang | **Immersive Visualization and Interactive Analysis of Ground Penetrating Radar Data**  
M.R. Sgambati, S. Koepnick, D.S. Coming, N. Lancaster, and F.C. Harris, Jr. |
| 11:30    | **Linear Clutter Removal from Urban Panoramas**  
Mahsa Kamali, Eyal Ofek, Forrest Iandola, Ido Omer and John C. Hart | **HandyMap: A Selection Interface for Cluttered VR Environments Using a Tracked Hand-held Touch Device**  
Mores Prachyabrued, David L. Ducrest and Christoph W. Borst |
| 9:40-12:10 | **Applications**  
Chair: Atsushi Imiya (Ballrooms 1-2) | - |
Ya-Lin Li and Wen-Hsiang Tsai | - |
| 10:00    | **Adaptive and nonlinear techniques for visibility improvement of hazy**  
Saibabu Arigela and Vijayan K Asari | - |
| 10:20    | **Linear Clutter Removal from Urban Panoramas**  
Mahsa Kamali, Eyal Ofek, Forrest Iandola, Ido Omer and John C. Hart | - |
| 11:10    | Coffee Break | - |
| 11:30    | **Efficient Starting Point Decision for Enhanced Hexagonal Search**  
Do-Kyung Lee and Je-Chang Jeong | - |
| 11:50    | Lunch (on your own) | - |

**12:10-1:30**  
Lunch (on your own)
<table>
<thead>
<tr>
<th>Time</th>
<th>Parallel Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30-2:30</td>
<td>Keynote: Benjamin Lok, University of Florida, USA (Ballrooms 1-2)</td>
</tr>
<tr>
<td>2:40-5:30</td>
<td><strong>Object Detection and Recognition II</strong> (Ballroom 4)</td>
</tr>
</tbody>
</table>
| 2:40       | Material Information Acquisition Using a ToF Range Sensor for Interactive Object Recognition  
|            | Md. Abdul Mannan, Hisato Fukuda, Yoshinori Kobayashi and Yoshinori Kuno            |
| 3:00       | A Neuromorphic Approach to Object Detection and Recognition in Airborne Videos with Stabilization  
|            | Yang Chen, Deepak Khosla, David Huber, Kyungnam Kim and Shinko Y. Cheng            |
| 3:20       | Retrieval of 3D polygonal objects based on multiresolution signatures               
|            | Roberto Lam and J.M. Hans du Buf                                                   |
| 3:40-4:10  | **Coffee Break**                                                                   |
| 4:10       | 3D Facial Feature Detection Using Iso-Geodesic Stripes and Shape-Index Based Integral Projection  
|            | James Allen, Nikhil Karkera and Lijun Yin                                          |
| 4:30       | Hybrid Face Recognition Based on Real-Time Multi-Camera Stereo-Matching            
|            | J. Hensler, K. Denker, M. Franz and G. Umlauf                                       |
| 4:50       | Learning image transformations without training examples                            
|            | Sergey Pankov                                                                      |
| 5:10       | **ST: Best Practices in Teaching Visual Computing** (Ballrooms 1-2)                 |
| 2:40-5:30  | **Virtual Reality** (Ballroom 3)                                                   |
| 2:40       | Investigation of Secondary Views in a Multimodal VR Environment: 3D Lenses, Windows, and Mirrors  
|            | Phanidhar Bezawada Raghubathy and Christoph W. Borst                                |
| 3:00       | Synthesizing Physics-Based Vortex and Collision Sound in Virtual Reality            
|            | Damon Shing-Min Liu, Ting-Wei Cheng and Yu-Cheng Hsieh                             |
| 3:20       | BlenSor: Blender Sensor Simulation Toolbox                                          
|            | Michael Gschwandtner, Roland Kwitt, Andreas Uhl and Wolfgang Pree                   |
| 3:40-4:10  | **Coffee Break**                                                                   |
| 4:10       | Fuzzy Logic Based Sensor Fusion for Accurate Tracking                               
|            | Ujwal Koneru, Sangram Redkar and Anshuman Razdan                                    |
| 4:30       | A Flight Tested Wake Turbulence Aware Altimeter                                    
|            | Scott Nykl, Chad Mourning, Nikhil Ghandi and David Chelberg                         |
| 4:50       | A Virtual Excavation: Combining 3D Immersive Virtual Reality and Geophysical Surveying  
|            | Albert Yu-Min Lin, Alexandre Novoy, Philip P. Weber, Gianfranco Morelli, Dean Goodmanz and Jurgen P. Schulze |
| 5:10       |                                                                                   |
# Poster Session (Ballrooms 1-2)
Tuesday, September 27\textsuperscript{th} (1:30pm-3:30pm)

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subvoxel Super-resolution of Volumetric Motion Field Using General Order Prior</td>
<td>Koji Kashu, Atsushi Imiya and Tomoya Sakai</td>
</tr>
<tr>
<td>Architectural Style Classification of Building Facade Windows</td>
<td>Gayane Shalunts, Yll Haxhimusa and Robert Sablatnig</td>
</tr>
<tr>
<td>Vision-based Horizon Detection and Target Tracking for UAVs</td>
<td>Yingju Chen, Ahmad Abushakra and Jeongkyu Lee</td>
</tr>
<tr>
<td>Bag-Of-Visual-Words Approach To Abnormal Image Detection In Wireless Capsule Endoscopy Videos</td>
<td>Sae Hwang</td>
</tr>
<tr>
<td>A Relevance Feedback Framework for Image Retrieval Based on Ant Colony Algorithm</td>
<td>Guang-Peng Chen, Yu-Bin Yang, Yao Zhang, Ling-Yan Pan, Yang Gao and Lin Shang</td>
</tr>
<tr>
<td>A Closed Form Algorithm for Superresolution</td>
<td>Marcelo O. Camponez, Evandro O. T. Salles, and Mário Sarcinelli-Filho</td>
</tr>
<tr>
<td>A Parallel Hybrid Video Coding Method Based on Noncausal Prediction with Multimode</td>
<td>Cui Wang and Yoshinori Hatori</td>
</tr>
<tr>
<td>Color-based Extensions to MSERs</td>
<td>Aaron Chavez and David Gustafson</td>
</tr>
<tr>
<td>3D Model Retrieval using the Histogram of Orientation of Suggestive Contours</td>
<td>Sang Min Yoon and Arjan Kuiper</td>
</tr>
<tr>
<td>Adaptive Discrete Laplace Operator</td>
<td>Christophe Fiorio, Christian Mercat and Frederic Rieux</td>
</tr>
<tr>
<td>Stereo Vision-based Improving Cascade Classifier Learning for Vehicle Detection</td>
<td>Jonghwan Kim, Chung-Hee Lee, Young-Chul Lim and Soon Kwon</td>
</tr>
<tr>
<td>Towards a Universal and Limited Visual Vocabulary</td>
<td>Jian Hou, Zhan-Shen Feng, Yong Yang and Nai-Ming Qi</td>
</tr>
<tr>
<td>Human Body Shape and Motion Tracking by Hierarchical Weighted ICP</td>
<td>Jia Chen, Xiaojun Wu, Michael Yu Wang and Fuqin Deng</td>
</tr>
<tr>
<td>Multi-View Head Detection and Tracking with Long Range Capability for Social Navigation Planning</td>
<td>Razali Tomari, Yoshinori Kobayashi and Yoshinori Kuno</td>
</tr>
<tr>
<td>A Fast Video Stabilization System Based on Speeded-up Robust Features</td>
<td>Minqi Zhou and Vijayan K. Asari</td>
</tr>
</tbody>
</table>
## Poster Session (cont'd)
**Tuesday, September 27th (1:30pm – 3:30pm)**

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introducing Confidence Maps to Increase the Performance of Person Detectors</td>
<td>Andreas Zweng and Martin Kampel</td>
</tr>
<tr>
<td>Monocular Online Learning for Road Region Labeling and Object Detection from a Moving Platform</td>
<td>Chung-Ching Lin and Marilyn Wolf</td>
</tr>
<tr>
<td>Detection and Tracking Faces in Unconstrained Color Video Streams</td>
<td>Cornélia Janayna P Passarinho, Evandro Ottoni T Salles and Mário Sarcinelli Filho</td>
</tr>
<tr>
<td>Model-based Chart Image Classification</td>
<td>Ales Mishchenko and Natalia Vassilieva</td>
</tr>
<tr>
<td>Kernel-based Motion-blurred Target Tracking</td>
<td>Yi Wu, Jing Hu, Feng Li, Erkang Cheng, Jingyi Yu and Haibin Ling</td>
</tr>
<tr>
<td>Robust Foreground Detection in Videos using Adaptive Color Histogram Thresholding and Shadow Removal</td>
<td>Akintola Kolawole and Alireza Tavakkoli</td>
</tr>
<tr>
<td>Deformable Object Shape Refinement and Tracking Using Graph Cuts and Support Vector Machines</td>
<td>Mehmet Kemal Kocamaz, Yan Lu and Christopher Rasmussen</td>
</tr>
<tr>
<td>A Non-intrusive Method for Copy-Move Forgery Detection</td>
<td>Najah Muhammad, Muhammad Hussain, Ghulam Muhamad and George Bebis</td>
</tr>
<tr>
<td>An Investigation into the use of Partial Face in the Mobile Environment</td>
<td>Rao G. Mallikarjuna, Kumar Praveen, Kumari G. Vijaya, Pande Amit and G.R. Babu</td>
</tr>
<tr>
<td>Optimal Multiclass Classifier Threshold Estimation with Particle Swarm Optimization for Visual Object Recognition</td>
<td>Shinko Y. Cheng, Yang Chen, Deepak Khosla and Kyungnam Kim</td>
</tr>
<tr>
<td>A Parameter-free Locality Sensitive Discriminant Analysis and Its Application to Coarse 3D Head Pose Estimation</td>
<td>A. Bosaghzadeh and F. Domaika</td>
</tr>
<tr>
<td>Image Set-based Hand Shape Recognition Using Camera Selection Driven by Multi-class AdaBoosting</td>
<td>Yasuhiro Ohkawa, Chendra Hadi Suryanto and Kazuhiro Fukui</td>
</tr>
<tr>
<td>Image Segmentation Based on K-Means Clustering and Energy-Transfer Proximity</td>
<td>Jan Gaura, Eduard Sojka and Michal Krumnikl</td>
</tr>
<tr>
<td>SERP: SURF Enhancer for Repeated Pattern</td>
<td>Seung Jun Mok, Kyungbooo Jung, Dong Wook Ko, Sang Hwa Lee and Byung-Uk Choi</td>
</tr>
<tr>
<td>Shape Abstraction through Multiple Optimal Solutions</td>
<td>Marlen Akimaliev and M. Fatih Demirci</td>
</tr>
<tr>
<td>Evaluating Feature Combination in Object Classification</td>
<td>Jian Hou, Bo-Ping Zhang, Nai-Ming Qi and Yong Yang</td>
</tr>
</tbody>
</table>
### Poster Session (cont'd)

**Tuesday, September 27th (1:30pm – 3:30pm)**

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Compensation Using Nonlinear Luminance-RGB component Curve of a Camera</td>
<td>Sejung Yang, Yoon-Ah Kim, Chaerin Kang and Byung-Uk Lee</td>
</tr>
<tr>
<td>Augmenting Heteronanostructure Visualization with Haptic Feedback</td>
<td>Michel Abdul-Massih, Bedrich Bene, Tong Zhang, Christopher Platzer, William Leavenworth, Huilong Zhuo, Edwin R. Garcia and Zhiwen Liang</td>
</tr>
<tr>
<td>An Analysis of Impostor Based Level Of Detail Approximations for LIDAR Data</td>
<td>Chad Mourning, Scott Nykl and David Chelberg</td>
</tr>
<tr>
<td>UI generation for data visualisation in heterogenous environment</td>
<td>Miroslav Macik, Martin Klima and Pavel Slavik</td>
</tr>
<tr>
<td>An Open-source Medical Image Processing and Visualization Tool to Analyze Cardiac SPECT Images</td>
<td>Luis Roberto Pereira de Paula, Carlos da Silva dos Santos, Marco Antonio Gutierrez and Roberto Hirata Jr.</td>
</tr>
<tr>
<td>CollisionExplorer: A tool for visualizing droplet collisions in a turbulent flow</td>
<td>Rohith MV, Hossein Parishani, Orlando Ayala, Lian-Ping Wang and Chandra Kambhamettu</td>
</tr>
<tr>
<td>A Multi Level Time Model for Interactive Multiple Dataset Visualization: The Dataset Sequencer</td>
<td>Thomas Beer, Gerrit Garbereder, Tobias Meisen, Rudolf Reinhard and Torsten Kuhlen</td>
</tr>
<tr>
<td>Automatic Generation of Aesthetic Patterns with the Use of Dynamical Systems</td>
<td>Krzysztof Gdawiec, Wiesaw Kotarski and Agnieszka Lisowska</td>
</tr>
<tr>
<td>A Comparative Evaluation of Feature Detectors on Historic Repeat Photography</td>
<td>Christopher Gat, Alexandra Branzan Albu, Daniel German and Eric Higgs</td>
</tr>
<tr>
<td>Controllable Simulation of Particle System</td>
<td>Muhammad Rusdi Syamsuddin and Jinwook Kim</td>
</tr>
<tr>
<td>3D-City Modeling: A Semi-Automatic Framework for Integrating different Terrain Models</td>
<td>Mattias Roupé and Mikael Johansson</td>
</tr>
</tbody>
</table>
KEYNOTE TALK
Monday, September 26, 2011
8:30 AM – 9:30 AM / Ballrooms 1-2

ISVC 2011: 7th International Symposium on Visual Computing
Las Vegas, September 26 - 28, 2011

Shaping the Future through Innovations: Personalized Medicine

Dorin Comaniciu
Integrated Data Systems Department
Siemens Corporate Research

Abstract

The promise of personalized medicine is to do more in advance, promote early detection of the disease, more efficient workflows, and provide patient-specific therapies. This talk will analyze two important imaging dimensions of personalized medicine: knowledge-based imaging and the in-silico modeling of the body function and disease. We will underline the role that semantics plays in parsing the medical image data into thousands of meaningful components. We will showcase new and comprehensive cardiac models that include patient’s anatomy, dynamics and hemodynamics. By presenting a couple of example technologies that make today a difference in hospitals we will extrapolate the clinical needs, the technology potential and expectations for the near future.

We acknowledge the contributions of Siemens colleagues and academic and clinical collaborators.

Speaker Bio-Sketch: Dorin Comaniciu is Global Technology Head for Image Analytics and Informatics at Siemens Corporate Research, Princeton, New Jersey, leading a research team with offices in the US, Germany, Austria, and China. His scientific interests include robust computer vision, medical imaging, motion estimation, object tracking, information fusion, biomedical informatics, and personalized healthcare. Dorin holds 80 US patents and has co-authored more than 200 publications in the area of information processing, including best papers in CVPR and MICCAI. He received the 2004 Siemens Inventor of the Year Award, the 2010 IEEE Longuet-Higgins Prize and served as the scientific director of Health-e-Child, a project granted the 2008 Europe's Information Society Grand Prize. The aortic valve implantation technology his team contributed to Siemens received the 2010 Innovation Award of the European Association for Cardio-Thoracic Surgery. Since 2010 he is a Top Innovator of Siemens AG. He served as an Associate Editor of IEEE Transactions on Pattern Analysis and Machine Intelligence (2006-2008) and IEEE Transactions on Medical Imaging (2009-2011). Dorin graduated from University of Pennsylvania - The Wharton School (AMP'11), Rutgers University (PhD'99), and the Polytechnic University of Bucharest (PhD'95, Dipl.-Ing'88)
Real-Time Modeling and Rendering of Natural Phenomena

Prof. Robert Geist
School of Computing
Clemson University

Abstract
Modeling and rendering natural phenomena, which includes all components of biophysical ecology, atmospherics, photon transport, and air and water flow, remains a challenging area for computer graphics research. Whether models are physically-based or procedural, model processing is almost always characterized by substantial computational demands which have almost always precluded real-time performance. Nevertheless, the recent development of new, highly parallel computational models, coupled with dramatic performance improvements in GPU-based execution platforms, has brought real-time modeling and rendering within reach. The talk will focus on the natural synergy between GPU-based computing and the so-called lattice-Boltzmann methods for solutions to PDEs. Examples will include photon transport for global illumination and modeling and rendering of atmospheric clouds, forest ecosystems, and ocean waves.

Speaker Bio-Sketch: Robert Geist is a Professor in the School of Computing at Clemson University. He served as Interim Director of the School in 2007-2008, and he is co-founder of Clemson's Digital Production Arts Program. He received an M.A. in Computer science from Duke University and a Ph.D. in mathematics from the University of Notre Dame. He was an Associate Professor of Mathematics at the University of North Carolina at Pembroke and an Associate Professor of Computer Science at Duke University before joining the faculty at Clemson University. He is a member of IFIP WG 7.3, a recipient of the Günther Enderle Award (Best Paper, Eurographics), and a Distinguished Educator of the ACM.
Can Computers Master the Art of Communication?
A Focus on Visual Analytics

Klaus Mueller
Visual Analytics and Imaging Laboratory, Center for Visual Computing
Computer Science Department, Stony Brook University

Abstract
Visual analytics seeks to conduct a discourse with the user through images, to stimulate curiosity and a penchant to decipher the unknown. The computer supports the user in this interactive analytical reasoning process, constructing a formal model of the given data, with the end product being formatted knowledge constituting insight. Yet, validation and refinement of this computational model of insight can occur only in the human domain expert's mind, bringing to bear possibly unformatted knowledge as well as intuition and creative thought. So, it is left to this human user to guide the computer in the formalization (learning) of more sophisticated models that capture what the human desires and what the computer currently believes about the data domain. In visual analytics, the computer uses images and text to exchange information with the user about its view of the domain model. Obviously, the better a communicator the computer is, the more assistance it will elicit from the user to help it refine the model. This leads to topic of my talk -the need for the computer to master the art of interpersonal communication-that is, the communication between it and the human analyst. Effective human speakers use various modes of communication, both direct and indirect, to convey a certain message. In this talk, I will enumerate some of these, translate them into the communication with visuals, and then apply them in a few practical applications, such as high-dimensional data visualization and visual model learning.

Speaker Bio-Sketch: Klaus Mueller received an MS degree in biomedical engineering and a PhD degree in computer science, both from The Ohio State University. He is currently an associate professor in the Computer Science Department at Stony Brook University, where he also holds co-appointments in the Biomedical Engineering and Radiology Departments. His current research interests are computer and volume graphics, visualization, visual analytics, medical imaging and computer vision. He won the US National Science Foundation CAREER award in 2001 and the SUNY Chancellor's Award for Excellence in Scholarship and Creative Activity in 2011. He served as a co-chair at various conferences, such IEEE Visualization, the Volume Graphics Symposium, and the Fully 3D Workshop on High-Performance Image Reconstruction. He has authored and co-authored more than 140 peer-reviewed journal and conference papers, and he has participated in 15 tutorials at international conferences on various topics in visualization and medical imaging. He is a senior member of the IEEE and the IEEE Computer Society. For more information, see http://www.cs.sunysb.edu/~mueller
Abstract

Computer technologies are progressing at a breakneck speed. But the tremendous computing speed and the enormous storage capacity come to naught, if we do not have intelligent human-computer interfaces. In this talk, I shall describe some of the research my students and I have been doing during the last decade on Human Computer Interaction. Specifically, information flow from human to computer: Hand/fingers tracking and gesture recognition; face tracking and emotion recognition; shrug detection; gender and age group recognition. And information flow from computer to human: Audio-visual emotive avatar. These interfaces have applications in many areas including Gaming and Electronic Consumer Relation Management (ECRM). Examples in ECRM include: Collection of demographic data (how many % of white male teenagers buy Product X?), adaptive public display (what is displayed depends on the genders, ages, and emotional reactions of the audience), and embodied intelligent agent.

Speaker Bio-Sketch: T. S. Huang received his Sc.D. from the Massachusetts Institute of Technology in Electrical Engineering, and was on the faculty of MIT and Purdue University. He joined University of Illinois at Urbana-Champaign in 1980 and is currently William L. Everitt Distinguished Professor of Electrical and Computer Engineering, Research Professor of Coordinated Science Laboratory, Professor of the Center for Advanced Study, and Co-Chair of the Human Computer Intelligent Interaction major research theme of the Beckman Institute for Advanced Science and Technology. Huang is a member of the National Academy of Engineering and has received numerous honors and awards, including the IEEE Jack S. Kilby Signal Processing Medal (with Ar. Netravali) and the King-Sun Fu Prize of the International Association of pattern Recognition. He has published 21 books and more than 600 technical papers in network theory, digital holography, image and video compression, multimodal human computer interfaces, and multimedia databases.
Detection and Classification of Vehicles in Urban Traffic

Sergio Velastin
Digital Imaging Research Centre
Kingston University, UK

Abstract

The talk will describe work that was done as part of a program of research funded by Transport for London to detect and classify the various road users (vehicles, cyclists, pedestrians, etc.) in London streets. There are more than 1500 cameras covering key roads in the city, which are very difficult to monitor manually. Automatic processing is highly desirable for traffic enforcement, management and planning. A detector and classifier for road users from images is presented that combines the concept of 3D models with Histogram of Oriented Gradients (HOG) to overcome limitations of conventional silhouette-based methods for road user classification. The appearance of road users varies substantially with the viewing angle and would require several single view object detectors like HOG. Here, 3D models are used for the object categories to be detected to train a single and complete 3D appearance model applicable for any viewing angle. A calibrated camera allows an affine transformation of the observation (video frame) into a normalised representation from which 3D HOG' features (3D extended histogram of oriented gradients) are defined. A variable set of interest points is used in the detection and classification processes, depending on which points in the 3D model are visible. The 3D HOG feature is compared with features based on FFT and basic histograms and also a motion silhouette baseline on the reference benchmark i-LIDS data set from the UK Home Office. We acknowledge the contributions of Siemens colleagues and academic and clinical collaborators.

Speaker Bio-Sketch: Sergio A. Velastin received the B.Sc. degree in Electronics, M.Sc. (Research) degree in Digital Image Processing and the Ph.D. from the University of Manchester Institute of Science and Technology (UMIST) in the UK, in 1978, 1979 and 1982 respectively. Currently he is a Professor and Director of the Digital Imaging Research Centre, His research interests include computer vision for pedestrian monitoring and personal security as well as distributed visual surveillance systems. Prof Velastin is also a member of the IET and the British Machine Vision Association (BMVA).
KEYNOTE TALK
Wednesday, September 28, 2011
1:30PM – 2:30 PM / Ballrooms 1-2

ISVC 2011: 7th International Symposium on Visual Computing
Las Vegas, September 26 - 28, 2011

Can Interacting with a Virtual Human Make You a Better Person?

Benjamin Lok
Department of Computer and Information Science and Engineering
University of Florida

Abstract

Virtual environments have made impressive strides in user interfaces, rendering, audio, and commercialization, and in this context we will cover the next frontier in virtual environments, virtual humans. Virtual humans are the digital citizens that populate virtual environments. Virtual humans have the potential to revolutionize the way we learn, interact, and train. In this talk, we will cover example real-world applications, affective capabilities, and propose research questions of virtual humans. My goal is to inspire the audience 1) on the transformative nature of virtual humans, 2) to participate in the research and application of virtual humans, and 3) explore the research and design space of virtual human populated virtual environments.

Speaker Bio-Sketch: Benjamin C. Lok is an Associate Professor in the Computer and Information Sciences and Engineering Department at the University of Florida. He is also an Adjunct Associate Professor in the Surgery Department at Georgia Health Sciences University. His research focuses on virtual humans and mixed reality in the areas of computer graphics, virtual environments, and human-computer interaction. Professor Lok received a Ph.D. (2002, advisor: Dr. Frederick P. Brooks, Jr.) and M.S. (1999) from the University of North Carolina at Chapel Hill, and a B.S. in Computer Science (1997) from the University of Tulsa. He did a post-doc fellowship (2003) under Dr. Larry F. Hodges at the University of North Carolina at Charlotte. Professor Lok received a NSF Career Award (2007-2012) and the UF ACM CISE Teacher of the Year Award in 2005-2006. He and his students in the Virtual Experiences Research Group have received best paper awards at ACM I3D (Top 3, 2003) and IEEE VR (2008). His work is primarily supported by the National Science Foundation and National Institutes of Health. He currently serves on the Steering Committee of the IEEE Virtual Reality conference, program co-chair of the ACM VRST 2009, IEEE Virtual Reality 2010, and IEEE Virtual Reality 2011. Professor Lok is on the editorial board of the International Journal of Human-Computer Studies and Simulation: Transactions of the Society for Modeling and Simulation.
Steering Committee

Bebis George, University of Nevada, Reno, USA
Boyle Richard, NASA Ames Research Center, USA
Parvin Bahram, Lawrence Berkeley National Laboratory, USA
Koracin Darko, Desert Research Institute, USA

Area Chairs

• Computer Vision
  Wang Song, University of South Carolina, USA
  Kim Kyungnam (Ken), HRL Laboratories, USA

• Computer Graphics
  Benes Bedrich, Purdue University, USA
  Moreland Kenneth, Sandia National Laboratory, USA

• Virtual Reality
  Borst Christoph, Univ of Louisiana at Lafayette, USA
  DiVerdi Stephen, Adobe, USA

• Visualization
  Chiang Yi-Jen, Polytechnic Institute of New York University, USA
  Jiang Ming, Lawrence Livermore National Lab, USA

Publicity

Albu Branzan Alexandra, University of Victoria, Canada
Pati Peeta Basa, CoreLogic, India

Local Arrangements

Regentova Emma, University of Nevada, Las Vegas, USA

Special Tracks

Sun Zehang, Apple, USA
International Program Committee

(Area 1) Computer Vision

Abidi Besma, Univ. of Tennessee at Knoxville, USA
Abou-Nasr Mahmoud, Ford Motor Company, USA
Agaian Sos, Univ of Texas at San Antonio, USA
Aggarwal J. K., University of Texas, Austin, USA
Albu Branzan Alexandra, Univ of Victoria, Canada
Amayeh Gholamreza, Eyecom, USA
Agouris Peggy, George Mason University, USA
Argyros Antonis, University of Crete, Greece
Asari Vijayan, University of Dayton, USA
Athitos Vassilis, Univ of Texas at Arlington, USA
Basu Anup, University of Alberta, Canada
Bekris Kostas, University of Nevada at Reno, USA
Belyaev Alexander, Max-Planck-Institut fuer Informatik, Germany
Bensrhair Abdelaziz, INSA-Rouen, France
Bhatia Sanjiv, University of Missouri-St. Louis, USA
Bimber Oliver, Johannes Kepler University Linz, Austria
Bioucas Jose, Instituto Superior Técnico, Lisbon, Portugal
Birchfield Stan, Clemson University, USA
Bourbakis Nikolaos, Wright State University, USA
Brimkov Valentin, State Univ of New York, USA
Campadelli Paola, Univ degli Studi di Milano, Italy
Cavallaro Andrea, Queen Mary, Univ of London, UK
Charalampidis Dimitrios, Univ of New Orleans, USA
Chellappa Rama, University of Maryland, USA
Chen Yang, HRL Laboratories, USA
Cheng Hui, Sarnoff Corporation, USA
Chowdhury Amit K. Roy, Univ of California at Riverside, USA
Cochran Steven Douglas, Univ of Pittsburgh, USA
Chung, Chi-Kit Ronald, The Chinese Univ. of Hong Kong, Hong Kong
Cremers Daniel, University of Bonn, Germany
Cui Jinshi, Peking University, China
Darbon Jerome, CNRS-Ecole Normale Superieure de Cachan, France
Davis James W., Ohio State University, USA
Debrunner Christian, Colorado School of Mines, USA
Demirdjian David, Vecna Robotics, USA
Duan Ye, University of Missouri-Columbia, USA
Doulamis Anastasios, National Technical University of Athens, Greece
Dowdall Jonathan, 510 Systems, USA
El-Ansari Mohamed, Ibn Zohr University, Morocco
El-Gamal Ahmed, University of New Jersey, USA
Eng How Lung, Institute for Infocomm Research, Singapore
Erol Ali, Ocali Information Technology, Turkey
Fan Guoliang, Oklahoma State University, USA
Ferryman James, University of Reading, UK
Foresti Gianluca, University of Udine, Italy
Fowlkes Charless, Univ of California, Irvine, USA
Fukui Kazuhiro, The University of Tsukuba, Japan
Galata Aphrodite, The Univ of Manchester, UK
Georgescu Bogdan, Siemens, USA
Gleason, Shaun, Oak Ridge National Lab, USA
Goh Wooi-Boon, Nanyang Technological University, Singapore
Guerra-Filho Gutemberg, University of Texas Arlington, USA
Guevara, Angel Miguel, Univ of Porto, Portugal
Gustafson David, Kansas State University, USA
Hammoud Riad, DynaVox Systems, USA
Harville Michael, Hewlett Packard Labs, USA
He Xiangjian, Univ of Technology, Sydney, Australia
Heikkilä Janne, University of Oulu, Finland
Heyden Anders, Lund University, Sweden
Hongbin Zha, Peking University, China
Hou Zujun, Institute for Infocomm Research, Singapore
Hua Gang, IBM T. J. Watson Research Center, USA
Imiya Atsushi, Chiba University, Japan
Jia Kevin, IGT, USA
Kamberov George, Stevens Institute of Technology, USA
Kampel Martin, Vienna University of Technology, Austria
Kamberova Gerda, Hofstra University, USA
Kakadiaris Ioannis, University of Houston, USA
Kettebekov Sanzhar, Keane inc., USA
Khan Hameed Ullah, King Saud University, Saudi Arabia
Kim Tae-Kyun, Imperial College London, UK
Kimia Benjamin, Brown University, USA
Kisacanin Branislav, Texas Instruments, USA
Klette Reinhard, Auckland University, New Zealand
Kokkinos Iasonas, Ecole Centrale Paris, France
Kollias Stefanos, National Technical University of Athens, Greece
(Area 2) Computer Graphics

Abd Rahni Mt Piah, Universiti Sains Malaysia, Malaysia
Abram Greg, Texas Advanced Computing Center, USA
Adamo-Villani Nicoletta, Purdue University, USA
Agu Emmanuel, Worcester Polytechnic Institute, USA
Andres Eric, Laboratory XLIM-SIC, University of Poitiers, France
Artusi Alessandro, CaSToRC Cyprus Institute, Cyprus
Baciu George, Hong Kong PolyU, Hong Kong
Balci soy Selim Saffet, Sabanci University, Turkey
Barneva Reneta, State Univ of New York, USA
Belyaev Alexander, Max-Planck-Institut fuer Informatik, Germany
Berberich Eric, Max-Planck Institute, Germany
Bilalis Nicholas, Technical University of Crete, Greece
Bimber Oliver, Johannes Kepler University Linz, Austria
Bohez Erik, Asian Inst of Tech, Thailand
Bouatouch Kadi, Univ of Rennes I, IRISA, France
Brimkov Valentin, State Univ of New York, USA
Brown Ross, Queensland Univ of Technology, Australia
Bruckner Stefan, Vienna Univ of Technology, Austria
Callahan Steven, University of Utah, USA
Chen Min, University of Wales Swansea, UK
Cheng Irene, University of Alberta, Canada
Choi Min, University of Colorado at Denver, USA
Comba Joao, Univ. Fed. do Rio Grande do Sul, Brazil
Crawfis Roger, Ohio State University, USA
Cremer Jim, University of Iowa, USA
Crossno Patricia, Sandia National Lab, USA
Culbertson Bruce, HP Labs, USA
Debattista Kurt, University of Warwick, UK
Deng Zhi gang, University of Houston, USA
Dick Christian, Technical Univ of Munich, Germany
Dingliana John, Trinity College, Ireland
El-Sana Jihad, Ben Gurion University of The Negev, Israel
Entezari Alireza, University of Florida, USA
Fabian Nathan, Sandia National Laboratories, USA
Fiorio Christophe, Univ Montpellier 2, LIRMM, France
De Florian Leila, University of Genova, Italy
Gaither Kelly, University of Texas at Austin, USA
Gao Chunyu, Epson Research and Development, USA
Geist Robert, Clemson University, USA
Gelb Dan, Hewlett Packard Labs, USA
Gotz David, IBM, USA
Gooch Amy, University of Victoria, Canada
Gu David, State Univ of New York at Stony Brook, USA
Guerra-Filho Gutemberg, University of Texas Arlington, USA
Habib Zulfiqar, COMSATS Institute of Information Technology, Lahore, Pakistan
Wolff Larry, Equinox Corporation, USA
Wong Kenneth, The University of Hong Kong, Hong Kong
Xiang Tao, Queen Mary, University of London, UK
Xue Xinwei, Fair Isaac Corporation, USA
Xu Meihe, Univ of California at Los Angeles, USA
Yang Ming-Hsuan, University of California at Merced, USA
Yang Ruigang, University of Kentucky, USA
Yi Lijun, SUNY at Binghampton, USA
Yu Ting, GE Global Research, USA
Yu Zeyun, University of Wisconsin-Milwaukee, USA
Yuan Chunrong, University of Tuebingen, Germany
Zabulis Xenophon, Foundation for Research and Technology - Hellas (FORTH), Greece
Zhang Yan, Delphi Corporation, USA
Cheng Shinko, HRL Labs, USA
Zhou Huiyu, Queen's University Belfast, UK
Wylie Brian, Sandia National Laboratory, USA
Wyman Chris, University of Calgary, Canada
Wyvill Brian, University of Iowa, USA
Yang Qing-Xiong, University of Illinois at Urbana, Champaign, USA
Ye Duan, University of Missouri-Columbia, USA
Yi Beifang, Salem State College, USA
Yin Lijun, Binghamton University, USA
Yoo Terry, National Institutes of Health, USA
Yuan Xiaoru, Peking University, China
Zara Jiri, Czech Technical University in Prague, Czech
Zordan Victor, University of California at Riverside, USA

(Area 3) Virtual Reality

Alcañiz Mariano, Technical Univ of Valencia, Spain
Arns Laura, Purdue University, USA
Azuma Robert, Nokia, USA
Balci soy Selim, Sabanci University, Turkey
Behringer Reinhold, Leeds Metropolitan Univ UK
Bilalis Nicholas, Technical Univ of Crete, Greece
Blach Roland, Fraunhofer Institute for Industrial Engineering, Germany
Blom Kristopher, University of Barcelona, Spain
Boulic Ronan, EPFL, Switzerland
Brady Rachael, Duke University, USA
Brega Jose Remo Ferreira, Universidade Estadual Paulista, Brazil
Brown Ross, Queensland University of Technology, Australia
Bruce Thomas, The University of South Australia, Australia
Bues Matthias, Fraunhofer IAO in Stuttgart, Germany
Chen Jian, Brown University, USA
Cheng Irene, University of Alberta, Canada
Coquillart Sabine, INRIA, France
Craig Alan, NCSA University of Illinois at Urbana-Champaign, USA
Cremer Jim, University of Iowa, USA
Egges Arjan, Universiteit Utrecht, The Netherlands
Encarnacao L. Miguel, University of Louisville, USA
Figueron Pablo, Univ de los Andes, Colombia
Fox Jesse, Stanford University, USA
Friedman Doron, IDC, Israel
Gregory Michelle, Pacific Northwest National Lab, USA
Gupta Satyandra K., University of Maryland, USA
Haller Michael, FH Hagenberg, Austria
Hamza-Lup Felix, Armstrong Atlantic State University, USA
Hinkenjann Andre, Bonn-Rhein-Sieg University of Applied Sciences, Germany
Hollerer Tobias, University of California at Santa Barbara, USA
Huang Jian, Univ of Tennessee at Knoxville, USA
Julier Simon J., University College London, UK
Kiyokawa Kiyoshi, Osaka University, Japan
Klosowski James, AT&T Labs, USA
Kozintsev, Igor, Intel, USA
Kuhlen Torsten, RWTH Aachen Univ, Germany
Lee Cha, Univ of California, Santa Barbara, USA
Liere Robert van, CWI, The Netherlands
Livingston A. Mark, Naval Research Lab, USA
Majumder Aditi, University of California, Irvine, USA
Malzbender Tom, Hewlett Packard Labs, USA
Mantler Stephan, VRVis Research Center, Austria
Molineros Jose, Teledyne Scientific and Imaging, USA
Muller Stefan, University of Koblenz, Germany
Olwal Alex, MIT, USA
Paelke Volker, Institut de Geomàtica, Spain
Papka Michael, Argonne National Laboratory, USA
Peli Eli, Harvard University, USA
Pettifer Steve, The University of Manchester, UK
Piekarski Wayne, Qualcomm Bay Area R&D, USA
Pugmire Dave, Los Alamos National Lab, USA
Qian Gang, Arizona State University, USA
Raffin Bruno, INRIA, France
Raij Andrew, University of South Florida, USA
Reiners Dirk, University of Louisiana, USA
Richir Simon, Arts et Metiers ParisTech, France
Rodello Ildeberto, University of San Paulo, Brazil
Sandor Christian, University of South Australia, Australia
Santhanam Anand, University of California at Los Angeles, USA
Sapidis Nickolas, Univ of Western Macedonia, Greece
Schulze, Jurgen, University of California - San Diego, USA
Sherman Bill, Indiana University, USA
Slavik Pavel, Czech Technical University in Prague, Czech Republic
Sourin Alexei, Nanyang Technological University, Singapore
Steinicke Frank, University of Münster, Germany
Su Simon, Geophysical Fluid Dynamics Laboratory, NOAA, USA
(Area 4) Visualization

Andrienko Gennady, Fraunhofer Institute IAIS, Germany
Avila Lisa, Kitware, USA
Apperley Mark, University of Waikato, New Zealand
Balázs Csébfalvi, Budapest University of Technology and Economics, Hungary
Brady Rachael, Duke University, USA
Benes Bedrich, Purdue University, USA
Bilalis Nicholas, Technical Univ of Crete, Greece
Bonneau Georges-Pierre, Grenoble Univ, France
Brown Ross, Queensland University of Technology, Australia
Bühler Katja, VRVIS, Austria
Callahan Steven, University of Utah, USA
Chen Jian, Brown University, USA
Chen Min, University of Wales Swansea, UK
Cheng Irene, University of Alberta, Canada
Chourasia Amit, University of California - San Diego, USA
Coming Daniel, Desert Research Institute, USA
Dana Kristin, Rutgers University, USA
Daniels Joel, University of Utah, USA
Dick Christian, Technical Univ of Munich, Germany
Doleisch Helmut, VRVis Research Center, Austria
Duan Ye, University of Missouri-Columbia, USA
Dwyer Tim, Monash University, Australia
Ebert David, Purdue University, USA
Entezari Alireza, University of Florida, USA
Ertl Thomas, University of Stuttgart, Germany
De Floriani Leila, University of Maryland, USA
Fujishiro Issei, Keio University, Japan
Geist Robert, Clemson University, USA
Goebel Randy, University of Alberta, Canada
Gotz David, IBM, USA
Grinstein Georges, University of Massachusetts Lowell, USA
Goebel Randy, University of Alberta, Canada
Gregory Michelle, Pacific Northwest National Lab, USA
Hadwiger Helmut Markus, VRVis Research Center, Austria
Hagen Hans, Technical University of Kaiserslautern, Germany
Hamza-Lup Felix, Armstrong Atlantic State University, USA
Heer Jeffrey, Armstrong University of California at Berkeley, USA
Hege Hans-Christian, Zuse Institute Berlin, Germany
Hochheiser Harry, University of Pittsburgh, USA
Hollerer Tobias, University of California at Santa Barbara, USA
Hong Lichan, Palo Alto Research Center, USA
Hotz Ingrid, Zuse Institute Berlin, Germany
Joshi Alark, Yale University, USA
Julier Simon J., University College London, UK
Kao David, NASA Ames Research Center, USA
Kohlihammer Jörn, Fraunhofer Institut, Germany
Kosara Robert, University of North Carolina at Charlotte, USA
Laramee Robert, Swansea University, UK
Lee Chang Ha, Chung-Ang University, Korea
Lewis R. Robert, Washington State University, USA
Liere Robert van, CWI, The Netherlands
Lim Ik Soo, Bangor University, UK
Linsen Lars, Jacobs University, Germany
Liu Zhanping, University of Pennsylvania, USA
Ma Kwan-Liu, University of California-Davis, USA
Maeder Anthony, University of Western Sydney, Australia
Majumder Aditi, University of California, Irvine, USA
Malpica Jose, Alcala University, Spain
Masutani Yoshitaka, The University of Tokyo Hospital, Japan
Matkovic Kresimir, VRVis Forschungs-GmbH, Austria
McCaffrey James, Microsoft Research / Volt VTE, USA
Special Tracks

ST1: 3D Mapping, Modeling and Surface Reconstruction

Organizers:
Nefian Ara, Carnegie Mellon University/NASA Ames Research Center, USA
Edwards Laurence, NASA Ames Research Center, USA
Huertas Andres, NASA Jet Propulsion Lab, USA

Program Committee:
Bradski Gary, Willow Garage, USA
Zakhor Avidah, Univ of California at Berkeley, USA

Cavallaro Andrea, Univ Queen Mary, London, UK
Bouguet Jean-Yves, Google, USA


Organizers:
Albu Alexandra Branzan, University of Victoria, Canada
Bebis George, University of Nevada, Reno, USA

Program Committee:
Antonacopoulos Apostolos, Univ of Salford, UK
Bellon Olga Regina Pereira, Universidade Federal do Parana, Brasil
Bowyer Kevin, University of Notre Dame, USA
Crawfis Roger, Ohio State University, USA

Hammoud Riad, DynaVox Systems, USA
Kakadiaris Ioannis, University of Houston, USA
Lladós Josep, Univ Autonoma de Barcelona, Spain
Sarkar Sudeep, University of South Florida, USA

ST3: Immersive Visualization

Organizers:
Sherman Bill, Indiana University, USA
Wernert Eric, Indiana University, USA
O’Leary Patrick, University of Calgary, Canada
Coming Daniel, Desert Research Institute, USA

Program Committee:
Su Simon, Princeton University, USA
Folcomer Samuel, Brown University, USA
Brady Rachael, Duke University, USA
Johnson Andy, Univ of Illinois at Chicago, USA
Kreylos Oliver, Univ of California at Davis, USA
Will Jeffrey, Valparaiso University, USA
Moreland John, Purdue University, Calumet, USA
Leigh Jason, University of Illinois, Chicago, USA

Schulze Jurgen, University of California, San Diego, USA
Sanyal Jibonananda, State Univ of Mississippi, USA
Stone John, UIUC, USA
Kuhlen Torsten, Aachen University, Germany
Wen Quan, University of Electronic Science and Technology of China, China
Zhou Huiyu, Queen’s University Belfast, UK
ST4: Computational Bioimaging

Organizers:
Tavares João Manuel R. S., University of Porto, Portugal
Jorge Renato Natal, University of Porto, Portugal
Cunha Alexandre, Caltech, USA

Program Committee:
Santis De Alberto, Università degli Studi di Roma "La Sapienza", Italy
Reis Ana Mafalda, Instituto de Ciências Biomédicas Abel Salazar, Portugal
Barrutia Arrate Muñoz, University of Navarra, Spain
Calvo Begona, University of Zaragoza, Spain
Constantinou Christons, Stanford University, USA
Iacoviello Daniela, Università degli Studi di Roma "La Sapienza", Italy
Ushizima Daniela, Lawrence Berkeley National Lab, USA
Ziou Djemel, University of Sherbrooke, Canada
Pires Eduardo Borges, Instituto Superior Técnico, Portugal
Sgallari Fiorella, University of Bologna, Italy
Perales Francisco, Balearic Islands Univ, Spain
Qiu Guoping, University of Nottingham, UK
Hanchuan Peng, Howard Hughes Medical Institute, USA
Pistori Hemerson, Dom Bosco Catholic Univ, Brasil
Yanovsky Igor, Jet Propulsion Laboratory, USA
Corso Jason, SUNY at Buffalo, USA
Maldonado Javier Melenchón, Open University of Catalonia, Spain
Marques Jorge S., Instituto Superior Técnico, Portugal
Aznar Jose M. García, Univ of Zaragoza, Spain
Vese Luminita, University of California at Los Angeles, USA
Reis Luis Paulo, University of Porto, Portugal
Thiriet Marc, Univ Pierre et Marie Curie (Paris VI), France
Mahmoud El-Sakka, The University of Western Ontario London, Canada
Hidalgo Manuel González, Balearic Islands University, Spain
Gurcan Metin N., Ohio State University, USA
Dubois Patrick, Institut de Technologie Méricale, France
Barneva Reneta P., State Univ of New York, USA
Belliotti Roberto, University of Bari, Italy
Tangaro Sabina, University of Bari, Italy
Silva Susana Branco, University of Lisbon, Portugal
Brimkov Valentin, State Univ of New York, USA
Zhan Yongjie, Carnegie Mellon University, USA

ST5: Interactive Visualization in Novel and Heterogeneous Display Environments

Organizers:
Rosenbaum Rene, University of California, Davis, USA
Tominski Christian, University of Rostock, Germany

Program Committee:
Isenberg Petra., INRIA, France
Isenberg Tobias, University of Groningen, The Netherlands and CNRS/INRIA, France
Kerren Andreas, Linnaeus University, Sweden
Majumder Aditi, University of California, Irvine, USA
Quigley Aaron, University of St Andrews, UK
Schumann Heidrun, University of Rostock, Germany
Sips Mike, GFZ Potsdam, Germany
Slavik Pavel, Czech Technical University in Prague, Czech Republic
Weiskopf Daniel, University of Stuttgart, Germany
Sponsors