Welcome to APGV 2011! We are pleased to present you the proceedings of the eighth annual Symposium on Applied Perception in Graphics and Visualization, held in Toulouse, France, August 27-28, 2011. The symposium aims at, on the one hand, using insights from perception to advance the field of visual, auditory and multisensory representation while, on the other hand, using computer graphics to enable research on perceptual issues that may otherwise not be possible.

APGV has traditionally fostered interaction between the fields of perception, graphics and visualization. This year, we have emphasized this tradition by co-locating the symposium with the 34th European Conference on Visual Perception (ECVP). We hope to create synergies between the two research communities, which obviously share a lot of common interests.

We received a total of 33 paper submissions. Each submission received three reviews, either by members of the International Program Committee, or external reviewers carefully chosen by them. From those reviews and some additional discussions, 19 papers were finally selected for oral presentation at the conference. Veronica Sundstedt, this year’s Poster Chair, additionally selected 17 submissions, highlighting late-breaking research in the field.

Following the current arrangement with ACM Transactions on Applied Perception (TAP), five submissions underwent a second review cycle for inclusion in the APGV special issue of the ACM TAP journal. These five submissions were selected by the Program Chairs, based on comments and recommendations made in the reviews. To grant publication, the authors were asked to address all the comments in the summary review; most of them actually went the extra mile and spent additional time and effort to provide the best possible papers. These papers will appear in the ACM Digital Library as TAP papers at the same time as the symposium takes place. They cannot appear in the APGV proceedings in order to avoid double publication.

In addition to the reviewed papers and posters, and as an immediate outcome of the APGV-ECVP collaboration, this year we are honored to have an impressive list of invited speakers, organized in two short joint symposia on Sunday. The first symposium, organized by Quasim Zaedi and Martin Giese, is entitled ‘Defining shapes - deformable templates’ and the second one, organized by Simon Thorpe, is entitled ‘Computer Vision & Biological Vision’. Furthermore, all APGV attendees are kindly invited to attend ECVP’s Rank Prize plenary lecture by Stan Dehaene: ‘How learning to read changes the visual system’.

As always, we are deeply grateful to Stephen Spencer, Chair of the ACM SIGGRAPH Publications Committee, whose diligence and effort brought these proceedings successfully together. We thank the whole ACM publications board for supporting the idea of fast-tracking selected papers directly into TAP, and the TAP editorial staff for processing them efficiently. To put together these proceedings (specially Carol O’Sullivan, Bobby Bodenheimer and Perceptually Adapted Noise).

APGV 2011 Conference Chairs
Rachel McDonnell Trinity College Dublin
Simon Thorpe Université Toulouse 3

APGV 2011 Program Chairs
Diego Gutierrez Universidad de Zaragoza
Martin Giese University of Tübingen

APGV 2011 Posters Chair
Veronica Sundstedt Blekinge Institute of Technology

Saturday, 27th August 2011

09:00-10:30 Session 1: Eyes and Gaze
Susana Castillo, Tilke Judd, Diego Gutierrez
Using Eye-Tracking to Assess Different Image Retargeting Methods
Laura C. Trutou, Elizabeth J. Carter, Iain Matthews and Jessica K. Hodgins
(Submitted in the APGV special issue of ACM Transactions on Applied Perception)
Modeling and Animating Eye Blinks
Andrew Duchowski, Brandon Pelfrey, Donald House and Rui Wang
Gaze Depth with an Eye Tracker During Stereoscopic Display
Simone Frintrop, Eric Rome and Henrik I. Christensen
(Submitted in the APGV special issue of ACM Transactions on Applied Perception)
Computational Visual Attention Systems and their Cognitive Foundation: A Survey

10:30-11:00 Coffee Break

11:00-12:55 Session 2: Virtual Environments
Erin Mcmanus, Quifeng Lin, Ayus Erdemir, Stephan Bailey, John Rieser, Bobby Bodenheimer
Perceiving Alterations in Trajectories while Throwing in a Virtual Environment
J. Adam Jones, J. Edward Swan, Gurjot Singh, Stephen R. Ellis
Peripheral Visual Information and Its Effect on Distance Judgments in Virtual and Augmented Environments
Erin Mcmanus, Bobby Bodenheimer, Stephan Streuber, Stephan De La Rosa, Heinrich Bülthoff, Betsy Williams, Stephen Bailey, Gayathri Narasimham, Muqun Li, Bobby Bodenheimer
The Influence of Avatar (Self and Character) Animations on Distance Estimation, Object Interaction and Locomotion in Immersive Virtual Environments

12:55-14:15 Lunch

14:15-15:45 Session 3: Visualization
Fernando Navarro, Susana Castillo, Francisco Seron, Diego Gutierrez
(Submitted in the APGV special issue of ACM Transactions on Applied Perception)
Perceptual Considerations for Motion Blur Rendering
Jeroen Van Baar, Steven Poulakos, Wojciech Jarosz, Derek Nowrouzezahrai, Rasmus Tamstorf, Markus Gross
Perceptually-Based Compensation of Light Pollution in Display Systems
Lea Lindemann, Stephan Wenger, Magnor Marcus Evaluation of Video Artifact Perception Using Event-Related Potentials
Alexandre Coninx, Georges-Pierre Bonneau, Jacques Droulez, Guillaume Thierry
Visualization of Uncertain Scalar Data Fields Using Color Scales and Perceptually Adapted Noise

15:45-16:15 Poster Fast-Forward

16:15-17:15 Coffee Break + Posters Session

17:15-18:45 Session 4: Distance Estimation
Markus Leyrer, Sally A. Linkenkauger, Heinrich H. Bülthoff, Uwe Kloo, Betty Mohler
The Influence of Eye Height and Avatars on Egocentric Distance Estimates in Immersive Virtual Environments
Phillip Napieralski, Bliss Allenhoff, Jeffrey Bertrand, Lindsay Long, Sabarish Babu, Christopher Pagano, Justin Kern, Timothy Davis
(Submitted in the APGV special issue of ACM Transactions on Applied Perception)
Comparing Near Field Distance Perception in Real and Virtual Environments Using Both Verbal and Action Responses
Quifeng Lin, Xianshi Xie, Ayus Erdemir, Gayathri Narasimham, Timothy McManus, John Rieser, Bobby Bodenheimer
Egocentric Distance Perception in Real and HMD-based Virtual Environments: the Effect of Limited Scanning Method
Tien Dat Nguyen, James Cremer, Joseph Kearney, Jodie Plunert
Effects of Scene Density and Richness on Travelled Distance Estimation in Virtual Environments

19:30 Reception
Sunday, 28th August 2011

09:00 - 11:30  APGV - ECVP SYMPOSIUM I: Deforming Shapes - Deformable Templates
Chris Bregler, USA
Non-Rigid Models in Science and Entertainment
Qasim Zaidi, USA
What do Deforming Shapes Reveal about Structure from Motion
Alan Johnston, UK
Perceiving Dynamic Faces
Rufin Vogels, Belgium
Coding of Static and Acting Bodies in Monkey Temporal Cortex
Martin Giese, Germany
Neural Theory for the Recognition of Goal-directed Actions: from Hand Actions to Causality Perception
Alan Yuille, USA
Learning Hierarchical Models of Shape

11:30 - 11:45  Coffee Break

11:45 - 13:15  Session 5: Motion and Animation
Dominik Endres, Andrea Christensen, Martin Giese
(Submitted in the APGV special issue of ACM Transactions on Applied Perception)
Emulating Human Observers with Bayesian Binning: Segmentation of Action Streams
Martin Prazak, Carol O’Sullivan
Perceiving Human Motion Variety
Michael Larkin, Carol O’Sullivan
Perception of Simplification Artifacts for Animated Characters
Franck Caniard, Heinrich Bülthoff, Pascal Mamassian, Seong-Whan Lee, Ian M. Thornton
Active Control Does Not Eliminate Motion-Induced Illusory Displacement

13:15 - 14:30  Lunch

In Cooperation with:

POSTERS

James Mardell, Mark Witkowski, Robert Spence
Gaze-Contingent Enhancements for a Visual Search and Rescue Task

Thomas J. Grindinger, Andrew T. Duchowski, Pilar Otero
Differentiating Aggregate Gaze Distributions

Guido Maiello, Clara Silvestro, Andrea Canessa, Manuela Chessa, Agostino Gibaldi, Silvio P. Sabatini, Fabio Solari
Assessment of Stereoscopic Depth Perception in Augmented Reality Environments based on Low-Cost Technologies

Srinivas Sridharan, Reynold Bailey, Ann McNamara, Cindy Grimm
Subtle Gaze Manipulation for Improved Mammography Training

Michael Dorr, Peter J. Bex
Gaze-Contingent Real-Time Video Processing to Study Natural Vision

Christine J. Ziener, Benjamin Chihak, Jodie M. Plunert, Tien Dat Nguyen, James F. Cremer, Joseph K. Kearney
Is Perception-Action Coupling More Malleable in Virtual than in Real Environments?

Allan G. Rempel, Wolfgang Heidrich, Rafal Mantiuk
The Role of Contrast in the Perceived Depth of Monocular Imagery

Fakhri Torkhani, Kai Wang, Annick Montanvert
Towards Perceptual Quality Evaluation of Dynamic Meshes

Nicolas Schneider, Michael Dorr, Laura Pomarjanschi, Erhardt Barth
A Gaze-Contingent Reading Tutor Program for Children with Developmental Dyslexia