



# ACM Symposium on Applied Perception

## Conference Program

22<sup>nd</sup>-23<sup>rd</sup> August 2013

Trinity College Dublin

### Conference Chairs

Ludovic Hoyet - Trinity College Dublin  
Betsy Williams Sanders - Rhodes College

### Program Chairs

Joe Geigel - Rochester Institute of Technology  
Jeanine Stefanucci - University of Utah

### Poster Chair

Cathy Ennis - Universiteit Utrecht

### Preface

It is our pleasure to present the proceedings of the Symposium on Applied Perception (ACM SAP) held at Trinity College in Dublin, Ireland, August 22-23, 2013. ACM SAP, formerly known as APGV, aims to advance and promote research that crosses the boundaries between perception and disciplines such as graphics, visualization, vision, haptics and acoustics. Our tenth annual event includes exciting new research from all of these disciplines. We decided to hold the ACM SAP 2013 conference immediately prior to the 36th annual European Conference on Visual Perception (ECVP) in Bremen, Germany. By doing so, we hope to further promote communication between the core perception and computer graphics communities, and also bring back the symposium in its new form to Europe.

The changing of the name to SAP was intended to broaden the scope of the conference and to encourage representation from all aspects of applied perception. We believe that this goal is already being met. We were delighted to see a number of submissions that included auditory, haptic, and vestibular perception. We had 54 papers submitted for the SAP conference and 22 of those were accepted through reviews from at least three members of the International Program Committee. Cathy Ennis also served as Poster's Chair and selected a number of poster submissions to be included in the meeting both as posters and flash reports.

Five of the best submitted articles will be included in the special issue of the ACM Transactions on Perception (TAP). These five papers received the highest rankings from the program committee as long papers and underwent a second review cycle in order to be included in the special issue. These papers will appear in the ACM Digital Library as TAP papers at the same time as the symposium takes place. To avoid double publication, they will not appear in the SAP proceedings.

We would like to thank our sponsors: Disney Research, Acuity, Science Gallery and Fáilte Ireland for their gracious support. We also thank Stephen Spencer, Chair of the ACM SIGGRAPH Publications Committee, for his hard work in bringing together these proceedings, as well as the TAP editors, Carol O'Sullivan and Roland Fleming, for their efficiency and helpfulness in ensuring that the selected papers for the special issue were processed on time.

Even more thanks should go to Ludovic Hoyet and Betsy Williams, this year's Conference Chairs, for organizing the event and keeping things moving smoothly. Thanks also to Trinity College for hosting the symposium and our keynote speakers Jim Ferwerda and Henrik Ehrsson. Finally, we would like to thank the SAP 2013 authors and the committee members for their interest and patience, as well as the SAP 2012 Program Chairs for answering all of our questions so quickly. We were honored to be Program Chairs of SAP 2013, and hope that you will enjoy this year's program.

### SAP 2013 Program Chairs

Joe Geigel, Rochester Institute of Technology  
Jeanine Stefanucci, University of Utah



### Thursday, 22<sup>nd</sup> August 2013

08:00 - 08:45 **Registration and Poster Set-up**

08:45 - 09:00 **Opening Remarks**

09:00 - 10:30 **Session 1: Shape Perception**  
Session Chair: Joe Geigel

Surface Perception of Planar Abstractions  
James McCrae, Niloy J. Mitra and Karan Singh

Shape Perception of Thin Transparent Objects with Stereoscopic Viewing  
Jianhui Chen and Robert Allison

How Does Lighting Direction Affect Shape Perception of Glossy and Matte Surfaces  
Arthur Faisman and Michael Langer

10:30 - 11:00 **Coffee Break**

11:00 - 12:20 **Session 2: Stereoscopic Depth Perception**  
Session Chair: Betsy Williams Sanders

Stereoscopic Static Depth Perception of Enclosed 3D Objects  
Filipe Marreiros and Örfan Smedby

Stereoscopic Egocentric Distance Perception: The Impact of Eye Height and Display Devices  
José Corujeira and Ian Oakley

Binocular Depth Perception of Stereoscopic 3D Line Drawings  
Yunjin Lee, Yongjin Kim, Henry Kang and Seungyong Lee

12:20 - 14:00 **Lunch**

14:00 - 15:00 **Keynote: Henrik Ehrsson**  
Multisensory Mechanisms of Body Self-Perception

15:00 - 16:10 **Session 3: Emotions and Avatars**  
Session Chair: Bobby Bodenheimer

Unpleasantness of Animated Characters Increases Viewer Attention to Faces  
Elizabeth Carter, Moshe Mahler and Jessica Hodgins

A Virtual Reality Setup for Controllable, Stylized Real-Time Interactions between Humans and Avatars with Sparse Gaussian Process Dynamic Models  
Nick Taubert, Martin Löffler, Nicolas Ludolph, Andrea Christensen, Dominik Endres and Martin Giese

Evaluating the Effect of Emotion on Gender Recognition in Virtual Humans  
Katja Zibrek, Ludovic Hoyet, Kerstin Ruhland and Rachel McDonnell

16:10 - 16:45 **Poster Fast Forward**

16:45 - 18:00 **Coffee Break & Posters Session**

19:30 - ??? **Reception**

### Friday, 23<sup>rd</sup> August 2013

08:30 - 09:00 **Registration**

09:00 - 10:30 **Session 4: Video, Art, and HCI**  
Session Chair: Ann McNamara

ElasticImages: Perceiving Local Elasticity of Images through a Novel Pseudo-Haptic Deformation Effect  
Ferran Argelaguet, David Antonio Gómez Jáuregui, Maud Marchal and Anatole Lécuyer

Corpus Based Visual Synthesis: An Approach for Artistic Stylization  
Parag Mital, Mick Grierson and Tim Smith

Transition Preference and Artifact Analysis for Video Transitions of Places  
James Tompkin, Min H. Kim, Kwang In Kim, Jan Kautz and Christian Theobalt

10:30 - 11:00 **Coffee Break**

11:00 - 12:10 **Session 5: Walking**  
Session Chair: Jeanine Stefanucci

Walk With Me: Interactions in emotional walking simulations, a pilot study  
Jonathan Perrinet, Anne-Hélène Olivier and Julien Pettré

Torso versus Gaze Direction to Navigate a VE by Walking in Place  
Betsy Williams, Matthew McCaleb, Courtney Strachan and Ye Zheng

Human Sensitivity to Dynamic Rotation Gains in Head-Mounted Displays  
Ruimin Zhang and Scott Kuhl

12:10 - 14:00 **Lunch**

14:00 - 15:00 **Keynote: James Ferwerda**  
Tangible Imaging Systems

15:00 - 16:30 **Session 6: 3D Display and Interaction**  
Session Chair: Scott Kuhl

Guiding Attention in Controlled Real-World Environments  
Thomas Booth, Srinivas Sridharan, Ann McNamara, Cindy Grimm and Reynold Bailey

Evaluation of Monocular Depth Cues on a High-dynamic-range Display for Visualisation  
Haider K. Easa, Rafal K. Mantiuk and Ik Soo Lim

Audio-Visual Integration in Stereoscopic 3D  
Lesley Deas, Laurie M. Wilcox, Robert S. Allison and Ali Kazimi

16:30 - 17:00 **Coffee Break**

17:00 - 18:45 **Session 7: Motion and Orientation**  
Session Chair: Rachel McDonnell

The Effect of Posture and Dynamics on the Perception of Emotion  
Aline Normoyle, Fannie Liu, Norman Badler, Mubbasir Kapadia and Sophie Joerg

Believability in Simplifications of Large Scale Physically Based Simulations  
Donghui Han, Shu-wei Hsu, Ann McNamara and John Keyser

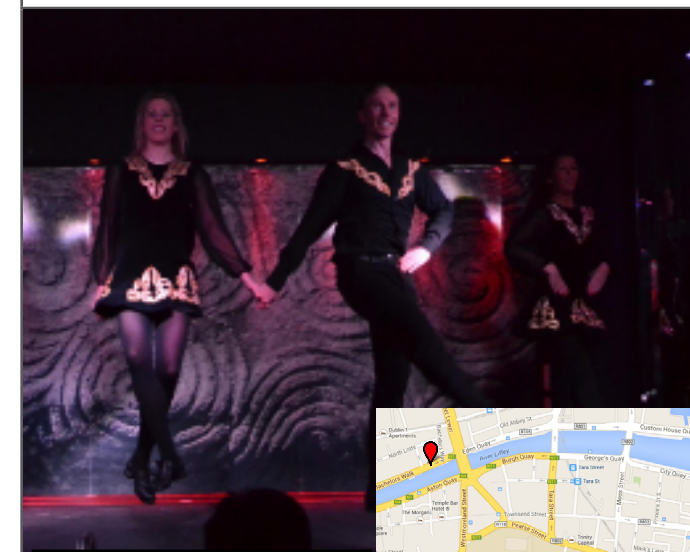
Stepping off a ledge in an HMD-based immersive virtual environment  
Qiufeng Lin, John Rieser and Bobby Bodenheimer

Does neck viewing angle affect spatial orientation in an HMD-based VE?  
Betsy Williams, Preston Tunnell Wilson, Gayathri Narasimham, Timothy McNamara, John Rieser and Bobby Bodenheimer

18:45 - 19:00 **Closing Session**

19:00 - 20:00 **Business Meeting**

### Thursday, 22<sup>nd</sup> August 2013 - 19:30 Reception Irish Dance Show & Dinner



Arlington Hotel - Dinner (19:30) & Show (20:30)  
23-25 Bachelors Walk, O'Connell Bridge

Science Gallery

