

First Symposium on Applied Perception in Graphics and Visualization

Sponsored by ACM SIGGRAPH

August 7-8, 2004
Wilshire Grand Hotel, Los Angeles

Conference Co-Chairs: Victoria Interrante and Ann McNamara
Program Co-Chairs: Heinrich H. Bülthoff and Holly Rushmeier

| | Friday Aug 6 th | Saturday Aug 7 th | Sunday Aug 8 th |
|---------|----------------------------|--|--|
| 7:00am | | | |
| 8:00am | | Registration | Registration |
| 9:00am | | Opening Remarks | |
| 10:00am | | Virtual Environments I- Locomotion | Rendering II- Image Characteristics |
| 11:00am | | Coffee Break | Coffee Break |
| 12:00pm | | Virtual Environments II- Distance and Latency Perception | Objects I- Shape Perception |
| 1:00pm | | Lunch | Lunch |
| 2:00pm | | Rendering I- Detecting Details | Objects II- Visual and Haptic Properties |
| 3:00pm | | | Soda Break |
| 4:00pm | | Soda Break | Facial Animation and Vision Realistic Rendering |
| 5:00pm | | Poster Preview Fast-Forward | Town Meeting |
| 6:00pm | | Poster Presentation | |
| 7:00pm | | Reception | |
| 8:00pm | | | |

BALLROOM LEVEL

APGV Event Locations

All technical presentations are in the Wilshire room. The reception is in the Los Angeles room.

Saturday, August 7th

- 8:00am** **Coffee and Muffins** – Wilshire Room
- 8:45am** **Symposium Opening** – Wilshire Room
- 9:00am** **Papers Session: Virtual Environments I– Locomotion** – Wilshire Room
session chair: Victoria Interrante
- 9:00am Spatial Updating in Real and Virtual Environments - Contribution and Interaction of Visual and Vestibular Cues
Bernhard E. Riecke, Markus von der Heyde, Heinrich H. Bühlhoff
- 9:30am Visual Motion Influences Locomotion in a Treadmill Virtual Environment
Betty J. Mohler, William B. Thompson, Sarah Creem-Regehr, Herbert L. Pick, Jr., William H. Warren, Jr., John J. Reiser, Peter Willemsen
- 10:00am Recalibration of Rotational Locomotion in Immersive Virtual Environments
Scott Kuhl
- 10:30am** **Coffee Break** – Wilshire Room
- 11:00am** **Papers Session: Virtual Environments II – Distance and Latency Perception** – Wilshire Room
session chair: Heinrich Bühlhoff
- 11:00am Distance Perception in Real and Virtual Environments
Jodie M. Plumert, Joseph K. Kearney, James F. Cremer
- 11:30am The Effects of Head-Mounted Display Mechanics on Distance Judgements in Virtual Environments
Peter Willemsen, Mark B. Colton, Sarah H. Creem-Regehr, William B. Thompson
- 12:00pm Perceptual Sensitivity to Head Tracking Latency in Virtual Environments with Varying Degrees of Scene Complexity
Katerina Mania, Bernard D. Adelstein, Stephen R. Ellis, Michael I. Hill
- 12:30pm** **Lunch Break**
- 2:00pm** **Papers Session: Rendering I - Detecting Details** – Wilshire Room
session chair: Erik Reinhard
- 2:00pm A Feasibility Test for Perceptually Adaptive Level of Detail Rendering on Desktop Systems
Derrick Parkhurst, Ernst Niebur
- 2:30pm An Experimental Approach to Predicting Saliency for Simplified Polygonal Models
Sarah Howlett, John Hamill, Carol O'Sullivan
- 3:00pm Perceptual Invariance of Nonlinear Focus+Context Transformations
Keith Lau, Ronald A. Rensink, Tamara Munzner
- 3:30pm Vision Realistic Rendering: Simulation of the Scanned Foveal Image from Wavefront Data of Human Subjects
Brian A. Barsky
- 4:00pm** **Soda Break** – Wilshire Room
- 4:30pm** **Poster Session** – Wilshire Room
- 4:30pm Poster Preview Fast-Forward
- 5:00pm Poster Presentations
- 6:30pm** **Reception** – Los Angeles Room

Sunday, August 8th

- 8:30am** **Coffee and Muffins** – Wilshire Room
- 9:00am** **Papers Session: Rendering II – Image Characteristics** – Wilshire Room
session chair: Derrick Parkhurst
- 9:00am Subband Encoding of High Dynamic Range Imagery
Gregory Ward, Maryann Simmons
- 9:30am Example-Based Color Stylization Based on Categorical Perception
Youngha Chang, Suguru Saito, Keiji Uchikawa, Masayuki Nakajima
- 10:00am Second Order Image Statistics in Computer Graphics
Erik Reinhard, Peter Shirley, Michael Ashikhmin, Tom Troscianko
- 10:30am** **Coffee Break** – Wilshire Room
- 11:00am** **Papers Session: Objects I – Shape Perception** – Wilshire Room
session chair: Roland Fleming
- 11:00am Effects of Rendering on Shape Perception in Automobile Design
James A. Ferwerda, Stephen H. Westin, Randall C. Smith, Richard Pawlicki
- 11:30am Do We Recognize the Shape of a Mirror Using Template Matching?
Silvio Savarese, Li Fei-Fei, Pietro Perona
- 12:00pm Conveying Three-Dimensional Shape with Texture
Sunghye Kim, Haleh Hagh-Shenas, Victoria Interrante
- 12:30pm** **Lunch Break**
- 2:00pm** **Papers Session: Objects II - Visual and Haptic Properties** – Wilshire Room
session chair: Ann McNamara
- 2:00pm A Perceptually-Inspired Force Model for Haptic Texture Rendering
Miguel A. Otaduy, Ming C. Lin
- 2:30pm Perceiving Translucent Materials
Roland W. Fleming, Henrik Wann Jensen, Heinrich H. Bühlhoff
- 3:00pm Frames of Reference in Virtual Object Rotation
Colin Ware, Roland Arsenault
- 3:30pm** **Soda Break** – Wilshire Room
- 4:00pm** **Papers Session: Facial Animation and Vision Realistic Rendering**– Wilshire Room
session chair: Holly Rushmeier
- 4:00pm The Components of Conversational Facial Expressions
Douglas W. Cunningham, Mario Kleiner, Christian Wallraven, Heinrich H. Bühlhoff
- 4:30pm Towards Perceptually Realistic Talking Heads: Models, Metrics
Darren Cosker, David Marshall, Paul L. Rosin, Susan Paddock, Simon Rushton
- 5:00pm** **Town Meeting** – TBD

Posters

- A Psychophysical Validation of Tone Mapping Operators using a High Dynamic Range Display, *Patrick Ledda, Alan Chalmers, Helge Seetzen*
- A Survey of Color Spaces for Shadow Identification, *Erum A. Khan, Erik Reinhard*
- Algorithms for Image Database Navigation and Tuning of Object Selective Neurons in the Non-Human Primate, *Sarah Allred, Yan Liu, Bharathi Jagadeesh*
- An Experimental Investigation of Distance Perception in Real vs. Immersive Virtual Environments via Direct Blind Walking in a High-Fidelity Model of the Same Room, *Victoria Interrante, Lee Anderson, Brian Ries*
- An Opponent Process Approach to Modeling the Blue Shift of the Human Color Vision System, *Brian Barsky, Todd J. Kosloff, Steven D. Upstill*
- Causes of depth perception errors in stereo displays, *Reynald Hoskinson, Caitlin Akai, Brian Fisher*
- Collision and Attention, *Carol O'Sullivan, Richard Lee*
- Color Appearance Models and Dynamic Range Reduction, *Ahmet Oguz Akyuz, Erik Reinhard, Sumanta Pattanaik*
- Distance Perception and Cues to Distance in Virtual Reality, *Ross Messing, Frank H. Durgin*
- Effective Color Coding of Menu Design for Movie Genres, *Kyung Jae Lee, James L. Mohler*
- Enhancing the Perceived Depth in Images via Artistic Matting, *Amy A. Gooch, Bruce Gooch*
- From Scene to Screen: Color Accuracy in Computer Simulations used for Psychophysics, *Alexa I. Ruppertsberg, Marina Bloj*
- Gaze-Directed Streamline Seeding, *Daisuke Watanabe, Xiaoyang Mao, Kenji Ono, Atsumi Imamiya*
- Image Appearance Modeling and High-Dynamic-Range Image Rendering, *Mark D. Fairchild, Garrett M. Johnson, Jiangtao Kuang, Hiroshi Yamaguchi*
- Lightness Perception Inspired Tone Mapping, *Grzegorz Krawczyk, Rafal Mantiuk, Karol Myszkowski, Hans-Peter Seidel*
- Observations of Visual and Audio Coaching Methods in a Virtual Laparoscopic Training Environment, *Mavis Chan, John Dill, Shahram Payandeh*
- Selective Rendering of Task Related Scenes, *Veronica Sundstedt, Alan Chalmers, Kirsten Cater*
- Selective Rendering using Task-Importance Maps, *Veronica Sundstedt, Kurt Debattista, Alan Chalmers*
- Statistical Analysis of Impressionist Color, *Asako Fukumoto Dong Sheng Cai Michiaki Yasumura*
- Throwing vs. Walking as Indicators of Distance Perception in Real and Virtual Environments, *Cynthia S. Sahn, Sarah H. Creem-Regehr, William B. Thompson, Peter Willemsen*
- Using a 2D colon to guide 3D navigation in virtual colonoscopy, *Jeanette C. Meng, Michael Halle*
- Using Facial Texture Manipulation to Study Facial Motion Perception, *Mario Kleiner, Adirian Schwaninger, Douglas Cunningham, Barbara Knappmeyer*
- View dependence of complex versus simple facial motions, *Christian Wallraven, Douglas W. Cunningham, Martin Breidt, Heinrich H. Bulthoff*
- Workspace Calibration via Perceptual Judgments, *Rashmi Sundareswara, Paul Schrater*

Program Committee

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|------------------------|---------------------|------------------|--------------------|
| Andy Beall | Victoria Interrante | Gary Meyer | Penny Rheingans |
| Douglas W. Cunningham | Roberta L. Klatzky | Karol Myszkowski | Ruth Rosenholtz |
| James Elder | Michael Langer | Ann McNamara | William B Thompson |
| Jim Ferwerda | Susan Lederman | Carol O'Sullivan | Colin Ware |
| Roland William Fleming | Ming Lin | Dinesh K. Pai | Ben Watson |
| Christopher G. Healey | Suresh Lodha | Erik Reinhard | Pavel Zahorik |
| Ken Hinckley | Jack Loomis | | |

Local Arrangements: Sunghie Kim

A/V: Amy Gooch