

MARCH 14-18 LAFAYETTE, LA, USA

IEEE VIRTUAL REALITY 09

IEEE Symposium on 3D User Interfaces

CONFERENCE PROGRAM

IEEE

Sponsored by IEEE Computer Society Visualization and Graphics Technical Committee

vgtc



PROGRAM AT-A-GLANCE

SATURDAY

SUNDAY

Time	SATURDAY					SUNDAY				
7:00	Breakfast <i>Second Floor Lobby</i>					Breakfast <i>Second Floor Lobby</i>				
7:30										
8:00	TUTORIALS		WORKSHOPS			TUTORIALS		WORKSHOPS		3DUI
8:30	<i>Zydeco Room</i>	<i>Jazz Room</i>	<i>Gospel Room</i>	<i>Cajun Room</i>		<i>Zydeco Room</i>	<i>Jazz Room</i>	<i>Gospel Room</i>	<i>Cajun Room</i>	
9:00	Tutorial 1: Hands On with Commercial VR Packages (full day 8:30am-5pm)	Tutorial 2: Hands On with Physics Engines for VR (full day 8:30am-5pm)	Workshop 1: Software Engineering and Architectures for Realtime Interactive Systems (SEARIS) (full day 8:30am-5:30pm)	Workshop 5: Workshop on Virtual Environments for Business Applications (half day 8:30am-12:30pm)	3DUI <i>Blues Room</i> Introduction & Session 1: Navigation	Tutorial 3: Hands On with Open/Free VR Packages (full day 8:30am-5pm)	Tutorial 4: Conducting Human-Subject Experiments with Virtual and Augmented Reality (full day 8:30am-5pm)	Workshop 3: Massively Multiuser Virtual Environment (MMVE) (full day 8:30am-5:30pm)	Workshop 2: Cloud-Mobile Convergence for Virtual Reality (full day 8:30am-5:30pm)	Blues Room Session 4: Wayfinding & Locomotion
9:30										Blues Room Session 5: Haptics & Modal
10:00										
10:30					Break					Break
11:00					<i>Blues Room</i> Session 2: Body Interaction					<i>Blues Room</i> Keynote Address
11:30										
12:00					Posters & Demos Fast Forward					
12:30										Lunch Break
1:00					Lunch Break					
1:30					<i>Lobby Area</i> Posters & Demos					<i>Extra Room</i> Workshop 6: PIVE - Perceptual Illusion in Virtual Environments (half day 1:30pm-5:30pm)
2:00										Blues Room Session 6: Mixed Reality
2:30										Best Paper Award & Closing
3:00										
3:30					Break					
4:00					<i>Blues Room</i> Session 3: Performance Analysis					
4:30										
5:00										
5:30						Exhibitors Reception				
6:00										
6:30										
7:00										
7:30										
8:00										
8:30										
9:00										

MONDAY

TUESDAY

WEDNESDAY

Second Floor Lobby		Second Floor Lobby		Second Floor Lobby		7:00
Breakfast		Breakfast		Breakfast		7:30
VR		VR		VR		8:00
Festival Ballroom		Festival Ballroom		Festival Ballroom		8:30
Opening Remarks		Keynote Address		Panel: Latency in Virtual Environments Systems		9:00
Festival Ballroom		Festival Ballroom		Festival Ballroom		9:30
Session 1: Haptics & Interaction		Session 4: Collaboration & Avatars		Session 7: Clinical & Medical Applications		10:00
Break		Break		Break		10:30
Festival Ballroom		Festival Ballroom		Festival Ballroom		11:00
Panel: VR and Art: Hyper-Reality?		Session 5: Perception & Usability		Session 8: Graphics & Modeling		11:30
Lunch Break		Lunch Break		Lunch Break		12:00
Festival Ballroom		Festival Ballroom		Festival Ballroom		12:30
Session 2: Displays & Tracking		Session 6: Eye Gaze & Olfactory Displays		Session 9: Presence & Perception		1:00
Break		Break		Break		1:30
Festival Ballroom		Festival Ballroom		Festival Ballroom		2:00
Session 3: Augmented Reality		Session 9: Presence & Perception		Student Panel: Building a Career in VR		2:30
Break		Break		Break		3:00
Festival Ballroom		Festival Ballroom		Festival Ballroom		3:30
Session 3: Augmented Reality		Session 6: Eye Gaze & Olfactory Displays		Student Panel: Building a Career in VR		4:00
Break		Break		Break		4:30
Festival Ballroom		Festival Ballroom		Festival Ballroom		5:00
Session 3: Augmented Reality		Session 6: Eye Gaze & Olfactory Displays		Student Panel: Building a Career in VR		5:30
Lobby Area		Lobby Area		Lobby Area		6:00
Poster Session		Poster Session		Poster Session		6:30
LITE Reception		LITE Reception		LITE Reception		7:00
LITE Reception		LITE Reception		LITE Reception		7:30
LITE Reception		LITE Reception		LITE Reception		8:00
LITE Reception		LITE Reception		LITE Reception		8:30
LITE Reception		LITE Reception		LITE Reception		9:00

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PROGRAM DETAILS

▶ SATURDAY MARCH 14

TUTORIALS

8:30 am - 5:30 pm

Tutorial 1: Hands On with Commercial VR Packages *Zydeco Room*

Tutorial 2: Hands On with Physics Engines for VR *Jazz Room*

WORKSHOPS

8:30 am - 5:30 pm

Workshop 1: Software Engineering and Architectures for Real-time Interactive Systems (SEARIS) *Gospel Room*

8:30 am - 12:30 pm

Workshop 5: Workshop on Virtual Environments for Business Applications *Cajun Room*

3DUI SYMPOSIUM

9:15 am - 9:25 am

Introduction *Blues Room*

9:25 am - 10:30 am

Session 1: Navigation
Measuring the Effect of Gaming Experience on Virtual Environment Navigation Tasks, Shamus Smith, Sam Du'Mont
A Direct Manipulation Interface for Time Navigation in Scientific Visualizations, Marc Wolter, Bernd Hentschel, Irene Tedjo, Torsten Kuhlen

Tech-note: ScrutiCam Camera Manipulation Technique for 3D Objects Inspection, Fabrice Declé, Martin Hachet, Pascal Guitton

10:30 am - 11:00 am

Break

11:00 am - 12:05 pm

Session 2: Body Interaction
Virtual Multi-Tools for Hand and Tool-based Interaction with Life-size Virtual Human Agents, Aaron Kotranza, Kyle Johnsen, Juan Cendan, Bayard Miller, D Scott Lind, Benjamin Lok

A Multiscale Interaction Technique for Large, High-Resolution Displays, Sarah Peck, Chris North, Doug Bowman

Tech-note: Device-Free Interaction Spaces, Daniel Stødle, Olga Troyanskaya, Kai Li, Otto Anshus

12:05 pm - 12:30 pm

Posters & Demos Fast Forward *Blues Room*

12:30 pm - 1:30 pm

Lunch at Exhibit Hall (provided) *Exhibit Hall A*

1:30 pm - 3:15 pm

Posters & Demos *Lobby Area*

3:15 pm - 3:45 pm

Break

3:45 pm - 5:00 pm

Session 3: Performance Analysis
Effects of Tracking Technology, Latency, and Spatial Jitter on Object Movement, Robert J. Teather, Andriy Pavlovyh, Wolfgang Stuerzlinger, I. Scott MacKenzie

Selection Performance Based on Classes of Bimanual Actions, Amy C. Ulinski, Zachary Wartell, Paula Goolkasian, Evan A. Suma, Larry F. Hodges

The Influence of Input Device Characteristics on Spatial Perception in Desktop-Based 3D Applications, Alexander Kulik, Jan Hochstrate, André Kunert, Bernd Froehlich

SUNDAY MARCH 15 ◀

TUTORIALS

8:30 am - 5:30 pm

Tutorial 3: Hands On with Open/Free VR Packages *Zydeco Room*

Tutorial 4: Conducting Human-Subject Experiments with Virtual and Augmented Reality *Jazz Room*

WORKSHOPS

8:30 am - 5:30 pm

Workshop 3: Massively Multiuser Virtual Environment (MMVE) *Gospel Room*

Workshop 2: Cloud-Mobile Convergence for Virtual Reality *Cajun Room*

1:30 pm - 5:30 pm

Workshop 6: PIVE - Perceptual Illusion in Virtual Environments *Extra Room*

5:30 pm - 7:30 pm

Exhibitors Reception *Exhibit Hall A*

3DUI SYMPOSIUM

8:30 am - 9:35 am

Session 4: Wayfinding & Locomotion
Wayfinding Techniques for MultiScale Virtual Environments, Felipe Bacim, Doug Bowman, Marcio Pinho

Arch-Explore: A Natural User Interface for Immersive Architectural Walkthroughs, Gerd Bruder, Frank Steinicke, Klaus H. Hinrichs

Tech-note: Vtrail: Supporting Trailblazing in Virtual Environments, Daniel Iaboni, Carolyn MacGregor

9:35am - 10:30 am

Session 5: Haptics & Multimodal
A Tactile Distribution Sensor Which Enables Stable Measurement Under High and Dynamic Stretch, Hassan Alirezaei, Akihiko Nagakubo, Yasuo Kuniyoshi

Tech-note: Multimodal Feedback in 3D Target Acquisition, Dalia El-Shimy, Georgios Marentakis, Jeremy R. Cooperstock

Tech-note: Iterative Design and Test of a Multimodal Experience, Holger Reckter, Christian Geiger, Jürgen Singer, Stephan Streuber

10:30 am - 11:00 am

Blues Room

Break

11:00 am - 12:00 pm

Blues Room

Keynote Address

The Inner Child of 3DUI Research, Gordon Kurtenbach, *Director in the Applied Research Group, Autodesk*

12:00 pm - 1:30 pm

Exhibit Hall A

Lunch at Exhibit Hall (provided)

1:30 pm - 2:35 pm

Blues Room

Session 6: Mixed Reality

Egocentric Navigation for Video Surveillance in 3D Virtual Environments, Gerwin de Haan, Josef Scheuer, Raymond de Vries, Frits H. Post

Visual Clutter Management in Augmented Reality: Effects of Three Label Separation Methods on Spatial Judgments, Stephen D. Peterson, Magnus Axholt, Matthew Cooper, Stephen R. Ellis

Tech-note: Spatial Interaction using Depth Camera for Miniature AR, Kyungdahm Yun, Woontack Woo

2:35 pm - 2:50 pm

Blues Room

Best Paper Award & Closing

▶ MONDAY MARCH 16

VR CONFERENCE

8:30 am - 9:00 am

Festival Ballroom

Opening Remarks

9:00 am - 10:30 am

Festival Ballroom

Session 1: Haptics & Interaction

Spatialized Haptic Rendering: Providing Impact Position Information in 6DOF Haptic Simulations Using Vibrations, Jean Sreng, Anatole Lécuyer, Claude Andriot, Bruno Arnaldi

Evaluating the Influence of Haptic Force-Feedback on 3D Selection Tasks using Natural Egocentric Gestures, Vijay M. Pawar, Anthony Steed

Haptic Assembly and Disassembly Task Assistance using Interactive Path Planning, Nicolas Ladeveze, Jean Yves Fourquet, Bernard Puel, Michel Taix

10:00 am - 5:30 pm

Exhibit Hall A

Research Demos

10:30 am - 11:00 am

Break

11:00 am - 12:30 pm

Festival Ballroom

Panel: VR and Art: Hyp-er- Reality?

12:30 pm - 1:30 pm

Exhibit Hall A

Lunch at Exhibit Hall (provided)

1:30 pm - 3:15 pm

Festival Ballroom

Session 2: Displays & Tracking

An Image-Warping Architecture for VR: Low Latency versus Image Quality, Ferdi Smit, Robert van Liere, Stephan Beck, Bernd Froehlich

A Distributed Cooperative Framework for Continuous Multi-Projector Pose Estimation, Tyler Johnson, Greg Welch, Henry Fuchs, Eric La Force, Herman Towles

JanusVF: Accurate Navigation Using SCAAT and Virtual Fiducials, Malcolm Hutson, Steven White, Dirk Reiners

Image Blending and View Clustering for Multi-Viewer Immersive Projection Environments, Jonathan Marbach

3:15 pm - 3:45 pm

Break

3:45 pm - 5:30 pm

Festival Ballroom

Session 3: Augmented Reality

Indoor vs. Outdoor Depth Perception for Mobile Augmented Reality, Mark A. Livingston, Zhuming Ai, J. Edward Swan II, Harvey S. Smallman

Virtual Heliodon: Spatially Augmented Reality for Architectural Daylighting Design, Yu Sheng, Theodore C. Yap, Christopher Young, Barbara Cutler

Explosion Diagrams in Augmented Reality, Denis Kalkofen, Markus Tatzgern, Dieter Schmalstieg

Improving Spatial Perception for Augmented Reality X-Ray Vision, Benjamin Avery, Christian Sandor, Bruce H. Thomas

5:30 pm - 7:00 pm

Lobby Area

Poster Session

6:30 pm - 8:30 pm

LITE Reception

TUESDAY MARCH 17 ◀

VR CONFERENCE

8:45 am - 10:30 am

Festival Ballroom

Keynote Address:

Successes and Challenges on Using VR in Product Design and Engineering, Elizabeth Baron, *Ford Motor Company*

10:00 am - 5:30 pm

Exhibit Hall A

Research Demos

10:30 am - 11:00 am

Break

11:00 am - 12:30 pm

Festival Ballroom

Session 4: Collaboration & Avatars

Eye Tracking for Avatar Eye Gaze Control During Object-Focused Multiparty Interaction in Immersive Collaborative Virtual Environments, William Steptoe, Oyewole Oyekoya, Alessio Murgia, Robin Wolff, John Rae, Estefania Guimaraes, David Roberts, Anthony Steed

A Virtual Peer for Investigating Social Influences on Children's Bicycling, Sabarish Babu, Timofey Grechkin, Benjamin Chihak, Christine Ziemer, Joseph Kearney, James Cremer, Jodie Plumert

Virtual Experiences for Social Perspective-Taking, Andrew Rajj, Aaron Kotranza, D. Scott Lind, Benjamin Lok

Exploring Co-presence for Next Generation Technical Support, Sinem Guven, Mark Podlaseck, Gopal Pingali

12:30 pm - 1:30 pm

Exhibit Hall A

Lunch at Exhibit Hall (provided)

1:30 pm - 3:15 pm

Festival Ballroom

Session 5: Perception & Usability

Measurement Protocols for Medium-Field Distance Perception in Large-Screen Immersive Displays, Eric Klein, J. Edward Swan II, Gregory S. Schmidt, Mark A. Livingston, Oliver G. Staadt

Quantification of Contrast Sensitivity and Color Perception using Head-worn Augmented Reality Displays, Mark A. Livingston, Jane H. Barrow, Ciara M. Sibley

Deskothèque: Improved Spatial Awareness in Multi-Display Environments, Christian Pirchheim, Manuela Waldner, Dieter Schmalstieg

Virtual vs. Real-World Pointing in Two-User Scenarios, Holger Salzmann, Mathias Moehring, Bernd Froehlich

Can Camera Motions Improve the Perception of Traveled Distance in Virtual Environments? Léo Terziman, Anatole Lécuyer, Sébastien Hillaire, Jan M. Wiener

3:15 pm - 3:45 pm

Break

3:45 pm - 5:30 pm

Festival Ballroom

Session 6: Eye Gaze & Olfactory Displays

Communicating Eye-gaze Across a Distance: Comparing an Eye-gaze enabled Immersive Collaborative Virtual Environment, Aligned Video Conferencing, and Being Together, David Roberts, Robin Wolff, John Rae, Anthony Steed, Rob Aspin, Moira McIntyre, Adriana Pena, Oyewole Oyekoya, Will Steptoe

Natural Eye Motion Synthesis by Modeling Gaze-Head Coupling, Xiaohan Ma, Zhigang Deng

Effective Presentation Technique of Scent Using Small Ejection Quantities of Odor, Junta Sato, Kaori Ohtsu, Yuichi Bannai, Ken-ichi Okada

Selection Method of Odor Components for Olfactory Display Using Mass Spectrum Database, Takamichi Nakamoto, Keisuke Murakami

7:00 pm - 9:30 pm

Vermillionville

VGTC 2009 Awards & Conference Banquet

▶ WEDNESDAY MARCH 18

VR CONFERENCE

8:30 am - 10:00 am

Festival Ballroom

Panel: Latency in Virtual Environment Systems

10:00 am - 5:30 pm

Exhibit Hall A

Research Demos

10:00 am - 10:30 am

Break

10:30 am - 11:45 am

Festival Ballroom

Session 7: Clinical & Medical Applications

A Virtual Iraq System for the Treatment of Combat-Related Post-traumatic Stress Disorder, Shih-Ching Yeh, Brad Newman, Matt Liewer, Jarrell Pair, Anton Treskunov, Greg Reger, Barbara Rothbaum, JoAnn Difede, Josh Spitalnick, Rob McLay, Thomas Parsons, Albert Rizzo

Immersive Training for Two-Person Radiological Surveys, Steven Koepnick, Derek Norpchen, William R. Sherman, Daniel S. Coming

Virtual Humans That Touch Back: Enhancing Nonverbal Communication with Virtual Humans through Bidirectional Touch, Aaron Kotranza, Benjamin Lok, Carla M. Pugh, D. Scott Lind

A Virtual Reality Claustrophobia Therapy System – Implementation and Test, Morgan Bruce, Holger Regenbrecht

11:45 am - 12:30 pm

Exhibit Hall A

Lunch at Exhibit Hall (provided)

12:30 pm - 1:45 pm

Festival Ballroom

Session 8: Graphics & Modeling

Virtualized Traffic: Reconstructing Traffic Flows from Discrete Spatio-Temporal Data, Jur van den Berg, Jason Sewall, Ming Lin, Dinesh Manocha

Efficient Large-Scale Sweep and Prune Methods with AABB Insertion and Removal, Daniel J. Tracy, Samuel R. Buss, Bryan M. Woods

Automatic Creation of Massive Virtual Cities, Charalambos Poullis, Suya You

1:45 pm - 3:15 pm

Festival Ballroom

Session 9: Presence & Perception

Does a Gradual Transition to the Virtual World increase Presence? Frank Steinicke, Gerd Bruder, Klaus Hinrichs, Anthony Steed, Alexander L. Gerlach

Relating Scene-Motion Thresholds to Latency Thresholds for Head-Mounted Displays, Jason Jerald, Mary Whitton

Comparing Aimed Movements in the Real World and in Virtual Reality, Lei Liu, Robert van Liere, Catharina Nieuwenhuizen, Jean-Bernard Martens

Issues with Virtual Space Perception within Reaching Distance: Mitigating Adverse Effects on Applications Using HMDs in the Automotive Industry, Mathias Moehring, Antje Gloystein, Ralf Doerner

3:15 pm - 3:45 pm

Break

3:45 pm - 5:00 pm

Festival Ballroom

Student Panel: Building a Career in VR

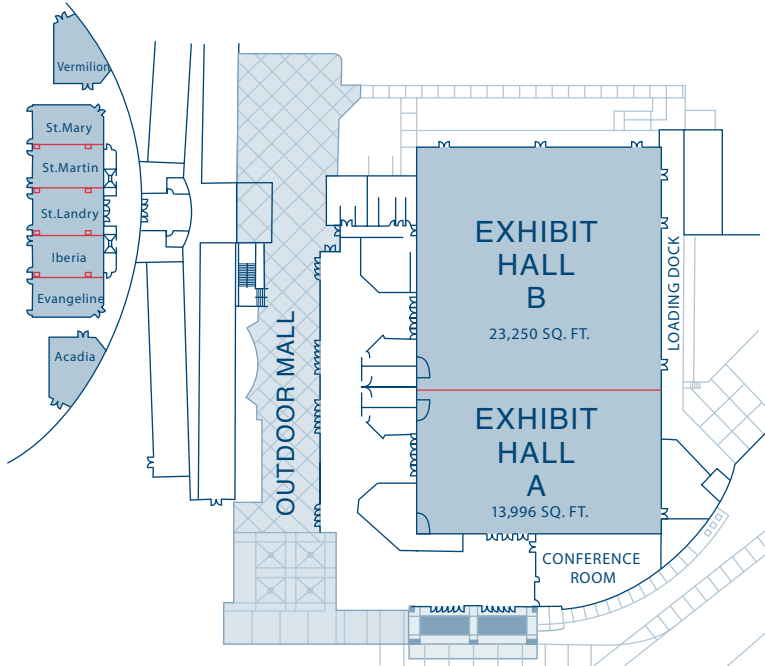
5:00 pm - 5:15 pm

Festival Ballroom

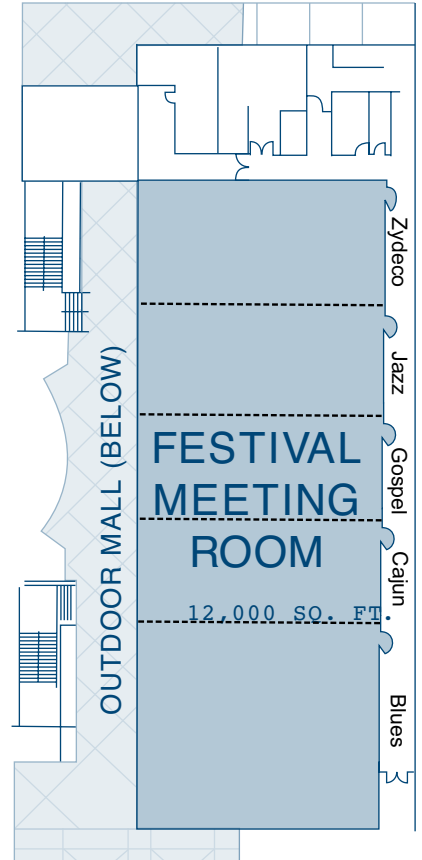
Best Paper Awards & Closing Remarks

MAPS

First Floor



Second Floor



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