

PROGRAM Web3D 2017

Monday, June 5, 2017

	Theatre GP-P419	Room GP-Z302
8:30-9:00	Registration	
9:00-9:15	Opening	
9:15-10:30	Keynote One Hundred Years of Aptitude* Mark Pesce (Inventor, Author, Educator, Broadcaster, Entrepreneur) + Tony Parisi (Head of VR and AR, Unity Technologies)	
	<i>*Mark Pesce will deliver the opening keynote in narrative form; prepared in collaboration with Tony Parisi, who will appear by video. Mark (and Tony, if remote logistics permit) will then continue a conversation on the past, present and future of virtuality with the audience.</i>	
10:30-10:45	Break	
10:45-12:15	Paper Session 1: Web-based 3D Visualisation <u>Community-driven Extensions to the X3D Volume Rendering Component</u> - Ander Arbelaz, Aitor Moreno, Luis Kabongo, Nicholas Polys and Alejandro García-Alonso. <u>x3oqre: connecting X3D to a state of the art rendering engine</u> - Pavel Rojtberg and Benjamin Audenrith <u>Mesh Segmentation and Texture Mapping for Dimensional Inspection in Web3D</u> - Daniel Mejia, Jairo R. Sánchez, Álvaro Segura, Oscar Ruiz Salguero, Jorge Posada and Carlos Cadavid <u>Programming driven 3D modeling on the Web</u> Andy Yeh	Discussion Session Rob Manson <u>W3C Community Group: Augmented Reality</u> www.w3.org/community/ar
12:15-1:00	Lunch	
1:00-2:30	Paper Session 2: Transmission and Streaming of 3D Content <u>Evaluating Multi-View Representations of a Web3D Streaming Server</u> Ayat Mohammed, Nicholas Polys, Vuk Marojevic, Richard Goff and Carl Dietrich <u>Webized 3D content streaming system for autostereoscopic 3D displays</u> - Daeil Seo, Byoungyun Yoo and Heedong Ko <u>WebTorrent Based Fine-grained P2P Transmission of Large-scale WebVR Indoor Scenes</u> - Yonghao Hu, Chaohui Chen and Jinyuan Jia <u>Proagressive High-Quality Rendering for Interactive Information Cartography using WebGL</u> - Daniel Limberger, Marcel Pursche, Jan Klimke and Jürgen Döllner	Masterclass 1 Don Brutzman <u>Graphics Education: Assets for Teaching and Learning X3D</u> Many course resources, examples, videos and learning tools are summarised. These assets show how individuals and instructors can learn, teach and build X3D Graphics models for a full range of capabilities.
2:30-2:45	Break	
2:45-4:00	Masterclass 2 Anita Havele, Vincent Marchetti <i>Choosing the Right 3D Technology For You</i> This Masterclass gives a comprehensive overview of today's 3D technologies from a modeler's and graphics practitioner's perspective and of the current challenges of using these technologies. How they complement, compete or converge with each other and become essential to the 3D enterprise.	Discussion Session Mark Pesce <u>W3C Community Group: Mixed Reality Service</u> www.w3.org/community/mixedreality/
4:00-5:00	Web3D Consortium Town Hall Nicholas Polys and Anita Havele	
5:00-7:30	Welcome Event at QUT CUBE CUBE demos, Poster Session, Art Gallery	

Tuesday, June 6, 2017

	Theatre GP-P419	Room GP-P504
9:00-10:30	Paper Session 3: Web-based 3D Environments and Systems <u>A Web3D Forest Geo-Visualization and User Interface Evaluation</u> Haitao Wang, Xiaoyu Chen, Nicholas Polys and Peter Sforza <u>Finding Frogs: Using Game-Based Learning to Increase Environmental Awareness</u> - Nicholas Polys, Jessica Hotter, Laura Purcell, Madison Lanier, Jordan Wolf, Cully Hession, Peter Sforza and James Ivory <u>Two Real-World Case Studies on 3D Web Applications for Participatory Urban Planning</u> - Toni Alatalo, Matti Pouke, Timo Koskela and Timo Ojala <u>Text Density and Display Bandwidth: Evaluating Scalability by Model and Experiment</u> - Jagathshree Iyer, Nicholas Polys and Lance Arsenault	Masterclass 3 Xavier Ho, Juan Miguel de Joya <u>WebGL 2.0</u> WebGL 2.0 has landed, and the future of graphics on the web is here. In this workshop, we will introduce the rendering specification for browsers. New features include geometry instancing, transform feedback, and 3D textures will be covered in depth. Topics will be drawn from arts, science, data visualisation, as well as WebVR/WebAR.
10:30-10:45	Break	
10:45-12:15	Masterclass 4 Nicholas Polys <u>Medical and Volume Visualisation on the Web</u> Interoperability and reproducibility are crucial concerns in medical imaging. This session showcases recent applications and case studies using X3D on the Web for volume rendering and visualization. We will demonstrate the techniques and tools in use today for Web3D and discuss community-driven extensions to improve the standard.	Workshop 1 Don Brutzman, Vincent Marchetti 3D Scanning: Use Cases, Workflow and <u>Profile Requirements for X3D</u> 3D scanning is growing in importance. Typical workflows exist both for scan refinement and scan applications, but numerous variations create difficulties that might be well served by a common data format and shared metadata conventions using X3D.
12:15-1:15	Lunch Keynote <u>Khronos Standards for the Web</u> Neil Trevett (President, Khronos Group)	
1:15-2:15	Keynote VR & Advanced Visualization Tech Specialist Ford Motor Company Elizabeth Baron	
2:15-3:45	Paper Session 4: Semantic 3D Modelling and Compression <u>Semantic Model for Distributed Augmented Reality Services</u> Dariusz Rumiński and Krzysztof Walczak <u>Knowledge-based Representation of 3D Content Behavior in a Service-Oriented Virtual Environment</u> - Jakub Flotyński and Krzysztof Walczak <u>3DRepoUnity: Dynamic Loading of Version Controlled 3D Assets into the Unity Game Engine</u> - Sebastian Friston, Carmen Fan, Jozef Dobos, Timothy Scully and Anthony Steed <u>Efficient Compression for Server-Side G-Buffer Streaming in Web Applications</u> - Sascha Räscher, Maximilian Herz, Arjan Kuijper and Johannes Behr	Masterclass 5 Don Brutzman, John Carlson, Roy Walmsley <u>Object Model for X3D (OM4X3D) and Scene Access Interface (SAI) for X3D, including JSONLD and X3DJSAIL</u> This class presents description and usage of the Object Model for X3D (OM4X3D) and Scene Access Interface (SAI). Current and potential work includes X3D Java SAI Library (X3DJSAIL), JavaScript and (draft) C++ implementations.
3:45-4:00	Break	
4:00-5:00	Keynote <u>The Call of the New</u> Michela Ledwidge (Co-founder and CEO, Studio Mod)	
5:00-6:00	Demos Showcase	
7:00-10:00	Conference dinner – Showboat Cruise	



Wednesday, June 7, 2017

	Theatre GP-P419	Room GP-P504
9:00-10:30	Masterclass 6 Mitch Williams <i>Moving Web 3D content Into GearVR</i> This Masterclass will demonstrate how current 3D technologies such as X3D, glTF, and the fbx and obj file formats can be used in creating VR content for GearVR.	Workshop 2 Vincent Marchetti, Don Brutzman <i>Using X3D Metadata for Domain Specific Information</i> This workshop will examine use of X3D over a span of domains such as Medical application, CAD visualization and Culture Heritage archiving. Examples will suggest general requirements for metadata support in the X3D standard. Best-practice guidelines will be proposed for including searchable metadata in X3D files.
10:30-10:45	Break	
10:45-12:15	Paper Session 5: Searching and Retrieval in a Web 3D Environment <i>SMULGRAS: A Platform for Smart Multicodal Graphics Search</i> Andreas Dietze, Marcel Klomann, Yvonne Jung, Michael Englert, Sebastian Rieger, Achim Rehberger, Silvan Hau and Paul Grimm <i>Towards browsing repositories of spatially oriented historic photographic images in 3D Web Environments</i> Jonas Bruschke, Florian Niebling, Ferdinand Maiwald, Kristina Friedrichs, Markus Wacker and Marc Erich Latoschik <i>3D Model Indexing in Videos for Content-Based Retrieval via X3D-Based Semantic Enrichment and Automated Reasoning</i> Leslie Frank Sikos <i>A Workflow for Web3D Interactive Outdoor Scene Visualisation</i> Yash Vyas, Emily Campbell, Stuart Anderson and Matt Adcock	Masterclass 7 Mike McCann <i>X3D Geospatial</i> This course will use real oceanographic data to demonstrate the use of X3D Geospatial for constructing rich visualizations of terrain and sensor data.
12:15-1:00	Lunch	
1:00-2:30	The Future of X3D Roy Walmsley and Don Brutzman <i>How will the X3D standard adapt to HTML5 and virtual and augmented reality on the web?</i>	Workshop 3 Seán O'Donoghue, Bosco Ho, Baichuan Sun <i>Web Molecular Graphics</i>
2:30-2:45	Break	
2:45-3:45	Keynote WebAR, WebVR and the Democratization of Mixed Reality Blair MacIntyre (Principal Research Scientist, Mozilla, and Professor of Interactive Computing, Georgia Tech)	
3:45-5:00	Conference closing and AWARDS Yay!	

Wireless NETWORK - WIFI

If you have an eduroam account use the 'eduroam' wireless network as you would at your home institution.

Via a mobile device (phone/tablet).

1. Go to your device's 'Settings' menu.
2. Select 'Wi-Fi'.
3. Select the network called 'Events@QUT' note – If you have used this service before you will have to "Forget this Network".
4. When prompted for a password, enter: **Nab3456N** (note – password is case-sensitive)
5. Open any web browser to <http://www.qut.edu.au/> (note – do not use https://) and a page titled 'Welcome to Events@QUT' will appear, displaying the service Terms and Conditions.
6. Select the 'Click to Accept' the Terms and Conditions option to commence using the conference wireless service.

Via a laptop (PC / Mac)

1. Go to your wireless network connections, by clicking on the 'wireless' logo on your laptop.
2. Select the wireless network called 'Events@QUT' note – If you have used this service before you will have to "Forget this Network".
3. When prompted for a password, enter: **Nab3456N** (note – password is case-sensitive)
4. Open any web browser to <http://www.qut.edu.au/> (note – do not use https://) and a page titled 'Welcome to Events@QUT' will appear, displaying the service Terms and Conditions.
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ART GALLERY	POSTERS and WIP POSTERS
Noise Aquarium: Victoria Vesna, UCLA Art Sci Center; Alfred Vendl, Martina Fröschl Visualization Lab Angewandte – Digital Art, University of Applied Arts Vienna. UCLA, Los Angeles, USA. Marpi x Archan Nair: Mateusz Marpi Marcinowski and Archan Nair. San Francisco, USA. Movement Study [90x4=360xinfinity]: Andrew Denton and Jennifer Nikolai. Auckland University of Technology (AUT), Auckland, New Zealand. Face Value: Elke Evelin Reinhuber. Nan Yang Technological University (NTU), Singapore, Singapore. Rose: Mark Chevez and Ina Conradi Chevez. Nan Yang Technological University (NTU) and Giant Monster Ptd Ltd., Singapore, Singapore. Being Ignored Yeohyun Anh and Ge Jin. Valparaiso University and Purdue University Northwest, In, USA Indeed: June Kim, QUT and UNSW, Australia Colour 32: Anastasia Tyurina, Griffith University, Brisbane, Australia The Media on the moon: Matthew Martin and Jenna Gavin Auckland, NZ MilkyWay 3D: Filip Michalski, University of Wroclaw, Wroclaw, Poland Guernica 2016: Jed Segovia, Parsons The New school, NY Streak: Al-Azmir Ibrahim, NTU, Singapore, Singapore Flow: Debbie Ng, NTU, Singapore, Singapore Migration: Madeline Ngai, NTU, Singapore, Singapore The Creature: Zhang Longfei, NTU, Singapore, Singapore Painting Translations with Conditional Adversarial Networks: Drew Flaherty, QUT, Brisbane, Australia	Visual Communication of Ecoacoustic Data to General Audiences: Exploring 360° Video Techniques: Leah Gustafson, Tomasz Bednarz Parallelizing Web Virtual Reality for fun and Profit: Rabimba Karanjai, Vivek Sarkar Combining 360-degree Video with Visualisations of Ambisonic Audio: Leah Gustafson General Immersive Big Data Visualisation and Analytics Middleware Framework: Joshua Bowden, Florence Wang, Miles McBain, Tomasz Bednarz Experience management: Wrangling Web3D for mixed reality: Michela Ledwidge An introduction to 3rd Eye Scene: A 3D Visual Debugger: Kazys Stepanas Visualizing and Interacting with data in virtual reality: Eleanor McMurtry, Xavier Ho Assimilate: collaborative interfaces with WebVR: Damian Hills Dexterity: A framework to use a smartphone as a 3D wand: Jenny Vuong, Christopher Hamming, Benedetta Frida Baldi, and Sean O'Donoghue

QUT Campus Map: Conference is in **Block P**. Some of the sessions on Monday are in **Block M**.

