

## Thursday 5<sup>th</sup> September: Location University of Bath

09:15 Registration desk opens. Including **Coffee**

09:45 Welcome

10:00 - 11:00 Keynote: Christian Theobalt, MPI

### Coffee

11:20 - 13:00 Session 1: Visualisation & Simulations (4)

GPU Simulation of Finite Element Facial Soft-Tissue Models  
Mark Warburton and Steve Maddock, University of Sheffield, UK

NetVis: a visualization tool enabling multiple perspectives of network traffic data  
Nicholls, James, Dominik Peters, Albert Slawinski et al. University of Oxford, UK

Geometry-based Algorithm for Detection of Asymmetric Tunnels in Protein Molecules  
Adam Jurčik, Jiri Sochor and Jan Byška, Masaryk University, Brno, The Czech Republic

The Evaluation of Perceptual Effectiveness of Isosurface Rendering-based Uncertainty  
Visualization Techniques for Volumetric Scalar Data  
Ji Ma, David Murphy, Gregory Provan, Cian O'Mathuna and Michael Hayes,  
University College Cork (UCC), Ireland

### Lunch

14:00 – 15:00 Keynote: Kenny Mitchell, Disney Research

### Coffee

15:20 – 17:00 Session 2: VR & Applications (4)

A Fast Inverse Kinematics Solver using Intersection of Circles.  
Srinivasan Srinivasan and Nigel John, University of Bangor, UK

Accurate and marker-less head tracking using depth sensors.  
Martin Breidt, Heinrich Bühlhoff and Cristobal Curio, Max Planck Institute for Biological  
Cybernetics, Tübingen, Germany

A Cost Effective, Accurate Virtual Camera System for Games, Media Production and  
Interactive Visualisation Using Game Motion Controllers  
Matthew Bett, Erin Michno and Keneth B. McAlpine, University of Abertay Dundee

Multi-Perspective Detail+Overview Visualization for 3D Building Exploration  
Sebastian Pasewaldt, Matthias Trapp and Jürgen Döllner, Hasso-Plattner-Institut,  
University of Potsdam, Germany

17:00 – Q&A for EGUK

19:00 - late Conference Dinner

## **Friday 6<sup>th</sup> September: University of Bath**

9:30 – 10:30 EGUK AGM

10:30 – 11:30 Keynote: Andrew Willmott, Maxis.

### **Coffee**

11:50 – 13:05 Session 3: Rendering I. (3)

StegoNPR: Information Hiding in Painterly Renderings  
John Collomosse and Craig Lord, University of Surrey, UK

Measuring realism in hair rendering (short paper)  
Girish Ramesh and Martin Turner, University of Manchester, UK

Acquisition, Representation and Rendering of Real-World Models using Polynomial Texture Maps in 3D  
Elaine Vassallo, Sandro Spina, University of Malta, Kurt Debattista, University of Warwick, UK.

### **Lunch**

14:05 – 15:20 Session 4: Rendering II. (3)

A Compact Tucker-Based Factorization Model for Heterogenous Subsurface Scattering  
Murat Kurt, Ege University, Turkey and Aydin Öztürk, Yasar University, Turkey

Support for the Calculation of Stent Fatigue Fracture in Peripheral Arteries  
Nigel McFarlane, Hui Wei, Youbing Zhao, et al., University of Bedfordshire, UK

Interactive Projective Texturing for Non-Photorealistic Shading of Technical 3D Models  
Matthias Trapp, Roland Lux, Amir Semmo and Jürgen Döllner, Hasso Plattner Institut, University of Potsdam, Germany

Resolution Estimation for Shadow Mapping (short paper)  
Michal Ferko, Comenius University, Bratislava, Slovakia.

15:20 – 15:30 Close

### **Key Note 1: Christian Theobalt**

Christian Theobalt is a Professor of Computer Science and the head of the research group "Graphics, Vision, & Video" at the Max-Planck-Institut fuer Informatik, Saarbruecken, Germany. From 2007 until 2009 he was a Visiting Assistant Professor in the Department of Computer Science at Stanford University. He received his MSc degree in Artificial Intelligence from the University of Edinburgh, Scotland, and his Diplom (MS) degree in Computer Science from Saarland University, in 2000 and 2001 respectively. From 2001 to 2005 he was a researcher and PhD candidate in Hans-Peter Seidel's Computer Graphics Group at MPI Informatik. In 2005, he received his PhD (Dr.-Ing.) from Saarland University and MPI.

Most of his research deals with algorithmic problems that lie on the boundary between the fields of Computer Vision and Computer Graphics, such as dynamic 3D scene reconstruction and marker-less motion capture, computer animation, appearance and reflectance modeling, machine learning for graphics and vision, new sensors for 3D acquisition, advanced video processing, as well as image- and physically-based rendering. For his work, he received several awards including the Otto Hahn Medal of the Max-Planck Society in 2007, the EUROGRAPHICS Young Researcher Award in 2009, and the German Pattern Recognition Award 2012. He is also a Principal Investigator and a member of the Steering Committee of the Intel Visual Computing Institute in Saarbruecken.

### **Key Note 2: Kenny Mitchell**

Kenny Mitchell is an Imagineer and research head for the Walt Disney Company Ltd, with lab located at Edinburgh University's business campus (an outpost of Disney Research Zurich). Over the past 16 years he has shipped games using high-end graphics technologies including voxels, volumetric light scattering, motion blur and curved surfaces. His PhD introduced the use of real-time 3D for information visualisation on consumer hardware, including a novel recursive perspective projection technique.

In between contributing to the technically acclaimed racing game, Split Second, Spielberg's Boom Blox (BAFTA award winner), Disney Infinity and the Harry Potter franchise games he is involved in developing new intellectual properties. His work on video games and mixed reality technologies includes collaboration with all Disney business units and many successful funded University collaborations. He is a member of the EPSRC strategic advisory network and an a number of computing school advisory boards. He is the most senior Disney Research representative in the UK.

### **Key Note 3: Dr. Andrew Willmott**

Dr. Andrew Willmott is a veteran engineering and research lead in the video game industry. Over the past twelve years he worked on a variety of simulation games for Maxis, including The Sims, SimCity, and Spore, culminating in a position as one of EA's most senior engineers. Earlier this year he co-founded the gaming startup Jellygrade, with the aim of bringing a fresh take on simulation games to mobile devices.

His core area of interest is computer graphics, particularly visual effects, and much of his focus has been on developing novel real-time solutions in this area. Some examples include lighting player-created levels, generating and rendering 3D planets, procedural biorama synthesis, simplifying meshes in real time, and the use of directional occlusion volumes for ambient occlusion.

Andrew holds a PhD from Carnegie Mellon University, where he worked with Paul Heckbert on finite-element global illumination, specialising in the processing of massive polygonal meshes. He was the engineering lead of the team that won a technical achievement BAFTA for the game Spore in 2009, and is a current BAFTA member. He lives in London with his wife Alma.