Campus Map

Borough Road

C

IC

Evening Gazette

King Edward's Square

M

W

VR

N

T

Linthorpe Road

Stephenson Street

Woodlands Road

A

SC

CE

Clarendon Road

Car Park

Southfield Lane

Dickens Inn Pub

Star & Garter Pub

Southfield Pub

Southfield Road

General Accident Building

Union

G

LRC

IT

OL

Wilton Street

Victoria Road

Woodlands Road

H

OLY

Vrd

R

CAMPUS MAP

Conference buildings in dark blue

H	**Centuria Building**
R	**Halls of Residence**
Union	**Student's Union and Gallery Restaurant**
VR	**Virtual Reality Auditorium**

Theory and Practice
of Computer Graphics
2006

Eurographics UK Chapter 24th Annual Conference

PROGRAMME

EG

UNIVERSITY OF
TEESSIDE

20-22 June 2006

University of Teesside

The University of Teesside was originally founded as Constantine College 75 years ago. The institution was officially opened by the Prince of Wales, the future King Edward VIII, on July 2, 1930. The college became a polytechnic in 1969 and in 1992, became one of the first new universities and entered a period of rapid change and staggering progress. Student numbers more than doubled, from just under 8,000 to over 20,000 in 2005, and over £70 million has been spent to create a 21st century campus, which is located on a single campus in the town of Middlesbrough of population 140,000.

School of Computing

Excellence in Teaching

The School delivers high-quality courses, research, and consultancy and is a centre of excellence in the creative and technical aspects of Computing, Games and Animation, Web and Multimedia.
The School has been awarded the highest possible rating of 'Excellent' for our teaching quality by HEFCE – the Higher Education Funding Council for England. Teaching programmes range from Higher National Diplomas and Foundation Degrees to undergraduate, Masters and research degrees. We have an excellent reputation for innovation and introducing new courses in areas such as Visualisation, Computer Animation and Computer Games.
There are 29 laboratories with more than 550 workstations supported by a team of 30 technicians. Specialist facilities support Multimedia, Visualisation, Web Development, Networking, Pre and Post Production and Games Development. The operating systems include Microsoft and Linux with over 156 different applications and tools.
The School is the home of Animex - the International Festival of Animation - animators, directors, artists and designers share knowledge and skills to promote the art of animation.

Research in Computer Graphics and Virtual Environments

The Virtual Environments Research Group has strong interdisciplinary and multidisciplinary links with researchers from other Schools within the University as well as other national and international groups. Members of the group have been involved in external exchanges with overseas universities in America, Europe and Japan and have been invited to speak at international conferences. A significant part of the group's research deals with the notion of Virtual Actors. This includes several aspects, from computer animation, motion control and behavioural animation to conversational characters, 'talking heads'. Most of this research is interdisciplinary and involves the combination of computer graphics, virtual reality, artificial intelligence, usability and human factors.

Eurographics UK
24th Annual Conference

PROGRAMME

University of Teesside
20th-22nd June 2006

PROGRAMME SCHEDULE

	MONDAY 19th	TUESDAY 20th	WEDNESDAY 21st	THURSDAY 22nd	
09:00		REGISTRATION CENTURIA FOYER / TUTORIAL / VR DEMO	SESSION 3 H0.53 / SESSION 4 H0.49	SESSION 8 H0.49	09:00
10:00					10:00
				TEA & COFFEE	
11:00			TEA & COFFEE	KEYNOTE H0.53	11:00
12:00		LUNCH	SESSION 5 H0.53	TPCG'07 & CLOSING REMARKS / AGM	12:00
13:00		OPENING REMARKS & VizNET RESULTS	LUNCH	LUNCH	13:00
14:00		KEYNOTE H0.53	KEYNOTE H0.53		14:00
15:00		SESSION 1 H0.53	SESSION 5 (cont) H0.53		15:00
16:00		TEA & COFFEE	TEA & COFFEE		16:00
17:00		SESSION 2 H0.53	SESSION 6 H0.53 / SESSION 7 H0.49		17:00
18:00		EVENING MEAL			18:00
19:00		ANIMEX SHOWCASE H0.53			19:00
20:00	EVENING MEAL & INFORMAL RECEPTION	WORLD CUP FOOTBALL: ENGLAND v. SWEDEN	CONFERENCE DINNER		20:00
21:00					21:00

Thursday 22nd June 2006 - Morning

PLENARY SESSION EIGHT: Animation & Virtual Environments
H0.49   Chair: Professor David Duce, University of Oxford Brookes

09:00   **Flexible Interaction with Large Point-Based Datasets**
A Rosiuta,   ebattista and city on Human HairG Reina & T. Ertl, University of Stuttgart, Germany

09:30   **Evolving Body Kinematics for Virtual Characters**
Christos Gatzoulis, Wen Tang & William J. Stoddart, University of Teesside, UK

10:00   **Expressive and Dynamic Deformation of Animated Computer Generated Characters**
Paul Noble & Wen Tang, University of Teesside, UK

10:30   **Tea & Coffee Break**

10:45   **Keynote: AI-based Interactivity**
Professor Marc Cavazza, School of Computing, University of Teesside, UK
H0.53

11:45   **Presentation of TPCG'07**

11:50   **Closing Remarks and Prizes**

12:00   **AGM** *H0.49*

12:45   **Lunch**
Student Union Gallery Restaurant

Programme ends after lunch

Tuesday 20th June 2006 - Morning

09:00 –   **Registration**
12:00   *Centuria Building Main Foyer*

TUTORIAL AND DEMONSTRATION

09:30   **Tutorial: GeoWall Construction and Multi-graphics Card Rendering Techniques**
Martin Turner, Anja Le Blanc & Louise Lever, Manchester Visualisation Centre, University of Manchester
H0.49

10:00   **Virtual Reality Demonstration**
Gary Quinn, School of Computing, University of Teesside
VR Auditorium

12:00   **LUNCH**
Student Union Gallery Restaurant

Tuesday 20th June 2006 - Afternoon

13:00   **Opening Remarks**
         H0.53

13:05   **VizNET Showcase Results**
         H0.53

13:30   **Keynote: Large-Scale Scientific Visualization**
         Professor Charles Hansen, School of Computing and the
         Scientific Computing and Imaging Institute, University of Utah,
         USA
         H0.53

PLENARY SESSION ONE: Simulation
H0.53   Chair: Dr Jonathan Roberts, University of Kent

14:30   **Physically Based Simulation and Visualization of Fire in
         Real-time Using the GPU**
         Samuel Rødal, Geir Storli & Odd E Gundersen, Norwegian
         University of Science and Technology, Norway

15:00   **Computing Static Electricity on Human Hair**
         Gerrit Sobottka & Andreas Weber, University of Bonn, Germany

15:30   **Tea & Coffee Break**
         Demos in H0.43 & H0.46

PARALLEL SESSION SIX: Work in Progress II
H0.53   Chair: Ms. Louise Lever, University of Manchester

16:00   **Curvature-Based Segmentation for Sketch
         Understanding**
         Wentao Zheng & Zhiyu Liu, Nanjing University, P. R. China

16:25   **A Mixed Reality Anatomy Teaching Tool**
         Rhys G Thomas, Nigel W John & Ik S Lim, University of Wales,
         Bangor, UK

16:50   **An Interactive Multiscale Framework for Enhancement
         and Visualization of 2D & 3D Image Data**
         Andrew D Graham, Martin J Turner & Terry Hewitt, University of
         Manchester, UK

PARALLEL SESSION SEVEN: Work in Progress II
H0.49   Chair: Dr Wen Tang, University of Teesside

16:00   **Visualisation of DNA - Does the Soul Have a Picture**
         M Middleton &Yong Yue, University of Luton, UK

16:25   **Visual Analysis of Packing Process for 3D Container
         Loading**
         Yong. Yue, M. Middleton & J. Liu, University of Luton, UK

EVENING SOCIAL EVENTS

         Coach pick-up for Conference Dinner

18:30   Outside Star & Garter Pub, Southfield Road

18:40   Thistle Hotel

Wednesday 21st June 2006 - Afternoon

13:30   **Keynote: Anatomy, Animation, Science, and Special Effects - Biology Meets Computer Graphics**
Professor Stuart Sumida, California State University, San Bernandino, USA
H0.53

PLENARY SESSION FIVE: Rendering II (cont.)
H0.53   *Chair: Dr Martin Turner, University of Manchester*

14:30   **Out of core Polyhedral Union and Its Application to Interactive Shadow Rendering**
John Fedorkiw, C Smith, Sherif Ghali, University of Alberta, Canada

15:00   **Structured Image Techniques for Efficient High-Fidelity Graphics**
Xiaohui Yang, K Debattista & Alan Chalmers, University of Bristol, UK

15:30   **Tea & Coffee Break**
Demos in H0.43 & H0.46

PLENARY SESSION TWO: Visualization & Web Graphics
H0.53   *Chair: Mrs. Mary McDerby, University of Manchester*

16:00   **HyperStreamball Visualization for Symmetric Second Order Tensor Fields**
Jia Liu, Martin Turner, Terry Hewitt & James S Perrin, University of Manchester, UK

16:30   **Smarticles for Sampling and Rendering Implicit Models**
Pauline Jepp, Brian Wyvill & Mario Costa Sousa, University of Calgary, Canada

17:00   **GraSSML: Smart Schematic Diagrams, XML and Accessibility**
Zaineb Ben Fredj & David A Duce, University of Oxford Brookes, UK

EVENING SOCIAL EVENTS

18:00   **Evening Meal**
Student Union Gallery Restaurant

19:00   **Animex Student Animation Awards Showcase**
H0.53

20:00   **World Cup Football Match: England vs. Sweden**
Various Pubs on Southfield Road

Wednesday 21st June 2006 - Morning

PARALLEL SESSION THREE: Rendering I
H0.53   *Chair: Ms. Louise Lever, University of Manchester*

09:00   **Polynomial Approximation of Blinn-Phong Model**
Aydin Ozturk, Ahmet Bilgili & Murat Kurt, International Computer Institute, Ege University, Turkey

09:30   **Perception-based Lighting Design**
Hai Nam Ha & Patrick Olivier, University of Newcastle Upon Tyne, UK

10:00   **ATIP: A Tool for 3D Navigation inside a Single Image with Automatic Camera Calibration**
Kevin Boulanger, Kadi Bouatouch & Sumanta Pattanaik, University of Central Florida, USA

10:30   **Fast Rendering of Complex Dynamic Scenes**
Vit Kovalcik & Jiri Sochor, Masaryk University, Czech Republic

PARALLEL SESSION FOUR: Work in Progress I
H0.49   *Chair: Professor David Duce, University of Oxford Brookes*

09:00   **A State-of-the-Art Review of Non-Photorealistic Rendering (NPR) for Visualisation**
Rezwan Sayeed & Toby Howard, University of Manchester, UK

09:25   **Hand Motion Capture and Tracking in 3D Animation**
Joan Condell, G Moore & J Moore, University of Ulster, UK

09:50   **Augmented Reality with Multilayer Occlusion**
Yan Feng & Yimin Chen, Shanghai University, P. R. China

10:15   **Real-Time Modelling of the Action of Wind on Liquid Surfaces**
Amanda Bristol & Thomas Varsamidis, University of Wales, Bangor, UK

10:40   **Collision Detection for Deformable Objects Using Octrees**
Francisco Madera, Andy M Day & Stephen D Laycock, University of East Anglia, UK

11:00   **Tea & Coffee Break**
Demos in H0.43 & H0.46

PLENARY SESSION FIVE: Rendering II
H0.53   *Chair: Dr Martin Turner, University of Manchester*

11:30   **Automatic Stroke Extraction and Stroke Ordering Based on TrueType Font**
Hyun Gyu Jang, Sang Ok Koo & Soon Ki Jung, Kyungpook National University, South Korea

12:00   **Perceived Aliasing Thresholds for High-Fidelity Rendering on Small Screen Devices**
Matthew Aranha, K Debattista, V Sundstedt & A Chalmers, University of Bristol, UK

12:30   **LUNCH**
Student Union Gallery Restaurant