U.K. Norwich

University of East Anglia

CGP
School of Information Systems
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Core Competence

Applied Computational Geometry, Real-time Rendering, Urban Modelling, Point based modelling and rendering Image Based Rendering, Scientific Visualisation, Colour, Medical Imaging, Haptics, Virtual and Augmented Environments

CG group member
Andrew Day

History

Computer Graphics was formed started in the 70's by Robin Forrest who coined the name computational geometry project (CGP). Lectures on computer graphics have been given since 1975. The school offers a complete degree in Computing for Computer Graphics and a Masters in Virtual Environments About 50 PhD's have completed their work since formation of the group.

Staff

1 Professor: Robin Forrest (plus 1 Professor leaving in Sept 2002: David Arnold)
1 Senior lecturer: Andrew Day
1 Lecturer: Rudy Lapeer
6 Research assistants: Julian Willmott, Peter Birch, Lloyd Wright, Vince Jennings, Phil Flack, Shaun Brown
1 Technician: Hugh Graham
1 Secretary: Rachel Buckenham

Rooms and Locations

The CGP has several teaching and research labs in the school as well as a VE projection theatre, specialised motion capture and video units. The School also has haptic feedback devices, Head Mounted Displays, a 3D scanning camera, data gloves, video edit suites and a magnetic motion capture facility

Financing

Faculty are financed by the University (Government). Most of the research assistants and some additional staff, as well as most special equipment are paid from projects funded by the EU, industry or government grants.

Current Structure and Important Partners

The main research areas of the School of Information Systems at UEA are Graphics and Computational Geometry, Computer Vision, Mathematical Algorithms, BioInformatics, Imaging and Signal Processing, Applied Media Engineering and Information Systems. There are a total of 35 members of faculty. The computational geometry and graphics group (CGP) has considerable research experience in visualisation, computational geometry, virtual environments and computer graphics. Computer Graphics Research at UEA has attracted research support from the Research Councils, ESPRIT, Framework IV and V, The Royal Society, and Industry. Current active

projects include 3 EU projects, the most relevant of which is CHARISMATIC for which UEA is the workpackage leader in the area of procedural urban modelling and real-time rendering of terrain and urban models. The Royal Society and the Natural Sciences Research Council of China fund a collaborative project with the State Key Laboratory of Computer-Aided Design and Computer Graphics. Zhejiang University, Hangzhou. The Computer Vision group explores how natural and artificial systems achieve and exploit visual information at higher levels in the information value hierarchy. Work has focused on two themes: Sieve-based representation, led by Prof. J.A.Bangham and Colour

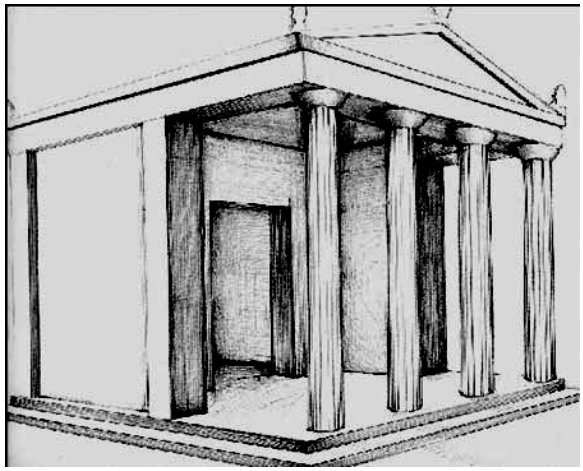
led by Prof. G. Finlayson. CGP Collaborators include: Universidade de Sao Paulo Sao Paulo Universidade de Sao Paulo, Sao Carlos, Zhejiang University, Hangzhou, John Innes Centre, University of Calgary, University of Stuttgart, Technische Universität Braunschweig, Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V., Televirtual Ltd., British Telecom, TAN Projektionstechnologie GmbH & Co. KG, Mellon, Exodus.

Current Research

Computational Geometry work explores geometric algorithms including point-based modelling and rendering of complex shapes using discrete geometry; haptic rendering, medical visualisation, multi-modal visualisation including sound and touch. Virtual environment interests include economic definition and rendering of virtual environments especially virtual heritage.

Important Recent Project Participations

- "CHARISMATIC EU project", www.charismatic-project.com
- "EPSRC Rapid World Modeling project", www.sys.uea.ac.uk/research/rwm/rwm1.htm
- "ETHOS" EU project



Important Recent Industrial Partners

Televirtual, BT, Mellon Technologies, Tan Projektionstechnologie GmbH Co.

Future of the Lab

CGP intends to continue work on urban modelling and rendering, medical visualisation, haptics and point based modelling and rendering. Projects will be in both applied areas and on the fundamentals of computer graphics and computational geometry.