

U.K.

Glasgow

University of Glasgow

3-D MATIC Research Laboratory
Dept of Computing Science
University of Glasgow
Glasgow, 12 8QQ, U.K.

☎ +44-141-330 3131 or 3124

☎ +44-141-330 3119

✉ psiebert@dcs.gla.ac.uk

🌐 www.faraday.gla.ac.uk



Core Competence

Vision-based 3D Capture, Human Body Modelling, Rendering & Animation; 3D Surface Anatomy Assessment, 2D/3D Computer Vision, including Space-Variant Vision, Image Manipulation & Film Effects Technology, Image Based Rendering, Cartoon Animation Technology



Head of 3D-MATIC
Paul Siebert

History

Computer Graphics Research was originally initiated at Glasgow University by Dr (now Prof) Alistair Kilgour in the late 1970s and Computer Graphics was the subject of the first research group formed in the Computing Science Dept at Glasgow University. This group collaborates with the Graphics (now Media Technology) Research Group at the University of Bath starting with the MEDIA Investment Club sponsored project ANIMAX (winner of the COMPUTER Cartoon competition in 1996), then going on to collaborative work in the Imaging Faraday Partnership set up in 1997 after merging with the computer vision research group from the Turing Institute, Glasgow.

Rooms and Locations

The Laboratory occupies three rooms in the second floor of the Boyd-Orr building next to the Department of Computing Science. One room is devoted to our 3D dynamic capture system and the other two contain research staff and research students in an open-plan arrangement. Staff rooms (5) are on Floor 1 and the Department of Computing Science, next door.

Staff

1 Director: J. Paul Siebert

1 Reader: W Paul Cockshott

1 Senior lecturer: John Patterson

1 Lecturer: Naoufel Werghi

2 Research fellows: Jean Christophe Nebel, Colin Urquart

2 Technology translators: Stephen Marshall, Don Whiteford

9 Research assistants: Janet Bowman (p/t), Sylvain Brugnot, Douglas Green, Joshua Hale, Svenja Hoff, Xiangyang Ju, Robert Rixon, Alexander Sibiryakov (one place about to be filled)

1 Administrative support staff: Colin McLaren

Financing

Technical, administrative, financial management and secretarial support is provided by the Department of Computing Science and financially the Laboratory is integrated with the Computing Science department. Income is generated from overheads on project work. Support for the non-research staff directly associated with the Laboratory comes from



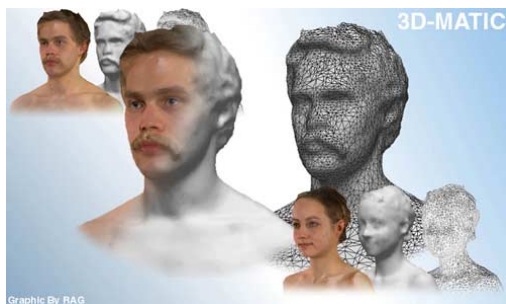
the Imaging Faraday Partnership's Intermediate Research Organisations (IROs).

Current Structure and Important Partners

The Computer Graphics Group is integrated with the 3D-MATIC Laboratory and does work across the computer vision-computer graphics divide. The work of the group is focused in two areas, Cartoon Animation Technology, carried out jointly with the Centre for Music Technology, and image vectorisation technology. Both of these topics are subjects for our collaborations with MTC at Bath University and the Expertise Centre for Digital Media at Limburgs Universitair Centrum (Diepenbeek, Belgium). The organising partners (IROs) for the Imaging Faraday partnership are TUV, (East Kilbride, Scotland) and SIRA (Chislehurst, England).

Current Research

Computer Graphics work in the 3D_MATIC laboratory is currently focused on previsualisation techniques for cartoon animation, feature films and documentaries, on vectorising image codecs and the manipulation of photographic images in vector form, on animating 3D face, head and body models developed from, and using, 3D scan data including dynamic data, on convincing human behaviour derived from simulation, deconstructing and reconstructing the illumination of scenes with a known geometry, and image compression techniques.

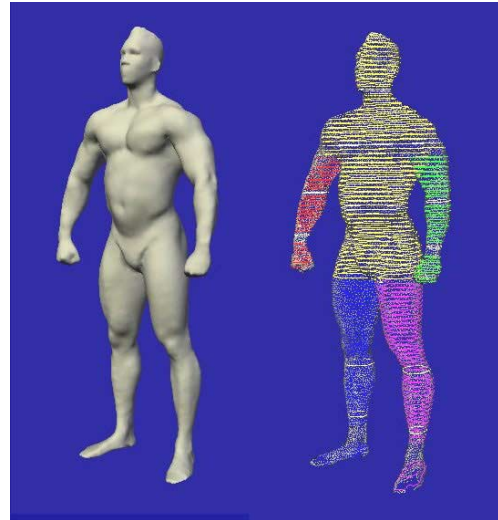


Important Recent Project Participations

- "PAVR", EU-TMR project, www.cs.bath.ac.uk/PAVR
- "CIRCUS", EU-IST project, www.circusweb.org
- "RACINE-S", EU-IST project (started July 1)
- "V_MAN", EU-IST project, www.faraday.gla.ac.uk/aboutus_frame.htm
- "Michelangelo", SHEFC-funded project, www.faraday.gla.ac.uk/resproj.htm

Important Recent Industrial Partners

Unilever plc, Smoke & Mirrors Ltd (London), Pandora (Kent), Cambridge Animation Systems, SIRIOL Productions (Cardiff), Digital Animations (Glasgow), Androme (Diepenbeek), ARRI (Munich), Cinecitta (Rome), National Film & Television School (Beaconsfield, England), Wavecrest Systems (England)



Future of the Lab

The 3D-MATIC Laboratory will continue to play its part in what we expect to be an ever-expanding Imaging Faraday Partnership. The Computer Graphics work is focused on the border between analytical (Vision) and Synthetic (Graphics) techniques where there is much functional commonality. This work is principally being applied to technology for film (for which read high-quality digital media) and animation construction throughout the production data-path and this is being developed in new work funded through both EU and local (Scottish) programmes, using the model of 'creative pull' developed in the CIRCUS W/G.

