

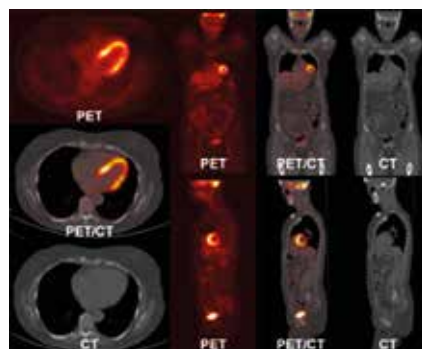
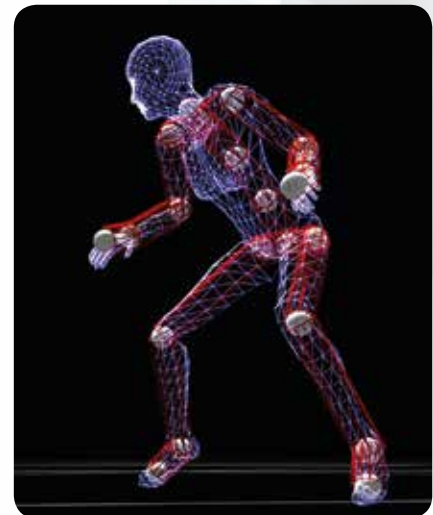
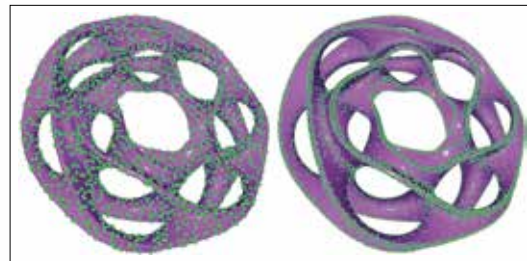
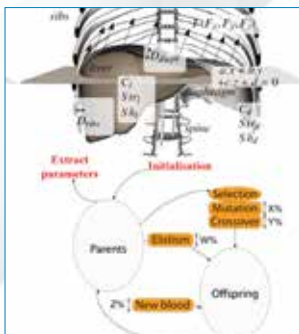


Wales Institute of Visual Computing (RIVIC)

RIVIC is the collaborative amalgamation of visual computing research programmes between the computer science departments at Aberystwyth, Bangor, Cardiff and Swansea Universities.

Our mission is to:

- Bring Wales to the forefront of visual computing research
- Promote long-term and sustainable collaborations between Welsh HEIs
- Support excellence in computer science education
- Develop industrial research and knowledge exploration and engagement



Building Capacity, Changing The Landscape

RIVIC is different:

- The world's first amalgamation of separate Visual Computing Universities into a single dedicated Visual Computing Institute.
- Synergy amongst the different department has led to greater achievements than would not be possible individually.
- The largest group of specialised visual computing experts anywhere.
- A large number of experts collaborating in cross-cutting research areas.
- Fantastic networking opportunities for 3rd parties due to the larger singer network of research areas and existing collaborator.
- Larger resource pool of post graduates for both research and recruitment into industry.
- Local access points to internationally acclaimed visual computing capabilities.
- Large-scale postgraduate programme to resource future research and development needs within industry and RIVIC.
- Access to a huge infrastructure of specialised equipment and facilities at each University.
- Dedicated international collaboration programme to bring together leading visualisation groups.
- Dedicated professional Knowledge Exploitation Programme to encourage, facilitate and deliver academic and industrial collaboration resulting in leading-edge research in innovative application areas.

Key scientific programmes:

Volume Graphics and Visualisation

Modelling and rendering of graphical models of amorphous phenomena (e.g. fire, smoke and clouds) and volume datasets (e.g. computed tomography, simulation of 3D physical world).

Video Processing and Video Visualisation

Automatic extraction of meaningful information from videos, and generation of summary visual representations, with applications ranging from sports to surveillance systems.

Vision-based Geometric Modelling

Accurate shape modelling based in noisy geometric data obtained using 3D model scanners, with applications in computer aided design and reverse engineering.

Virtual Human Modelling and Augmented Reality

Simulation and accurate physiological modelling of a virtual human together with providing added value by combining computer generated imagery with real world scenes – a surgeon being able to see models of the internal organs of his patient overlaid onto the surface of their skin.

Scientific Visualisation and Information Visualisation

Extracting knowledge from data. Visual data mining techniques for exploring various data mountains in physical and social sciences, engineering, business and medicine.

Scientific Foundation of Visual Computing Interfaces

Fundamental concepts associated with primitives in visual computing, such as points, surfaces and manifolds, offering theoretic understanding of the abstract models and algorithms in visual computing.

Medical Image Processing

Segmentation and analysis of medical images. This work is in close collaboration with the NISCHR Advanced Medical Imaging and Visualization Unit.

Contacts

Chair

Professor Sian Hope OBE (Bangor),

Honorary Director.

Tel: +44 (0) 1248 382686

s.hope@bangor.ac.uk

Marketing

Stevie Scanlan

Tel: +44 (0) 1248 382724

stevie.scanlan@bangor.ac.uk

RIVIC Directors

Professor Ralph Martin (Cardiff),

Co-director.

Tel: +44 (0) 29 2087 5536

Ralph.Martin@cs.cardiff.ac.uk

Dr Mark Jones (Swansea),

Co-director.

m.w.jones@swansea.ac.uk

Professor Nigel John (Bangor),

Co-director.

Tel: +44 (0) 1248 382717

n.w.john@bangor.ac.uk

Professor Reyer Zwiggelaar (Aberystwyth),

Co-director.

Tel: +44 (0) 1970 628691

rrz@aber.ac.uk



RIVIC

Research Institute of Visual Computing

