

# Research in Computing and IT

The School of Computing Science hosts a lively and rapidly expanding forum for computing research and investigation backed by an energetic programme of funding for recruiting research students and research-active academics. We concentrate on making computers better; better in serving the people who use them and in the cost-effectiveness of the work they do.



## The Middlesex Experience

- A large, lively and multinational research community made up of about 75 PhD/MPhil students and approximately the same number of research-active staff.
- A wide range of research themes addressing important applied research problems.
- A range of different routes to achieving your research degree, one of which is the “research student/tutor” scheme offering generous bursaries and no fees.
- Your own supervisory team of two or three staff.
- Training programmes in research methods, teaching and learning, and transferable skills, together with regular research seminars.
- Commitment by both the University and the School, to a continuing programme of energetic research expansion, building on the recent successes in the national Research Assessment Exercise.
- Membership of one of the largest Computing Schools in London (and also one of the largest in the UK).
- A professoriate comprising a number of internationally distinguished full-time and visiting professors.
- Research team led by Professor Colin Tully, Director of Research and Postgraduate Studies
- A student-centred research management team dedicated to pursuing your individual interests and well-being.

We offer you a range of different routes to achieving your research degree:

- The MPhil and PhD can be studied on a full or part-time basis.
- The MPhil and PhD by Published Works are awarded on the basis of your previously published works with accompanying context statement.
- The International PhD is completed by external research, ideal for students living elsewhere in the world, with some time spent in the UK at Middlesex each year.

## Research Themes

- Human Computer Interaction
- Artificial Intelligence
- Information Systems Engineering
- Health Informatics
- Vision and Image Processing
- Software Practice
- Theory of Computation
- Computers and Society
- Communications and Education
- Business IT
- Digital Creativity

Much of our research expertise is organised within Research Centres (see [www.cs.mdx.ac.uk/research/centres/](http://www.cs.mdx.ac.uk/research/centres/)).

There are a large number of informal and self-organising research groups, both within and outside these Centres. The groups make it possible for students and staff with shared interests to exchange ideas and information.



School Research Office staff, with Professor Colin Tully

## Applications

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For more information and online application, visit [www.cs.mdx.ac.uk/research/](http://www.cs.mdx.ac.uk/research/)

# Research Centres

## E-Centre

The E-Centre's academic mission is to produce high-quality, applied and relevant research output in the area of modern IT-based business systems. Its business mission is to help companies achieve their goals using IT, particularly with e-technologies such as the Web. The Centre's strengths are in the development of both technology and strategy. By working in partnership with business it aims to ensure that research is of practical use. The primary characteristics of its work are innovative business solutions and strategies for innovation. Its mission is pursued in several areas, including:

- Internet usage
- Paperless office
- Web services
- Component-based software development
- Agile development.

## National Centre for Project Management (NCPM)

NCPM is a new inter-disciplinary centre of excellence based at Middlesex University. It operates in collaboration with industry, government and the learned societies, including the Association for Project Management. The Centre aims to set the national agenda in establishing project management as a major profession and discipline in the UK, fostering the integration of successful practice and theoretical research. The Centre is unique in adopting an interdisciplinary perspective covering all aspects of project and programme management regardless of sector. Its work will reflect the increasing role of projects and project management in modern society, as well as the organisational, strategic and cultural implications associated with instituting sound project management practice. This broad perspective positions the Centre to become leading learned centre of excellence specialising in all aspects of managing projects.

- Web services
- Wireless Internet
- Pervasive computing.

## Interaction Design Centre (IDC)

The IDC investigates how people manipulate and interact with computers and information, how individuals and teams use computers to control systems and processes and how software should be designed and built to support the nature of such work. Current lines of research include:

- Accessibility of on-line public information by socially disadvantaged groups
- Cognitive engineering of complex systems and computer-supported collaborative work
- Formalisms for human computer system interaction and design
- Digital libraries
- Universal access and adaptive technology.

## Software Forensics Centre (SFC)

The focus of the SFC is to improve software development and management practice through empirical work. The Centre holds details of over three hundred projects and has links to a further two thousand cases, and is the only dedicated research centre of its kind. The following are some of its prime areas of investigation:

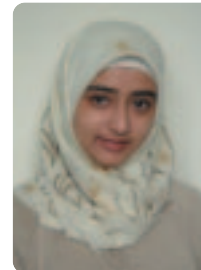
- Symptoms and patterns of failure in software projects
- Predicting, analysing and learning from failure
- Recording of assumptions during projects
- Feedback and evolution in software products and processes
- Designing fault-tolerant software projects
- Software process definition, management and improvement.



*"Seminars, fellow students and academic staff have all taught me a lot about research, and also provided a stimulating environment"*

**Stephen Batty**, PhD student

Research Topic: **Development of medical image database**



*"Apart from having the wonderful opportunity to work under the guidance of experts in my field, the warm and friendly environment at the University is very welcoming."*

**Fatema Shaikh**, Research Student/Tutor

Research Topic: **Quality of Service Issues in Wireless Tele-surgical Applications**