



Opportunities for Postgraduate Study at Keele Computer Science

PhD and MPhil projects are available across a range of areas including *Software Engineering, Computational Intelligence and Cognitive Science, Knowledge Modelling, Visualisation and Green Computing*. PhD projects are usually for 3 years (full time) and MPhil projects for 1 year (full time). Part time study is also possible.

Some specific topics, based on our recent research, are outlined below, however, this is a fast moving discipline and we are happy to discuss other projects in the areas listed above.

Software engineering

- Empirical evaluation of software development techniques, processes and tools
- Service-oriented architectures
- Distributed databases
- Global software development and process improvement
- Evidence-based research and practice

Knowledge Modelling

- Critical reassessment of expert reasoning
- Cognitive and computational modelling of judgements
- Computational models of complexity and innovation

Computational Intelligence & Cognitive Science

- Capturing expertise for more effective automated interrogation of large datasets
- Development of models that improve medical diagnosis and prognosis
- Development of software tools for the estimation and simulation of human performance
- Extending the capabilities of neuro-evolutionary systems
- Determining requirements for open-ended evolution, and analysing emergent behaviours
- Robot navigation & applications of computer vision

Visualisation

- Visualisation methodologies for building large scale distributed systems
- Digital encryption technologies augmented with biometrics

Green IT

- Efficient Teraflop Computing Service
- Touch Sensitive HCI, Avatar Synthesis
- Power Optimised Scheduling (Algorithms) for Embedded Systems
- Access control within a dynamic mobile environment
- Green Data Centre Databases
- Complex Systems Modelling for Simulation and Characterisation

For further information see the School website (<http://www.scm.keele.ac.uk/research/>) or contact Pearl Brereton, Computing Postgraduate Tutor, o.p.brereton@cs.keele.ac.uk.

Full details of application procedures for study may be found on the Keele website

<http://www.keele.ac.uk/gradschool/prospective/applying/howtoapply.htm> or contact The Graduate School, Keele University, Staffordshire, ST5 5BG (tel: 01782 734368, email: gradschool@keele.ac.uk) for an application guide & application form.