

## Staff list

### Professor and Head of Department

**John McDermid** OBE, FREng, PhD (Birmingham) Safety engineering; security; safety-critical software; large-scale software engineering

### Professors

**James Austin**, PhD (Brunel) Neural networks; e-science and grids; parallel computation; neuroscience-inspired computation  
**Samuel Braunstein**, PhD (Caltech), CPhys, FInstP Quantum computation; small-scale machine design  
**Alan Burns**, DPhil (York), CEng, FBCS, FIET Real-time systems; resources scheduling; real-time programming languages  
**John Clark**, DPhil (York) Security; cryptography; non-standard computation; software engineering  
**Edwin Hancock**, PhD, DSc (Durham) Computer vision; pattern recognition; machine learning; brain imaging; graph theory  
**Richard Paige**, PhD (Toronto) Model-driven development; software engineering; formal methods; software architectures; security  
**Helen Petrie**, PhD (London) Human-computer interaction; disabled and older users; psychological aspects of technology use  
**Colin Runciman**, DPhil (York) Programming languages and systems; functional programming  
**Susan Stepney**, PhD (Cambridge), CEng, FBCS Bio-inspired algorithms; complex adaptive systems; emergent properties; nanite assemblers  
**Jonathan Timmis**, PhD (Wales) Artificial immune systems; immune modelling; complexity; embedded systems  
**Andy Wellings**, DPhil (York) Real-time programming languages and operating systems  
**Richard Wilson**, DPhil (York) Inexact graph matching; structural pattern recognition; stereo and shape-from-shading  
**Jim Woodcock**, PhD (Liverpool), FBCS, CITP Grand challenge in verified software; dependable software engineering; formal methods

### Readers

**Ana Cavalcanti**, DPhil (Oxford) Program verification; concurrency; object-orientation; control systems; formal methods; Z; CSP  
**Alan Frisch**, PhD (Rochester) Artificial intelligence; constraint programming; automated generation of constraint programs

### Senior Lecturers

**Neil Audsley**, DPhil (York) Embedded real-time system implementation: architectures, programming, operating systems, analysis  
**Iain Bate**, DPhil (York) Real-time and critical systems design and analysis; search-based engineering  
**Paul Cairns**, DPhil (Oxford) Statistical modelling of users; video games and immersion; human-computer interaction  
**James Cussens**, PhD (London) Machine learning; graphical models; statistical relational learning; inductive logic programming  
**Alistair Edwards**, PhD (Open) Novel forms of multi-modal human-computer interaction  
**Dimitar Kazakov**, PhD (Prague) Artificial intelligence; machine learning; adaptive agents; computational linguistics; language origins  
**Tim Kelly**, DPhil (York) Development, modelling, analysis and certification of high-integrity systems  
**Steve King**, DPhil (Oxford) Formal software development; refinement; provably-correct software; safety-critical software  
**Manuel Oriol**, PhD (Geneva) Dynamic updates; software testing; computer science education; middleware  
**Nick Pears**, PhD (Durham) Computer vision and pattern recognition in biometrics, robotics and HCI  
**Detlef Plump**, Dipl.-Inform., Dr.-Ing., Habilitation (Bremen) Graph transformation; graph-based programming models; rewriting systems; theoretical computer science  
**Fiona Polack**, PhD (Cambridge) Practical systems engineering: formal, nonclassical, model driven; dependability argumentation  
**Alan Wood**, PhD (London) Distributed computing; radical programming languages and models; co-ordination systems and languages

### Lecturers

**Rob Alexander**, PhD (York) Autonomous systems; systems of systems; safety engineering; simulation  
**Chris Bailey**, PhD (Teesside) Novel processors and arrays; code optimisation and translation; VLSI design  
**Ian Benest**, PhD (Essex) Hypermedia interfaces for everyone, especially for teaching and learning  
**Adrian Bors**, PhD (Thessaloniki) Computer vision; image processing; pattern recognition; computational intelligence  
**Jeremy Jacob**, DPhil (Oxford) Mathematical modelling of systems, properties and languages  
**Dimitrios Kolovos**, PhD (York) Model-driven engineering; object-oriented design; software architecture; programming languages  
**Daniel Kudenko**, PhD (Rutgers) Artificial intelligence: games and interactive entertainment, machine learning, user modelling  
**Suresh Manandhar**, PhD (Edinburgh) Natural language processing; minimally supervised learning of syntax and semantics  
**Simon O'Keefe**, DPhil (York) Neural network; binary correlation matrix memory; non-standard and natural computation  
**Stefano Pirandola**, PhD (Camerino, Italy) Quantum information and computation; quantum cryptography  
**Christopher Power**, PhD (Western Ontario) Human-computer interaction; accessibility; user requirements; evaluation methodologies  
**William Smith**, PhD (York) Face recognition; shape-from-shading; reflectance/appearance modelling; multispectral imaging  
**Leandro Soares Indrusiak**, Dr.-Ing. (TU Darmstadt, UFRGS) Design and verification of embedded systems: multi-processor, distributed, real-time, reconfigurable

### Research and Teaching Fellows

**Rob Davis**, DPhil (York) Real-time systems; scheduling analysis; industrial applications  
**Dan Franks**, PhD (Leeds) Network theory and analysis; complex systems; agent-based modelling; bio-inspired computing  
**Mike Freeman**, PhD (York) Hardware architecture for high speed text and vector processing  
**Ibrahim Habli**, PhD (York) Software architectures; product-line development; software safety; safety cases  
**Matthew Naylor**, PhD (York) Programming languages; functional programming; computer architecture  
**Mark Nicholson**, DPhil (York) System safety engineering; safety-critical software; statistical analysis; reconfiguration  
**David Pumfrey**, DPhil (York) Hazard identification; risk assessment; system and software safety analysis  
**Andrew Rae**, PhD (Queensland) Safety engineering; software safety; safety risk acceptability  
**Tommy Yuan**, PhD (LeedsMet) Human-computer dialogue; software agents and their communications; dialogue game theory