Newcastle University - School of Computing Science

Newcastle University can trace its origins to a school of medicine and surgery, established in Newcastle in 1834, and to the College of Physical Science, later Armstrong College, founded in the city in 1871. These two colleges formed one division of the federal University of Durham, the Durham Colleges forming the other division. The Newcastle Colleges merged to form King's College in 1937 and, in 1963, when the federal University was dissolved, King's College became the University of Newcastle upon Tyne.

The University is a member of the Russell Group, comprising 20 leading research institutions in the UK. It has one of the largest European Union research portfolios in the UK and has research links with many other countries. Our research spans a wide range of activity, subject boundaries and traditional faculty divides, with a strategy to develop our research to address major societal challenges. Over 19,500 students from more than 100 different countries choose to study at Newcastle. Our 50-acre site at the heart of Newcastle city centre boasts some of the best teaching and learning facilities in the country. Our multimillion-pound investment in the campus is set to continue, ensuring state-of-the-art facilities for our students and researchers. We are one of the largest employers in the North East of England, with approximately 5,000 staff.

We play a leading role in the economic, social and cultural development of the North East of England and we collaborate with a range of partners and strategic initiatives, helping to extend the University's influence and reinforce our ties with the city, region and beyond. These include Newcastle City Council, One North East, the NHS and Newcastle Science City.

Computing Science at Newcastle University

The School of Computing Science is one of the longest established in the UK and our reputation, built up over 50 years, means that we are able to secure research funding from UK research councils, the European Union and industry. The 2008 Research Assessment Exercise classed 80 per cent of our research as 'internationally excellent' and 20 per cent as 'world leading'.

Research is currently clustered in five groups: biology, neuroscience and computing; concurrent asynchronous systems; dependability; human–computer interaction; and systems. All our groups are supported by, and in many cases lead, large multisite national and international projects involving the active engagement of both industry and other research disciplines.

We have four research units that further stimulate our research and encourage working across themes that do not necessarily fall neatly into a group. These units are: Centre for Software Reliability; North East Regional e-science Centre; Digital Institute; Centre for Cybercrime and Computer Security.
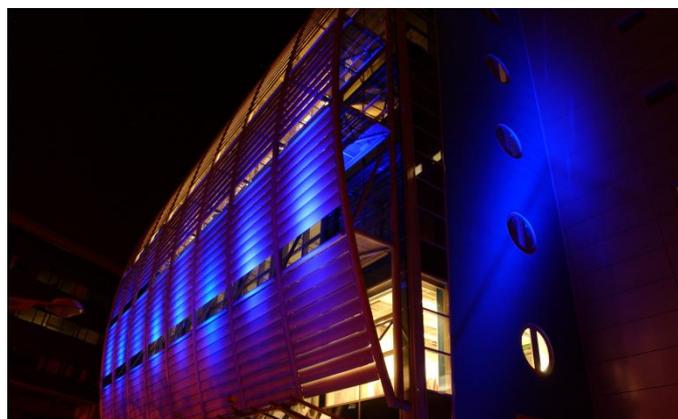
It is this research-led culture that keeps our British Computer Society (BSC)-accredited computing science and information systems degrees at the cutting edge of the subject, with industrial placement years available as part of all our degrees, helping our students hone their skills in the commercial computing world.

In the current job market, the skills developed by our Computing Science graduates enable them to obtain employment in challenging and fulfilling careers. Computing manufacturers, computer games companies, IT consultancies and software houses, for example, recruit our graduates as software engineers, web developers, programmers and analysts.

Undergraduate Degrees

All our undergraduate degrees are accredited by the British Computer Society, which exempts our students from further examinations if they decide to apply for Chartered Engineering status after graduating.

Our stage 2 students take part in a team project which exposes them to a mode of working they are likely to experience in the work place. Project goals are set and assessed by an industrial partner.

Many of our students take advantage of our industrial links to spend a year between stages 2 and 3, working in an IT-related role in industry.

Stage 3 options reflect the research strengths of our School and are taught by lecturers who are also leading researchers in their field.

It is this industrial experience and research-led teaching which gives our graduates the edge in an increasingly competitive jobs market.

Computing Science

Computing Science (Network Systems and Internet Technologies)

Computing Science (Games and Virtual Environments)

Computing Science (Software Engineering)

Master of Computing with Honours in Computing Science

Information Systems with Business Studies

Information Systems with Management

Postgraduate degrees

All our research degrees and taught programmes are based in the School but benefit from selected teaching and supervision by staff from other disciplines in different parts of the University. For example, the MSc in Bioinformatics and Computational Systems Biology is taught jointly with the Faculty of Medical Sciences and the MSc in E-Business and Information Systems is jointly taught with Newcastle University Business School.

Computing Science

Advanced Computer Science

Bioinformatics and Computational Systems Biology

Computer Security and Resilience

Computer Game Engineering

Internet Technologies and Enterprise Computing

E-Business and Information Systems

PhD/MPhil in Computer Science

Integrated PhD in Computer Science

For more information visit study.cs.ncl.ac.uk

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Project Spotlight - SIDE

Poor health, disability, family breakdown, poverty and unemployment are just some of the reasons why people of all ages may become marginalised from society and may lack the skills, confidence or opportunities to access and benefit from digital technologies that have the potential to transform their lives.

Technology

Digital products and applications will be developed to address problems faced by particular excluded communities; these will be: scalable, by expanding niche markets, bringing experimental technologies to market, and meeting robustness needs through economies of scale; transferable, where lessons can be transferred to other excluded groups and to non-excluded populations; viable, with new business

The Digital Economy Research Hub aims to tackle social exclusion by making it easier for people to access the life-changing benefits offered by digital technologies. The £12 million Hub is based at Newcastle University and is a key element of the Research Councils UK Digital Economy research programme.

The Hub, in which the University of Dundee will also play a key role, will address four fields where digital technologies and the building of a truly inclusive digital economy could deliver major social benefits: Connected Home & Community; Accessibility; Inclusive Transport Services; and Creative Industries.

The researchers will be working closely with a group of 3000 volunteers from the Dundee and Newcastle areas, including people from a range of age groups and with a variety of disabilities. In the North East, a large panel of older people recruited and supported by Years Ahead, the Regional Forum on Ageing which is a key partner in the Hub, will be involved.

Through the involvement of Years Ahead we will develop a carefully profiled panel of 3,000 end-users. The panel will contribute to the formulation of research strategy, and evaluate the research outputs, as well as being engaged in participatory design, co-design and evaluation activities to ensure that the outputs of our research programme are both meaningful and usable.

models harnessing cultural capital and creative production.

The convergence of a service economy and user-driven needs will contribute to an "experience economy". The business dynamic in decentralised complex models of emergence builds on notions of social capital and communities of practice. The increasing commoditisation of technology and infrastructure has increasingly placed value on design and experience. These "soft" aspects of both economics and technology development will be developed using a family of well established social science techniques that include ethnomethodology, user-centred design, and cultural probes.

On the one hand, the rapid development of new ICT enables innovations in the strategies, business models, organizational designs and inter-organizational relations that are by far superior to the existing organizational forms, and enhance organizational efficiency and competitiveness. On the other hand, to be viable, any applications and initiatives that facilitate digital inclusion need to be affordable and sustainable. The project will identify and explore sustainable business models and new organizational forms in different domains and areas of application.

www.side.ac.uk/index.html

Student Spotlight -Iliana Filippou

At school in my home country of Greece I studied subjects including languages and classics, but I was not particularly focussed on science or technology. However, after high school, I studied a short course about programming because by then I was fascinated by it. For me programming is an art form; you create something out of nothing. More specifically, you create entire programs or applications that appear on your home PC, laptop or mobile device just by entering commands into the computer. That is where the magic is. Once I started, I was hooked!

When I started my undergraduate degree I was a little nervous. I wondered if perhaps I did not have the right foundation, because surely you need a science background and lots of maths, right? Fortunately, I was completely wrong! Everything I needed was taught within my course. The teaching staff provided advice and help in a friendly and encouraging environment. The three years that I studied as an undergraduate were challenging but also very rewarding. I had the opportunity to learn how to use different technologies, improve my problem solving skills, work with other people in a team or from another university and use state of the art technologies to create some of my coursework.

I realised that I should pursue what I love doing and study for a degree in Computing Science. My family were very encouraging and I decided to apply to Newcastle University because of its world-leading research reputation.

I am now studying for an MSc in Internet Technologies and Enterprise Computing. I know that when I finish I will have the right qualifications and more for a job in the field of Enterprise Computing – designing and implementing large internet applications.