Programmed for success

Head of School, Professor Steve Linton, reflects on the continuing growth and success of Computer Science at St Andrews.

The first degree in Computer Science in the University was awarded in 1971 and the School of Computer Science moved into the purpose-built Jack Cole building in 2004. Today these house our offices, social spaces and research and teaching labs, which are continually being refurbished and updated to reflect changing staff needs. All of our students share a ‘social lab’, a ‘quiet lab’, and a teaching lab, while the ‘interaction lab’ is home to two research groups and their equipment.

When I came to St Andrews as a postdoc in 1994, the School had seven academic staff. Since then, the School has grown steadily, supported by University investment and our founding role in SICSA, the Scottish Informatics and Computer Science Alliance. The School now consists of over 30 academic staff (82 total staff), who form world-leading research groups in Artificial Intelligence, Software Engineering, Human Computer Interaction, Computer Systems and Programming Languages. The recent REF 2014 Assessment placed the Quality of our Research Output as second in Scotland.

Our success can be seen in our top ranking of over 100 computer science departments in the UK in the National Student Survey in 2013, 2014 and 2015. This is not something staff can achieve alone. The key to it is that staff, students, alumni and employers come together as a community to learn, teach, share and discover.

Demand for our courses remains very high as both student numbers and entry requirements have risen. We now have 246 undergraduates and 64 taught Masters students and this is projected to rise steeply over the next couple of years. Ensuring that every one of these students enjoys a high quality learning experience remains central to our ethos. We can see this with student groups organising hackathons and teaching one another topical skills, research interns securing places at Google, final year students winning awards at the DLS, and our Distinguished Lecture Series (DLS) in the lead up to the 50th anniversary celebration in 2015. The DLS talks on leading edge topics in Computer Science were initiated by Professor Jack Cole in 1969. Our most recent talk was delivered on 31 March by Maria Klawe, President of Harvey Mudd College, USA and former President of the Association of Computing Machinery. Further details of the DLS and other School news can be found at http://blogs.cs.st-andrews.ac.uk/alumni

Miss Isabel Peters, BSc 2012, Internet Computer Science

"After completing a Masters degree in Advanced Computing at Imperial College London in 2013, I moved to New York City to work as a Software Engineer at AsterWorks, a software research and venture development firm. Since we are a small company, my work spans various areas within computing: from designing and implementing distributed systems algorithms to maintaining and improving the software life cycle, to making design decisions for the graphical user interface. We are moving rapidly and every change in the code has a tangible impact on the end product, so work can be very challenging yet highly rewarding. Having studied data security and biometrics at undergraduate and graduate levels, I remain intrigued by the relevance of both to information privacy issues in our daily lives."

Dr Katherine Mickan Enderling, PhD 2006, Computer Science

"Following graduation, I stayed in Edinburgh for a year working for a bio-tech start-up. When I decided to move to the Alps, I stayed in the job and commuted once a month to Scotland until I got a job locally at a semi-conductor manufacturing company. There I led a team of off-shore developers building software for wafer verification. While in Austria I also ran training courses for young women to encourage their interest in studying IT. In 2010 I moved to Adelaide, Australia and started working for Accenture Digital, developing marketing analytics software. As a technical lead I now deliver cutting edge data science products to some of the biggest companies in the world. In my spare time I volunteer at my children’s school teaching basic robotics and programming, or run in the national park behind my house where there are always plenty of kangaroos, koalas and snakes."

Dr Douglas Pearson, BSc 1988, Computational Science-Mathematics

"After graduating, I moved to America and did a PhD in Artificial Intelligence at the University of Michigan before moving to Seattle where I started a couple of businesses, most recently FlowPlay, an online games company, specialising in building virtual game worlds. Today we run two of those – ourworld.com and vegaworld.com. OurWorld is aimed at teenage girls who like to dress up and chat with their friends. It has been running profitably for about eight years now. VeganWorld is aimed at older adults who enjoy playing casino games, but again in a social setting where they can go to parties and build deep friendships. FlowPlay employs about 50 people today, mostly artists and engineers. I am the Chief Technology Officer and one of the co-founders. We spend our days wondering how best to make a few million people happy – pretty hard to beat that as a way to make a living."

Professor Muffy Calder, PhD 1988, Computational Science

"My career path has been largely academic and in computing science, but there have been a few interesting twists. I held short-term positions in industry at BT Research Laboratories and at DEC (Digital Equipment Corp.) research labs in California, and for three years I was Chief Scientific Adviser to the Scottish Government. Now I am Vice-Principal and Head of the College of Science and Engineering at the University of Glasgow, where I have been an academic for over 20 years. I retain a strong interest in computing science research and, in particular, in modelling and reasoning about the behaviour of complex software and biochemical systems to solve problems in a range of systems. I have been fortunate in being able to collaborate with scientists and engineers from a wide range of disciplines and was delighted to be honoured in 2011 with an OBE for services to Computer Science. I am pleased to still have a St Andrews connection through a joint research grant I currently hold with the University on the science of sensor system software."

Mr Aleksejs Sazonovs, BSc 2015, Computer Science

"I am enrolled in a PhD programme in Mathematical Genomics and Medicine at the University of Cambridge. My background is very useful as many branches of biology are becoming increasingly data-driven and rely on mathematical and computational methods. As a first year student, I am doing modules that range from population genetics to machine learning. My first research rotation is a collaboration between the Department of Biochemistry and Microsoft Research, I will be looking at creating Boolean gene regulatory networks and examining their properties using formal methods. For the second rotation, I’ll be working at the Sanger Institute, attempting to uncover gene variants associated with complex diseases. I am looking forward to using these experiences to determine the focus of my PhD."

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