Dear All,

I hope you had a great Summer – we’ve been celebrating our leavers’ graduation and preparing for the new academic year. There’s also been plenty of research, teaching developments and events going on in the Department, and some highlights are below.
UCL software reveals Ulster’s forgotten history

Researchers from UCL Computer Science have used specially designed software to digitise the Great Parchment Book, a crucial historical text documenting the City of London’s role in 17th century Ulster that was previously unreadable for over 200 years due to fire damage.

A team from UCL Computer Science and UCL Centre for Digital Humanities, led by Dr Tim Weyrich worked with the London Metropolitan Archives (LMA) to capture 50 to 60 high resolution images of each page. Kazim Pal, a PhD student working on the project, then built software to generate a 3D model which allowed viewing of the damaged pages at archival resolution. A key feature of the software is to dynamically flatten these models virtually on screen, allowing the contents of the book to be accessed more easily and without further handling of the document. A major survey from 1639 of all the estates in Derry managed by the City of London, the Great Parchment Book represents a hugely important source for the City of London’s role in the Protestant colonisation and administration of Ulster. Damaged as the result of a fire at Guildhall in 1786, it has been unavailable to researchers ever since.

Dr Weyrich said: “From the start, the project was a large collaborative undertaking in which the practical conservation of the Great Parchment Book was the essential first step, followed by the digital imaging work.”

First Minister of Northern Ireland, the Rt Hon Peter D Robinson, said: “I cannot praise the work of the LMA & UCL highly enough. In completing this mammoth project they have succeeded in opening a veritable treasure trove of information relating to a most significant period in the history of Ulster; and illustrating as never before the central role played by the London Guilds in the creation and preservation of the city of Londonderry and its environs.”

The software could help other researchers salvage other damaged materials, and help further develop approaches to digitising historical documents that are either highly distorted or fire-damaged.
**Professor Peter Kirstein honoured with new room**

Pro **f Peter Kirstein**, CBE, is to be honoured this month as we unveil a new room which will be named after him. CS will give Peter’s name to a refurbished lab in recognition of his 40 years’ dedication to the Department.

Peter Kirstein joined the Department in 1973 (then the Department of Statistics and Computer Science of University College London), was appointed the first Head of the newly formed Department of Computer Science in 1980, and served until 1994. Peter was instrumental in establishing the first connection to the precursor of the Internet outside the United States and still works tirelessly for the Department. He also helps developing countries create networking capabilities and join the Internet.

Peter, who recently turned 80, will formally open the ‘Peter T. Kirstein Room’, a new facility which will provide a wonderful working environment for our growing department.
MSc mid project presentations at Level39

Last month our MSc Financial Risk Management students enjoyed the wonderful view at Level39, Canary Wharf, Europe’s largest financial IT accelerator space, where they presented their projects to date to an audience of leading industry professionals. Students undertake a summer work placement in an industry environment and the placement gives students experience of conducting project work in a real-life setting. The Engineering Faculty at UCL is very proud to run one of the most innovative and successful work placement programs as a mandatory part of specialty finance graduate degrees, and over 100 students now have relationships with City firms, re-regulators and key stakeholders.

We thank our city partners Lloyds TSB; Deutsche Bank; Nomura; Standard Chartered; RBS; CIBC; Citi; BNP Paribas; J P Morgan; Bank of England; Prudential Regulation Authority.

There is major interest in the Bank of England, the Financial Services Authority and the Financial Services Industry to raise the level of quantitative analytics used in risk management and compliance. CS, in collaboration with the BoE/FSA, aims set a new benchmark in this area, based on turning out risk professionals who are good scientists in the area of risk management. MSc Financial Risk Management is a new and growing MSc course – find out more here.
The Engduino & Computing At Schools

The department recently launched new innovative teaching tools designed in-house, and this includes the Engduino Board. Based on an Arduino LilyPad in terms of hardware, but unlike a bare-bones Arduino, it has 16 multicolour LEDs and a button, which can be used to provide visual feedback and simple user input. It also comes with three further components: a thermistor, capable of sensing temperature; a 3D accelerometer, which measures accelerations; and an infrared transmitter/receiver, which can be used to transmit messages from one Engduino to another, or from a normal remote control to the Engduino.

The Engduino is programmed over a normal USB connection using the standard Arduino IDE, and power can be supplied either by the USB itself, or using a rechargeable battery that is recharged by USB. This means it can be used outside the computer room – it’s as usable on the games field as in the classroom, or it could just be the flashing light on a cyclist’s backpack if programming doesn’t appeal. A team led by Prof Steve Hailes is now working on a second, improved version, and the department is keen to use this and other applications to broaden its Outreach work.

In related news, CS has become a Computing At Schools (CAS) Hub for London, and we were delighted to support Camden in becoming the first local authority in England to introduce computer programming clubs in all its primary schools. Simon Collins, Education Developer and Co-ordinator for the Faculty of Engineering said “We are delighted to be involved in this partnership to inspire and educate the next generation of technologists and scientists. This is critical to ensuring that we build an advanced and innovation-based society”.

Awarding winning staff & students

We are delighted to announce that Dr Niloy Mitra, Reader in Virtual Environments & Computer Graphics, has become one of this year’s five recipients of a prestigious ACM SIGGRAPH award. SIGGRAPH is a special interest group of the Association for Computing Machinery (ACM) - the world’s first and largest computing society. SIGGRAPH has evolved to become “an international community of researchers, artists, developers, filmmakers, scientists, and business professionals who share an interest in computer graphics and interactive techniques”. Niloy has been chosen as this year’s “Significant New Researcher”. SIGRAPH’s citation for Niloy’s award reads: “ACM SIGGRAPH is proud to recognize Niloy Mitra with the 2013 Significant New Researcher Award for his innovative and influential contributions to geometric analysis of shapes, 3D modeling techniques and computational design tools. The hallmark of Niloy’s research has been the development of mathematical and computational foundations to discover and use structure and function of 3D objects. He has successfully applied this philosophy to develop computational frameworks for smart and intuitive acquisition, manipulation, and synthesis of fabrication and function-aware 3D geometry.”

In other great news, Dr Sebastian Riedel, Lecturer in the Intelligent Systems Group, has been awarded a competitive Google Focused Research Award. The award was granted for his proposal on “Populating a Knowledge Base of Compositional Universal Schema.” In line with Google’s recent efforts in moving from “strings to things”, or from document collections to knowledge graphs, the projects aims at building rich and large-scale probabilistic knowledge bases of entities, relations, and events using matrix factorisation methods. On receiving the award, Sebastian said: “I was honoured to be able to apply to this invite-only call, and of course even more so to receive the award. The award will not only give me the opportunity to hire a research associate that will help me with this research, but also provide me with access to Google resources and enable me to attend Google knowledge discovery workshops with other leading researchers in the field.”

And finally, Larissa Romualdo Suzuki, Software Engineering research student, is to be the recipient of Intel Doctoral Student Honor Programme award worth $35,000. Larissa will be attending the awards ceremony at the Europe Research and Innovation Conference (ERIC) in October. Larissa is delighted to win the award: “I expect that the next two years of my research agenda will provide a multitude of outputs and outcomes which will be relevant both to academia and software practice. With the help of this award I will attend relevant events, training, and present my research at leading international academic conferences in my field of study that is software engineering, urban informatics and smart cities. This award will definitely allow me to further develop my PhD research and help me to reach my personal goal which is to become world-class professional in software engineering with a rigorous devotion to excellence.”
UCL-CS supports London Hopper & Karen Spärck Jones Lecture

In conjunction with the BCS and IBM, we are pleased to now be the key supporter of two prestigious Women in Computer Science events – London Hopper and Karen Spärck Jones Lecture.

The London Hopper Colloquia grew out of the Scottish Hopper Colloquia, and is modeled on the American Grace Hopper Celebration of Women in Computing which is designed to bring the research and career interests of women in computing to the forefront. These annual American meetings are held as a tribute to Admiral Grace Murray Hopper - pioneer of the computer business language COBOL - who inspired many young U.S. Naval computing students during her heyday and still continues to inspire computer scientists around the world many years after her death. This year’s London Hopper Colloquium was attended by over sixty delegates from across the UK.

The Karen Spärck Jones lecture is an annual event that honours women in computing research. The lecture series builds on the activities to celebrate, inform and support women engaged in computing. This year’s speaker Professor Barbara Liskov delivered a talk entitled “The Power of Abstraction”, and discussed how the abstraction mechanisms we use today came to be, how they are supported in programming languages, and some possible areas for future research. A recording of this year’s lecture can be found here.

We’re proud that our Women in CS profile continues to grow.
CS Shop – customise your own CS products!

Our online shop has just been re-launched. Students recently organised their own competition to design a new CS logo, which is now available on a range of merchandise to buy, and the proceeds from purchases will be spent by the Staff Student Consultative Committee. Well worth a look here.

Don’t forget to keep up-to-date with the latest CS News

Why not keep up-to-date with Department’s latest work – we’re proud to have a big impact on the future of Computer Science. We continue to create innovative technologies that change lives with computers.

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Kind regards,

John Shawe-Taylor
Head of Department
Professor of Computational Statistics and Machine Learning