Dear All, I hope you had a great Christmas break – 2014 promises to be another busy year for the Department, our staff and students. We look forward to keeping our alumni up-to-date and involved.

We hope you enjoy our latest round-up of research, teaching and outreach news – I’m sure you’ll agree there are many success stories for us to celebrate and reflect on.
CS Unveiled: launching our new teaching initiatives & research stories

On 9 December UCL-CS opened it’s doors to the general public, giving an exclusive peek at the cutting edge research and teaching facilities that will change the world in the future.

Our aim was to de-mystify the discipline and showcase the challenges and opportunities facing the Department today.

Highlights of the day included tours and of demos of UCL Interaction Centre, the Immersive Virtual Reality Lab and our new Secure Data Lab. In addition to the public and press, we also invited local school children to participate in an Engduino Workshop.

Finally we took the opportunity to unveil our most recent research impact stories covering financial computing, healthcare and information security, with a formal presentation hosted by The Provost.

A collection of short videos are available online on our YouTube channel here. We would like to thank everyone who attended.
New CDT in Delivering Quantum Technologies

We are delighted to announce that a new centre for doctoral training in Delivering Quantum Technologies will be established with EPSRC funding from September 2014.

Quantum technologies involve the control and manipulation of quantum states to achieve results not possible with classical matter; they promise a transformation of measurement, communication and computation.

The highly-skilled researchers who will be the future leaders in this field must be equipped to function in a complex research and engineering landscape where quantum physics meets cryptography, complexity and information theory, devices, materials, software and hardware engineering.

UCL's Centre for Doctoral Training in Delivering Quantum Technologies brings together a team of almost forty academic experts with key players from commerce and government and a network of international partner institutes to train those research leaders.

PhD students will be recruited from September 2014. The programme will build on the breadth of UCL’s research in this field (spanning computer science, quantum physics, and engineering), providing students with a foundation in both theory and experimental methods for quantum technologies, before they embark on their research project. For more news about this exciting new developments, please see here.
3Dami:

Teenagers create computer-animated film shorts

Seventeen talented college students from across Britain have scripted, modelled and animated two minute-long films in just 7 days. Using the resources of UCL-CS and the hub of nearby creative agencies they are learning what it takes to be part of a film-making team, and gaining experience of the techniques they would need to find a job in this competitive industry. See the films they produced here.

This is the second year that the 3Dami program has been run by Tom Haines, (UCL-CS) and Peter Kemp, a sixth-form college tutor, this year with help from SAE, NESTA, and UCL Engineering. Aged 15 to 18, students were selected as a result of their excellent portfolio work, and are now being given the opportunity to develop their independently-developed skills with the benefit of UCL-CS’s highly specced student computer labs and graphics researchers.

After a brief review of film theory and storyboarding, the students were encouraged to think about what makes a good movie, and come up with their own ideas for one. Appointing their own directors and project managers, the teams managed their own production schedules, using Blender to model, rig and animate their own animated shorts in preparation for a screening to an exclusive audience of UCL staff, their parents, and friends at UCL.

Tom Haines says: “There is little formal education available in these subjects, and limited awareness outside the industry of how to break in. 3Dami encourages, mentors and celebrates the talents of young 3D content creators, providing them with the resources and experience to develop towards becoming professionals.”
ACM Fellowships
for two CS Professors

We are delighted to announce that two UCL CS colleagues have been appointed to prestigious ACM Fellowships this year:

Ingemar Cox left above, Professor of Telecommunications, for contributions to computer vision, image retrieval, and digital watermarking.

Stephen Robertson, right below, Visiting Professor, for contributions to the theory and practice of information retrieval.

ACM (Association for Computing Machinery) is the world’s largest educational and scientific computing society, to advance computing as a science and a profession. It recognises its members for their contributions to computing that are driving innovations across multiple domains and disciplines. The 2013 ACM Fellows have achieved advances in computing research and development that are accelerating the digital revolution and impacting every dimension of how we live, work, and play... worldwide.

ACM President Vinton G. Cerf celebrated the impact of innovations achieved by this year’s ACM Fellows: “We recognize these scientists and engineers, creators and builders, theorists and practitioners who are making a difference in our lives. Their advances have led to opportunities for improved healthcare, enhanced security, expanded interactions, and enriched lifestyles. Some recipients have also led efforts to extend computing across continents and countries including Brazil and China.”

ACM will formally recognize the 2013 Fellows at its annual Awards Banquet in June 2014, in San Francisco.
New DUCO Prize:
Undergraduate Winners

We are delighted to announce the winners of our new DUCO prize for our Second Year students on BSc & MEng Computer Science courses. The UCL Duco Prize in Computer Science is awarded for the best performance in examinations. As a Department we are always keen to recognise outstanding academic achievement so we send our congratulations to the winners:

1st: Michael Boon (£1000)
2nd: Kinga Mrugala (£600)
3rd: Jing Li (£400)

We are very grateful to UCL-CS Alumnus Dr Christian Nentwich, CEO and Co-Founder of DUCO, and Dr Michael Marconi, Co-Founder of Duco, for their support.

Christian and Michael joined Head of Department Prof John Shawe-Taylor, Director of Studies Dr Graham Roberts and Second Year Co-Ordinator Dr Licia Capra at a drinks reception to celebrate the achievement of our winners (pictured with Christian and Michael).
Funding boost: to track development from embryo to adult

Scientists from UCL-CS, Manchester University and the University of Cambridge have been awarded £2.8million for a collaborative project to help us learn more about how cells develop and form particular types of body tissue.

The award is part of a £17.7million cash-injection by the BBSRC (Biotechnology and Biological Sciences Research Council) aimed at harnessing the power of bioscience and make significant impacts in health as well as agriculture, alternatives to fossil fuels, and using biology to produce important commercial products.

The research team will be using fruit fly embryo development as a model system to answer important questions about how much of each gene product is expressed at different time points, which versions of individual genes are expressed and define a catalogue of interacting protein partners. The UCL team, headed by Professors David Jones (Department of Computer Science) and Christine Orengo (Research Department of Structural and Molecular Biology), will be responsible for the computational analysis of the very large data sets that will be generated during the course of the project.

The research, known as the **BBSRC Drosophila Developmental Interactome Project**, is funded through BBSRC’s Strategic Longer and Larger Awards (sLoLas), which give world-leading teams the time and resources. The projects were chosen based on their scientific excellence; because they required long timescales, extensive resources and/or multidisciplinary approaches; and they involve internationally-leading research teams.

Professor Jackie Hunter, BBSRC’s Chief Executive, said: **“This public funding offers long-term support to address major research challenges, while building research capacity in important areas and maximising economic and social benefits for the UK”**.
Software Systems Engineering: project launch

Last month saw the launch day of the 2014 Software Systems Engineering projects for second year UCL-CS undergraduates. A total of twenty-three groups will be working on an exciting range of projects, supported by sponsors including Microsoft, the NHS, the BBC, the Metropolitan Police and a number of UCL departments.

Each project will see an initial idea turned into a proof of concept prototype, which is then developed into a production design ready for delivery to the project sponsor. Students will demo their projects to our sponsors at the end of the year – and their marks decided by a panel of expert industry judges.

The highlight of the launch day was an entertaining and stimulating talk by Prof. Bill Buxton, Principal Researcher from Microsoft, Redmond USA, who spoke about ubiquitous computing and the future of embedded devices. Prof. Buxton is also supporting several of the Systems Engineering projects.
CS Shop:
Customise your own 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.

Keep updated with the latest UCL-CS news and events – and we’d love to hear from you.

Check us out on the web www.cs.ucl.ac.uk
Like us on Facebook www.facebook.com/UCLCS.Ho
Or follow us on Twitter twitter.com/intent/user?screen

Kind regards,

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