

Reporter finds out
how Imperial is
supporting its first
Junior Research Fellows

... CENTRE PAGES

Careering ahead



SUMMER SCIENCE

Imperial
researchers
take their work
to the public

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QUEEN'S LIST

Arthur Spirling
and Carol
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their royal
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WACKY RACES

Themed dinner
raises money
for student
opportunities
fund

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EDITOR'S CORNER

Family affair

Last week streams of eager and anxious-to-impress **sixth formers** visited the College for Imperial's annual science and engineering undergraduate **open day**. Keen to gain insight into the first impressions we offer to prospective students I sat alongside them at the introduction given by the Department of Physics as they were wowed by videos of **explosions** used to illustrate shock physics and by Dr Mark Richards' sound wave experiments in which he remixed Rihanna's pop song Umbrella to a reggae beat. I was touched to see so many equally **captivated parents**, diligently taking notes and probing current undergraduates in the question and answer session. Seeing them reminded me how integral parents are to **supporting our students**, even though many of us only see them at open day and graduation – the bookends of the student experience.

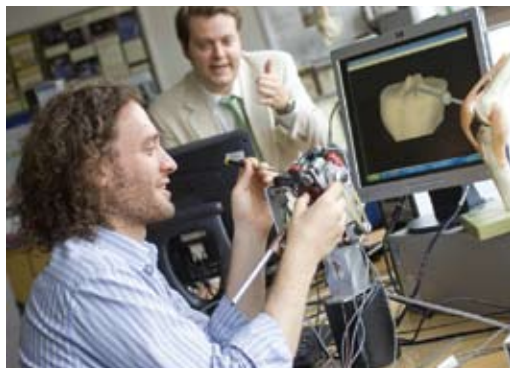
EMILY ROSS, EDITOR

Notification

As *Reporter* went to press, we learnt that **Brian Flowers**, one of Imperial's longest-serving Rectors, died at the age of 85. See page 3 for more details.

Reporter is published every three weeks during term time in print and online. The next publication day is 29 July. Contact Emily Ross: reporter@imperial.ac.uk +44 (0)20 7594 6715

Recognised by RCUK



Imperial's training and development programmes for researchers in the early stages of their careers are amongst the best in the UK, according to a report by the RCUK's Research Careers and Diversity Group which the College received in June.

The Group visited the College in April 2010 as part of a national programme to assess provision in institutions that receive over £1 million annually from RCUK for the career development and transferable skills training of PhD students and postdocs.

Its report praises Imperial's two Graduate Schools and its Postdoc Development Centre (PDC) for helping research postgraduates and postdocs to develop well-rounded skills, for example, enabling them to communicate and present their work efficiently, and for alerting them to future career opportunities. The PDC's good practice guidelines for postdoc support and development in departments, currently

being finalised, are particularly singled out by the Group, which recommends that they should be shared with other universities. The guidelines will be disseminated at Imperial via Heads of Department shortly.

Professor Mary Ritter, Pro Rector (International Affairs) commented: "It's great to have independent confirmation that we are leading the way in this area, both at national and, indeed, international level".

—ABIGAIL SMITH, COMMUNICATIONS

New powerhouse for heart and lung healthcare



The College has come together with Imperial College Healthcare NHS Trust and Royal Brompton and Harefield NHS Foundation Trust in a new agreement, signed this month, to undertake joint research

studies and explore clinician-led integration of services into joint working units and programmes.

The alliance will bring together more than 460 cardiac and thoracic surgeons, consultants, cardiologists, professors and researchers. Together, they will exploit the critical mass of expertise and patients to deliver world-leading improvements in clinical care, education and research activities relating to heart and lung health, for example, through enrolling patients from the two Trusts in large-scale joint research studies.

Professor Stephen Smith, Principal of the Faculty of Medicine at Imperial and Chief Executive of Imperial College Healthcare NHS Trust, said: "Our shared vision is to lead and be competitive on a global scale in cardiovascular and respiratory healthcare. This collaboration is crucial in breaking down the artificial organisational barriers among acute specialist care providers."

"This collaboration is crucial in breaking down the artificial organisational barriers among acute specialist care providers"

The collaboration will form part of an extension of the Academic Health Science Centre, the partnership formed in 2007 between the College and Imperial College Healthcare NHS Trust, which will see the creation of a new system of associates from the tertiary and primary healthcare sectors. Known as the Academic Health Science System, its aim will be to explore new patterns of care, and achieve greater advances in healthcare delivery and outcomes.

—LAURA GALLAGHER, COMMUNICATIONS

Imperial College
London



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Magnificent seven staff honoured

College celebrates two new knights, two CBEs, two OBEs and an MBE

Seven members of staff, including three from Imperial's Business School, have been recognised in the Queen's birthday honours list published on 12 June 2010.

Knighthoods go to Professor Marc Feldmann (Kennedy Institute), an expert on autoimmune diseases such as rheumatoid arthritis, and Professor John Beddington (Life Sciences), currently chief scientific advisor to the government.

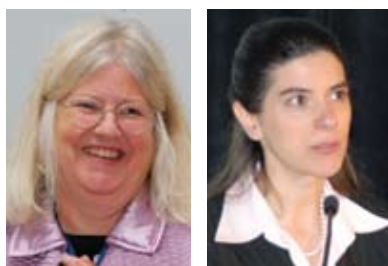
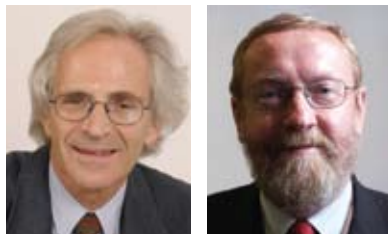
In the Business School, Professor David Gann, Head of Innovation and Entrepreneurship, and Professor Carol Propper, Head of Healthcare Management, are appointed CBE, while Professor Dot Griffiths, Deputy Principal of the School, is appointed OBE.

Elsewhere in the College, Dr Maha Barakat, co-founder of the Imperial College London Diabetes Centre in Abu Dhabi is appointed OBE, while Arthur Spirling, Director of ICT, is appointed an MBE. Congratulating all those recognised, Rector Sir Keith O'Nions said:

"Such honours are a mark of distinction and a sign of the high esteem in which these seven people are held. For one institution to have so many members of staff recognised is a great achievement and my congratulations go to them all."

Honours lists are published twice a year at New Year and in mid-June on the date of the Queen's official birthday.

—ABIGAIL SMITH, COMMUNICATIONS



L-R from top: Professors Marc Feldmann, John Beddington, David Gann, Carol Propper, Dot Griffiths, Dr Maha Barakat and Mr Arthur Spirling.

Royal Society Summer Exhibition 2010

A giant pelvis, a wooden hut covered in layers of paper and a CSI-style chemical investigation are some of the innovative methods Imperial academics are employing to explain their research to the public at the Royal Society Summer Science Exhibition this month.



Mr Alister Hart (Surgery and Cancer) with the giant pelvis at the Royal Society Summer Science Exhibition.

Researchers from the Department of Surgery and Cancer are exhibiting a model of a human pelvis and hip replacement eight times the average size, to help them describe the work they are doing using a high-intensity X-ray beam to examine why some hip replacements fail. They are exhibiting with Diamond Light Source, the UK's national synchrotron science facility, where they carry out some of this X-ray research.

In another unique exhibit, created by researchers from Imperial's Department of Medicine and the University of Addis Ababa in Ethiopia, layers of paper encase a hut, resembling human skin. Visitors are encouraged to rip away parts of the paper 'skin', to illustrate the damage that the debilitating tropical disease leishmaniasis can do to a person's face and body. The researchers are exploring potential ways to treat the disease by investigating how it can suppress the immune system.

Researchers from the Department of Chemical Engineering and Chemical Technology are also on hand at the exhibition to demonstrate the power of a chemical photography technique, which allows researchers to understand the chemical composition of different materials. Visitors can take part in live experiments to see what traces of chemicals can be found on their fingerprints.

—LUCY GOODCHILD, COLIN SMITH AND LAURA GALLAGHER, COMMUNICATIONS

The Royal Society Summer Exhibition runs until 4 July at London's Southbank Centre. To watch videos about the Imperial researchers involved see: Chemical photography • www3.imperial.ac.uk/news/chemicalphotography Hip replacements • www3.imperial.ac.uk/news/hipreplacements Leishmaniasis research • www3.imperial.ac.uk/news/leishmaniasis

in brief



Imperial remembers former Rector

Brian Flowers, who served as Imperial's Rector for 12 years from 1973, died on 25 June aged 85. He is survived by his wife, Mary.

Paying tribute, Lord Oxburgh, who led Imperial from 1993–2000, said: "Brian Flowers was a giant among Rectors – as well as consolidating the engineering and physical sciences at Imperial as prosperity returned after the lean years following the Second World War, he recommended and foresaw the amalgamation and strengthening of medicine in London that we have today." Reporter will publish a full tribute to Lord Flowers in issue 222. Share your memories of Imperial's 10th Rector at: www3.imperial.ac.uk/news/lordflowers

Engineering students change the world

A group of students from the Department of Electrical and Electronic Engineering have won the top prize in the IEEE Presidents' Change the World Competition with their project to provide an electricity system to rural Rwandan communities. The e.quinox project, already operating in a Rwandan village, uses renewable energy, such as solar power, to charge portable batteries in a central kiosk. These batteries can then provide power in local people's homes. Members of e.quinox collected their US\$10,000 award and the title of IEEE Student Humanitarian Supreme at a ceremony held in Montreal, Canada, on 26 June.

Faculties focus on the very best in teaching

Last month two ceremonies were held at Imperial to honour staff with teaching or teaching-related roles for their commitment to education and supporting students over the past year. To read the full story of the Faculty of Natural Sciences Teaching Awards and the Faculty of Engineering's Awards for Teaching Excellence, and for the list of winners see: www3.imperial.ac.uk/news/teachingaward

“Amazing, I loved the fake operation with all the blood. It taught me a lot about being a doctor and I'm going to be one, one day.”



—BENJAMIN, AGED 11, ON HIS EXPERIENCE OF THE IMPERIAL EXHIBIT AT THE CHELTENHAM SCIENCE FESTIVAL ORGANISED BY ACADEMICS FROM THE COLLEGE.

media mentions

—COLIN SMITH, COMMUNICATIONS



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www.imperial.ac.uk/media/jointsignon

SKY NEWS ▶ 02.06.2010

BP 'had no plan B'

One of the country's leading energy engineers has told *Sky News* that BP had no plan B following the collapse of an oil rig in the Gulf of Mexico. Speaking to *Sky's Jeff Randall Show*, Professor Geoffrey Maitland (Chemical Engineering and Chemical Technology) said that, although there was a whole range of



safety measures in place for the potential blow-out, they all failed. "The main problem is that this leak

happened 5,000 feet below the sea surface and what would have been a relatively normal operation on land, has to be done remotely in the sea," he said. "I think it has revealed to the industry as a whole, not just BP, that there was no immediate plan B." He added: "A full investigation is needed to see what caused this – whether it was a failure of equipment or procedure."

NATURE ▶ 09.06.2010

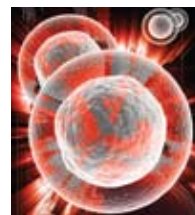
Emergency medicine for frogs

Scientists are taking measures to save endangered amphibians from the disease *chytridiomycosis*, reports the journal *Nature*. Chytrid fungus, which causes *chytridiomycosis*, is rapidly spreading, and an experiment conducted in 2009 aimed to help scientists in search of a treatment. In the experiment, researchers removed tadpoles from the ponds affected by the fungus and treated them with antifungal medication, before returning them to the wild. Explaining why the midwife toad species in the pond makes this an important test, Dr Matthew Fisher (Public Health) said: "They are so susceptible to chytrid". Disappointingly, results of swabs taken this year suggested that all the tadpoles probably still carried the fungus.

BBC ONLINE ▶ 14.06.2010

Public want regulation

The public wants a say in how research into the manufacture of synthetic life is conducted, reports *BBC News Online*. A report commissioned by the UK research councils revealed that people are comfortable with the idea of creating life, but only if it is properly regulated and there is assurance that the research could bring tangible benefits. The report also suggests that people want to have



say in how the research is conducted and how grants are awarded.

Professor Paul Freemont (Life Sciences) commented: "We want the science to flourish," adding: "We want the public to engage with it, understand it and also to influence it".

NEW SCIENTIST ▶ 14.06.2010

What's wrong with the sun?



Solar behaviour has changed dramatically over the past two years, reports *New Scientist*.

Sunspots, caused by giant loops of magnetism bursting through the Sun's surface, generally emerge then fade but recently they have mostly been missing. Their absence is the most prolonged in nearly 100 years. Scientists are debating the extent to which changes in the sun's activity can affect our climate and the extended decrease in the amount of solar radiation reaching the planet could be the right test. Professor Joanna Haigh (Physics) commented: "As a natural experiment, this is the very best thing to happen." She added: "Now we have to see how the Earth responds."

awards and honours

INTERNATIONAL OFFICE

Wood wins top German medal

Professor John Wood, Senior International Relations Advisor (International Office), has been awarded the Officers' Cross of the Order of Merit of the Federal Republic of Germany for his role as chair of the International Steering Committee of the European X-Ray Laser Project (XFEL). The medal will be presented at the German embassy on 21 July.

NATURAL SCIENCES

Phillips wins Porter Medal

Emeritus Professor David Phillips (Chemistry) has been awarded the Porter Medal, awarded every two years to the scientist who, in the opinion of the European Photochemistry Association, the Inter-American Photochemistry Society



and the Asian and Oceanian Photochemistry Association, has contributed most to the subject of photochemistry. Professor Phillips, who is the incoming President of the Royal Society of Chemistry, is the first British scientist to win the medal since its inauguration in 1988.

ENGINEERING

Caro receives Honorary Doctorate



In May,

Emeritus Professor Colin Caro (Bioengineering) flew to Johannesburg to receive an honorary Doctorate of Science from the University of the Witwatersrand, his *alma mater*, in recognition of his pioneering work in the field of biomedical engineering. It was his first return to South Africa for 25 years.

NATURAL SCIENCES

Kafatos wins gold

Professor Fotis Kafatos (Life Sciences) has won the 2010 Robert Koch Gold Medal – a prestigious

prize awarded annually in Germany by the Robert Koch Foundation for outstanding and internationally recognised scientific achievements. Professor Kafatos is recognised for his work on immunogenetic studies relating to insect immunity and malaria. He will receive the medal at a ceremony in November.

MEDICINE

Top 10 HIV paper

In April, a research paper entitled *Delayed anti-HCV antibody response in HIV-positive men acutely infected with HCV* written by Dr Emma Thomson and colleagues from the Department of Medicine was named as one of the top 10 HIV papers of the year 2009–10, at the British HIV Association annual conference.

Increased mortality rate at weekends



People admitted to English hospitals in an emergency at the weekend have, on average, a seven per cent higher mortality rate than people admitted between Monday and Friday, according to research published in the journal *Quality and Safety in Health Care* on 10 June.

The new study, led by Imperial's Dr Foster Unit and Department of Acute Medicine, is the largest ever to look at the differences between weekend and weekday mortality, focusing on the deaths of patients admitted as emergencies to 163 acute hospital trusts in England during 2005–06.

Lead author of the study Dr Paul Aylin (Public Health) said: "Staffing levels are often lower at weekends, with fewer senior medical staff around, and some specialist services are less available. This may be contributing to the increase in mortality rates on Saturdays and Sundays, but we would like to see more research."

In particular, the research showed a higher mortality rate at the weekend compared to weekdays for patients with conditions including heart attack, heart failure, stroke, some cancers and aortic aneurysms. The authors suggested that poorer access to hospital services and variations

in staffing levels at the weekend may be contributing to the difference in death rates.

"Hospitals have been reassessing the working hours and rotas

of their doctors and, considering the impact that staff availability may be having on mortality rates, this is a timely reminder to hospitals that they must take care not to jeopardise the quality and standard of patient care available at weekends when devising new staffing rotas," added Dr Aylin.

—LUCY GOODCHILD, COMMUNICATIONS

"Staffing levels are often lower at weekends, with fewer senior medical staff around"

New insights into volcanic activity



New research by Imperial researchers has revealed that when two parts of the Earth's crust break apart, this does not always cause massive volcanic eruptions. The study, published on 16 June in the journal *Nature*, explains why some parts of the world saw extreme volcanic events millions of years ago and others did not.

When the present-day continent of North America broke apart from what is now Europe, 54 million years ago, massive volcanic activity was caused along the rift between the two. Prior to this study,

scientists thought that such activity always accompanied plate breaks, believing the temperature of the mantle beneath them to be the key factor.

The research shows, however, that comparatively little volcanic activity occurred when the present-day sub-continent of India broke away from what is now the Seychelles, 63 million years ago. The new study reveals this to be due to the rift's prior history of a huge amount of volcanic activity, caused by plate thinning, which left it with very little magma to erupt when the rift occurred.

“Our study is helping us to see more clearly some of the factors that cause the events that have helped to shape the Earth”

Co-author Dr Jenny Collier (Earth Science and Engineering) said: "Mass extinctions, the formation of new continents and global climate change are some of the effects that can happen when plates break apart and cause super volcanic eruptions. Excitingly, our study is helping us to see more clearly some of the factors that cause the events that have helped to shape the Earth over millions of years."

—COLIN SMITH, COMMUNICATIONS

Antarctic expedition

Scientists from Imperial's Winston Wong Centre for Bio-Inspired Technology, the Department of Civil and Environmental Engineering and the Centre for Transport Studies are using 'digital plasters', mobile pollution monitors and black box sensor technology to provide the engineering know-how for a 3,600 kilometre expedition across Antarctica in November, in a collaboration announced on 11 June.

The scientists are partnering with the Moon Regan Trans-Antarctic Expedition team and will provide a network of mobile wireless sensors to assess the environmental impact of the expedition vehicles, check satellite positioning and navigation systems, and harness solar power to melt snow for drinking water.

The 'digital plasters' will improve our understanding of how humans perform in extreme conditions by monitoring the explorers' vital signs such as heart rate, temperature and respiration.

The sensors will be worn by the explorers and fitted to their transport, which comprise two Science Support Vehicles and the Winston Wong Bio-Inspired Ice Vehicle (WWBIV), which will slide along on skis using radar to detect dangerous crevasses. The expedition aims to evaluate the performance of bio-fuel, which will be used to power the WWBIV, and the energy efficiency and environmental impact of the SSVs, which could provide a viable alternative to light aircraft that emit high levels of CO₂.

Dr Robin North (Civil and Environmental Engineering) said:



Official launch of the Moon Regan Trans-Antarctic expedition at Imperial.

"We are providing sensors to monitor human physiology and the performance of the vehicles and their impact on the environment. We will also capture atmospheric and meteorological data and assess the performance of GPS systems to understand more about the atmospheric conditions around Antarctica."

—COLIN SMITH, COMMUNICATIONS

Professor Maggie Dallman chats with Junior Research Fellows Dr Ati Sharma (left) and Dr Silvia Díez-González (right)



Good Fellows

As Imperial begins recruiting its third cohort of Junior Research Fellows, *Reporter* catches up with some of the first intake – the class of 2009.

Setting up the JRFs

The shock to the system felt by early career scientists when they set up their own research group can be overwhelming. Making the leap from postdoc to principal investigator often means a sudden, and sometimes daunting, increase in responsibility for people, money and ideas. Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, was keen to find a way of making this transition easier. In 2008 she fulfilled her vision by persuading the College to establish its own Junior Research Fellowship (JRF) scheme.

The idea behind the scheme was to appoint a new community of the

brightest and best early career researchers at Imperial, and give them freedom to focus on their research. The scheme's support buys Fellows time free from obligatory teaching and administration. "I was lucky to receive a Fellowship early in my career, so I know what a significant difference such support can make in establishing your research, before you have to go on and take responsibility for everything else," says Maggie. "Even the brightest scientists can struggle with the experience of suddenly having to run the whole show themselves."

Imperial is investing more than £10 million over five years into the Fellowship scheme, which offers up to 60 fully funded three-year Fellowships that also include research expenses. In addition, each Fellow receives backing from a senior Imperial academic, who acts as sponsor by providing mentoring, equipment and research space for them. This level of commitment

and support from a scheme run by a UK university is rare, especially in today's financial climate. Not surprisingly, the programme has attracted high quality applications from scientists around the world, as well as from early career researchers already working at Imperial.

Class of 2009

Imperial welcomed its first cohort of Fellows this academic year, with 17 world class researchers taking up their new posts from October 2009. Dr Ati Sharma (Aeronautics) is one of the eight Fellows from the first cohort, who were already working at Imperial before starting the Fellowship. He has used his new appointment to move from a joint postdoc position in the Departments of Aeronautics and Electrical and Electronic Engineering to focus solely on aeronautics. "I have followed what you might call an unusual career path – starting in physics, ending up in engineering, going via a small hedge fund and a large investment bank along the way," he says.

Ati's research looks at reducing turbulence to decrease the frictional drag in the air flow over structures such as an aeroplane wing or car bonnet. He hopes his theoretical findings will be used to cut fuel consumption in the aeronautics, shipping and automobile industries. His new post has also enabled him to establish collaborations with colleagues both at Imperial and further afield at the California Institute of Technology.

"Making the jump from postdoc to something more permanent is hard to do," Ati observes. "This Fellowship has given me an amazing break. It can be difficult to build up the required research experience when you're working on relatively short-term contracts. It often feels like there's very little middle ground, an excellent stepping stone."

Although there is no requirement for Fellows to teach, Ati has volunteered to develop his experience in this area by supervising Master's students, to put him in a better position when it comes to applying for his next job.

Moving to Imperial

Dr Silvia Díez-González (Chemistry) is one of the seven Junior Research Fellows from the first cohort to come from abroad, joining Imperial from the Institute of Chemical Research of Catalonia in Spain. Her research focuses on developing more efficient metallic catalysts for cleaning up chemical reactions. "I particularly like the fact that there are an almost infinite number of possible molecular combinations – they are going to keep me busy for a long time to come!" she says.

“Making the jump from postdoc to something more permanent is hard to do. This Fellowship has given me an amazing break.”

As well as taking advantage of the chance to live and work in London, Silvia was attracted to the JRF scheme, as it gave her the opportunity to build her own independent research programme, which will help her to secure a permanent research position in the future. "The Chemistry Department at Imperial has been really welcoming," says Silvia. "My sponsor, Dr Mimi Hii (Chemistry), has gone out of her way to help and support me. In some labs we might just be treated like cheap labour, but here I have really been supported to develop my own research."

Catching up

On an overcast June afternoon, the Reporter JRF photoshoot on Dalby Court at Imperial's South Kensington Campus provides Maggie with an opportunity to catch up with Ati and Silvia about the Fellowship scheme in general, and in particular, what life has been like as part of the class of 2009.

Although they have been busy building connections in their own departments, the Fellows also feel part of a broader community. The

group has had several opportunities to bond during their first year, especially through the induction, training and support provided by Imperial's Postdoc Development Centre. "Being linked with other people at a similar stage in their career has been a useful network to have in the first year," says Ati. "You never know when connections with a group of colleagues working in diverse disciplines will come in useful. I am sure it will stand us in good stead for the future."

New cohorts

Everyone is anticipating the arrival of the second JRF cohort this autumn. For Maggie, it is reassuring that talented researchers are still seeking to stay in the university sector, and she is keen to highlight Imperial's continued support for the scheme: "The College is determined to keep nurturing new research stars. Even in times of financial stress, we are not going to cut off our blood supply. We remain completely committed to attracting and supporting the best talent."

With applications for the third cohort open until 29 October 2010, Silvia wants to encourage others to apply to the scheme. "From the day I started as an undergraduate, everyone has told me there are few openings in science," she says. "But research fellowship schemes like this one prove that there are still great opportunities for us, even relatively early in our careers." Ati is equally enthusiastic: "If you don't submit an application, you will never know what could have been. This Fellowship has enabled me to get up to speed in a new area of research and is helping me carve out a fulfilling academic career."

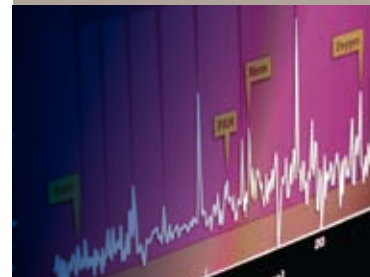
— NATASHA MARTINEAU, COMMUNICATIONS

Meet the Fellows: Imperial JRFs will be presenting their research at the First Annual JRF conference on 11 October on the South Kensington Campus. The event is free of charge and open to everyone. To register, email: a.haylen@imperial.ac.uk

Apply for an Imperial Junior Research Fellowship

Imperial JRFs receive fully-funded, three-year fellowships, which include a competitive salary, research expenses and mentoring support from a senior Imperial academic.

The College welcomes applications from researchers with up to four years' postdoc experience, across Imperial's core disciplines. You can apply from within Imperial or from other organisations, from the UK and abroad. You need to identify an Imperial academic who agrees to act as your 'sponsor', by providing laboratory space, research facilities and mentorship. Applications will be judged primarily on scientific merit, track record and potential for developing independent research.



For more information:
[www.imperial.ac.uk/
juniorresearchfellowships](http://www.imperial.ac.uk/juniorresearchfellowships)

Deadline for applications:
29 October 2010



Picking up the honours

Last month seven Imperial staff members were recognised in the Queen's birthday honours. *Reporter* speaks to Arthur Spirling, Director of ICT, and Professor Carol Propper, Head of Healthcare Management (Business School), to find out how it feels to receive that letter and what tips they have for a successful career.



Arthur Spirling, Director of ICT, received an MBE for services to higher education

How did you find out you were going to be recognised?

I received a letter from the Cabinet Office explaining that Gordon Brown was going to recommend me to the Queen for the award of an MBE and asking whether I wanted it or not. I ticked the box for yes but I didn't really imagine anything would come of it until I saw my name in the newspaper.

Were you surprised that you were nominated?

I always thought you had to be terribly special to get an MBE, as the bulk of the honours you read about in the papers are awarded to actresses, athletes, civil servants or academics. It felt surprising but rather nice to be recognised as a support service person.

“It felt surprising but rather nice to be recognised as a support service person”

You have worked at the College for 45 years – how technologically advanced was Imperial when you arrived?

When I started, keyboards, video screens, word-processing, email, Google, e-learning, high performance computing, Facebook and Twitter didn't exist, and I'd never even used a computer before! The College started with one mainframe in 1965. That grew to 10 mainframes, which were then supplemented by hundreds of workstations, then thousands of desktops, and today Imperial has around 30,000 devices, servers, desktops, laptops and handhelds.

What would be your advice to a trainee computer software programmer starting out now?

The most important thing to realise, is that people use computers, so always write people-friendly programmes. Also remember that computers have limitations – they can't do everything – for example they rarely smile!

What are you most proud of achieving?

Providing a great customer service to the College is really important to me, as is the

fact that the level of complaints about the ICT service is incredibly low.

How do you feel about your award?

I feel really proud, but I couldn't have achieved what I have without my colleagues, and the quality and quantity of skills they bring to the job – they really are a very hard working lot.



Carol Propper, Head of Healthcare Management (Business School), received a CBE for services to social science

How did you find out about your award?

I got a phone call on a Friday afternoon from a lady at the Cabinet Office. Because I do a lot of work with the government on competition and healthcare, I assumed they were going to ask me to give a seminar. But instead she asked me if I'd received a letter from the prime minister. I said no and she explained I'd been nominated for a CBE – it later turned out they'd sent the letter to the University of Bristol where I also hold an appointment. I was stunned by the news and held the phone away from me and looked around to see if someone was setting me up.

What are you most proud of achieving in your career?

Advancing research in economics of healthcare in general and raising the question of whether competition in healthcare markets is a good thing, and whether incentives used in the private sector can be used to improve outcomes in the NHS.

What are your tips for a successful career as an economist?

You need to study at a really good institution. It'll feel like boot camp but excellent technical skills are vital and you'll also get the opportunity to meet people with exciting ideas.

What advice would you give an economics researcher?

Follow your nose and pursue interesting and sometimes off-beat questions. As economists, we don't have lab experiments so we have to think of clever ways of inferring cause and effect from observational data.

How does it feel to get a CBE?

It's like being the Queen! I've had a constant stream of lovely emails from colleagues, friends and family, and the wider academic community. I've also drunk a lot of champagne!

—EMILY ROSS, COMMUNICATIONS

inside story

mini profile



Ammon Salter

Professor Ammon Salter, Research Director of the UK Innovation Research Centre (Business School), on the risks and rewards of innovation.

What is the UK Innovation Research Centre (UK-IRC)?

The Centre is a joint venture between Imperial College Business School and the Centre for Business Research at the University of Cambridge with the aim to further research and knowledge exchange on innovation policy and practice. UK-IRC involves a large-scale, research programme and a knowledge hub that seeks to engage policy-makers and practitioners about innovation research.

When did you first recognise the importance of innovation?

When I was an undergraduate reading the work of English economist, Chris Freeman, and Austrian economist, Joseph Schumpeter. Studying innovation has many attractions, as it involves attempting to understand how new things come into being and are then modi-

fied and changed in use. When I was studying for my degree at Concordia University in Montreal, Canada was mired in recession, and the study of innovation seemed to offer the prospect of a pathway to recovery.

What happens if companies aren't innovative?

Innovation is risky, offering the carrot of spectacular rewards or the stick of destitution. But our economic system is diverse and, in many sectors, it is possible to survive and not be very innovative, learning from the innovations of others. What is really required is the ability to learn quickly, be flexible and be willing to accept a high degree of uncertainty. Of course, these skills are hard to develop for individuals as well as organisations.

Why does Imperial need a centre for innovation?

As a leading university of science, technology and medicine, it is critical that we seek to understand how ideas are translated into new products, processes and services, and how these innovations are used, adapted and changed in practice. The study of innovation provides a map for policy-makers, managers and academics to better understand how we can influence the future, by proactively shaping investments and decisions about the development and use of technology.

—EMILY ROSS, COMMUNICATIONS

Wacky Races benefit

On 10 June, Support Services held a *Wacky Races*-themed benefit dinner in support of the Student Opportunities Fund. Rosie Dalton, Graduate Intern (Commercial Services), helped organise the event and reports on her experience:

“What started out as a racing-inspired evening took a creative turn and emerged as *Wacky Races*, based on an animated television series broadcast in the 1960s. Support Services were joined at the event by 350 guests from over 70 companies with links across the whole College, for a truly wacky evening held in the Queen's Tower Rooms on the South Kensington Campus. Highlights included filmed pig and sheep races,



Last race winners receiving their prizes. From left to right: Andrew Murphy (Director of Finance), Louise Lindsay (Director of Human Resources), Dr Martin Knight (Chief Operating Officer), Jane Neary, Paddy Jackman and Nigel Buck (Faculty Operating Officer for Medicine).

fancy dress outfits starring *Wacky Races* cartoon characters Dick Dastardly (Paddy Jackman, Director of Commercial Services), Penelope Pitstop (Jane Neary, Assistant Director of Commercial Services) and Muttley (Tudo Scheibner, Commercial Services Systems Manager), and ‘last place’ t-shirts so infamous that people bid up to £50 to take one home!

The funds raised from the evening will be used for a scholarship named

after Sharine Brown, the College's Head of Accommodation Services, who died in April. The Sharine Brown Scholarship will offer the opportunity for a student to study at Imperial and be part of the institution of which Sharine was so proud.

The night ran smoothly thanks to the contributions and commitment of all those involved. In total the event raised £25,000 and a thoroughly enjoyable evening was had by all!”

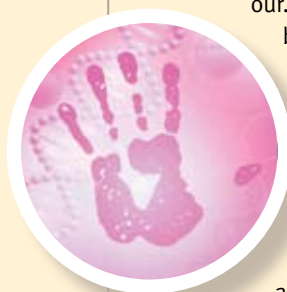
▶ SCIENCE FROM SCRATCH

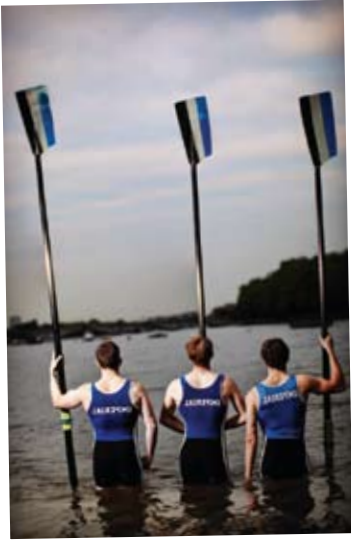
As explained by Natalie Mills, MSc Science Communication



Phenotype

The term ‘pheno’ derives from the Greek word for ‘display’. Phenotype is a term which describes the observable traits of an organism, like size, shape or colour. The colour of our eyes is a phenotype which is strongly controlled by our genetic makeup. However, a phenotype is not only down to an organism's genetics but can be due to its interaction with the environment where it lives, or the result of interactions between its genetics and its environment, so that as the environment changes the phenotype of an organism also alters. For example, some plants can change their leaf thickness in response to stress caused by environmental factors such as lack of water. The term phenotype was first coined by Danish scientist Wilhelm Johannsen after his work on *Phaseolus Vulgaris*, or princess beans, showed that genetically identical beans had different weights. He concluded that the appearance of a trait is not totally dependent on genetic make-up, which explains why identical twins can grow up to behave and even look different.





Down at the waterside

In May, Beth Elzer, Creative Director (Communications), organised a photo shoot at the Imperial College Boat Club headquarters on London's Putney Embankment. Beth reports on the unique shoot:

"I have always been impressed with the dedication our students show for athletic pursuits and, with the Olympics coming up, we wanted to highlight that Imperial is serious when it comes to sport.

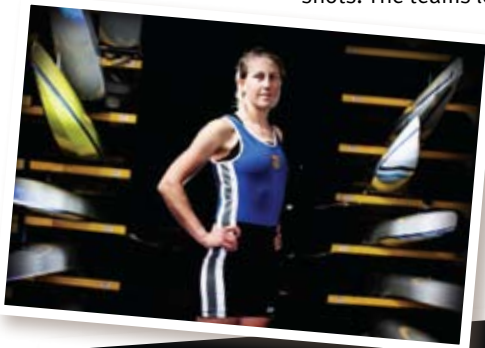
The Imperial College Boat Club has always had high profile successes at student events so I was keen to capture their passion.

We amped up the usual Imperial photography style and went for a high-drama, confident and intense visual style for these shots. The students and coaches were amazing – completely game for anything we asked, wonderfully energised and in amazing shape!

The photographer, Sophie Mitchell, was eight months pregnant, but that didn't stop her from half lying down in the freezing river shooting on her back to get the perfect shot. Spending four hours on the banks of the Thames with music pumping out of the boathouse made for a fabulous atmosphere which resulted in a portfolio of amazing shots. The teams look fierce, gorgeous

and a force to be reckoned with!"

To see Beth's photo shoot, visit: www3.imperial.ac.uk/news/waterside



From Land's End to John O'Groats

Leading Fire Officer Jon Avery (Security Services) reports on his experience of cycling from Land's End to John O'Groats last month.

"It all started with a drunken idea in a pub – doesn't it always? My friend Steve and I cycle together a lot and we decided it would be a good idea to cycle from Land's End to John O'Groats. We also thought it would be an opportunity to raise some money for a prostate cancer charity, as I lost my father to the disease two years ago.

Seven months later, on 29 May, we set off from Land's End in the pouring rain. Within hours I had broken a spoke, which then buckled my wheel, meaning that I had to buy a new wheel in Barnstaple. Luckily, the weather improved by the next day, which helped, as we had to navigate two major hill climbs in Devon that definitely tested our legs! Over the next seven-and-a-half days we pedalled on past towns and landmarks including Chepstow, Whitchurch, Sedbergh, Moffat, Loch Lomond, Fort Augustus and Dorach, and finally arrived in John O' Groats.

"Exmoor and Glencoe in Scotland stand out for me, as the scenery was fantastic"



The hardest thing about the ride was being in the saddle for up to eight hours a day – not so much the physical side as the mental side – as there were some long, straight, boring roads in

stretches like Preston to Lancaster, where it was difficult to stay motivated. However, there were also some magical moments. Exmoor and Glencoe in Scotland stand out

for me, as the scenery was fantastic, the sun was beating down and the climbs and descents were brilliant. All in all it was an amazing experience, and anyone thinking about doing it should stop thinking and get planning! So far we have raised £1,542."

To support Jon visit: www.justgiving.com/lejongsteveandjohn



Ashley holding Mike the Micrometer – mascot of Imperial College Union.

"The last year has been a fantastic experience, if stressful at times!

We've got a new management team, a renewed building, better support for student representatives and a new system to provide support for small student-led projects. The thing I'll miss most is the people both in the Union and

in College. I'll be taking a couple of months off to recover from nine years at Imperial before heading back into industry."

– ASHLEY BROWN LOOKS BACK ON HIS YEAR AS STUDENT UNION PRESIDENT IN THE FINAL WEEKS OF HIS ROLE. KEEP YOUR EYES PEELED THIS MONTH FOR A FULL INTERVIEW: WWW.IMPERIAL.AC.UK/REPORTER

obituaries



PROFESSOR SIR HUGH FORD

Former Pro Rector Professor Sir Hugh Ford died on 28 May 2010 at the age of 96. His career as a mechanical engineer, which saw him revolutionise metal and plastic production processes, began at the City and Guilds College (part of Imperial) where he studied for a mechanical

engineering undergraduate degree, followed by a PhD. After a stint working in industry, he returned to Imperial in 1948 as Reader in Applied Mechanics. Focusing on applied mechanics, plasticity theory and metal working processes in his research and teaching, he was promoted to Professor of Applied Mechanics in 1951. He was Head of the Department of Mechanical Engineering from 1965 until 1978 when he was made Pro Rector, working with Rector Brian Flowers. He was knighted in 1975 and retired in 1980.

Emeritus Professor Colin Besant (Mechanical Engineering), who worked with Sir Hugh, pays tribute:

“Hugh Ford was a man of vision and his most recent interest was in energy use and conservation. He was keen to raise awareness of how much energy is used in the manufacture and disposal of products. As Head of the Department of Mechanical Engineering, Hugh was highly regarded by both staff and students. He encouraged staff to develop new lines of research, which resulted in subjects like biomechanics, computer-aided design and manufacture, robotics, polymer engineering and fracture mechanics becoming established.”

For a full obituary and to share your memories of Sir Hugh visit: www3.imperial.ac.uk/news/sirhughford

Welcome new starters

Mr Ryan Abbt, Business School
Miss Angeliki Aispou, Civil and Environmental Engineering
Mr Jamie Banks, Physics
Mr Simon Bennett, Life Sciences
Dr Jeroen Bergmann, Surgery and Cancer
Mr Simon Butler, EEE
Dr Cristina Canova, NHLI
Dr Katie Chapman, Medicine
Dr Sotirios Chatzis, EEE
Miss Gabrielle Crown, Medicine
Dr Rhiannon David, Surgery and Cancer
Dr Chiara Dellabianca, Clinical Sciences
Dr Ivan Diakonov, NHLI
Mr Thomas Dinsdale-Young, Computing
Ms Elizabeth Dubois, Public Health
Dr Ahmed El Sheikh, ESE
Dr Riccardo Fini, Business School
Professor Al Fraser, ESE
Ms Louise Full, Kennedy Institute
Dr Belinda Garner, Biomedical Engineering
Ms Tamaswati Ghosh, Molecular Biosciences
Mr Seyed Hosseini, Chemical Engineering and Chemical Technology
Dr Nicholas Hylton, Physics
Dr Tao Jin, EEE
Mrs Noeline Joseph, Business School
Dr Ravinder Kanda, Biology
Dr Marius Kaucikas, Molecular Biosciences
Miss Pajaree Kewcharoenwong, Civil and Environmental Engineering
Ms Sarah Lester, Grantham Institute
Mr Adrién Lorenzi, Security Science and Technology
Dr Piotr Lugiewicz, Mathematics
Mr Daniel Mackay, Medicine
Dr Isabel Moraes, Molecular Biosciences
Dr Beinn Muir, Physics
Ms Korinne Northwood, Clinical Sciences
Dr Michael Okun, Bioengineering
Miss Michelle Osmond, Computing
Miss Sharon Pyne, Medicine
Ms Rebecca Rahman, Aeronautics
Miss Yasaman Shadrokh, EEE
Dr Kathleen Sim, Medicine
Dr Benjamin Simpson, Medicine
Dr Diego Soto Sanchez, EEE
Miss Tsing-Young Tang, Chemistry
Mr Filipe Teixeira de Almeida, Public Health
Mr Mark Thommyppillai, Mechanical Engineering
Mr Craig Tipple, Medicine
Dr Tina Toni, Molecular Biosciences
Mr James Turton, Surgery and Cancer



Professor Al Fraser, EGI Chair in Petroleum Geoscience (Earth

Science and Engineering), joined Imperial on 1 June. He previously worked at BP, looking into opportunities in Libya for offshore oil exploration. His new role involves fostering links between the College and the Energy and Geoscience Institute (EGI) at the University of Utah. Al says: “I’m excited to finally give something back to the students and for them to find out what life is like in the oil industry.”

Dr Flavie Vial, Public Health
Mr Ioannis Vyrides, Chemical Engineering and Chemical Technology
Miss Natalie Watt, NHLI
Mr Wolfram Wiesemann, Computing
Mr Norman Woolcock, Medicine
Mr Lang Yuan, Materials
Dr Minghao Zhang, Molecular Biosciences

Farewell moving on

Mr Rob Anderson, ICT (12 years)
Dr Anna Andersson, Kennedy Institute
Dr Istvan Bartok, Medicine (5 years)
Dr Dan Brudzevsky, Medicine
Dr Dominic Buchstaller, EEE
Miss Anita Chau, Surgery and Cancer (5 years)
Dr Driss Choujaa, Computing
Mr James Coles, NHLI
Ms Dima Cvetkova, Bioengineering (6 years)
Mrs Emily Ephgrave, Medicine
Dr Amalio Fernandez-Pacheco, Physics
Miss Amy Ford, Surgery and Cancer
Dr Susan Gotensparre, Surgery and Cancer
Mrs Diane Hazlehurst, Kennedy Institute (19 years)
Mrs Rebecca Hernandez, Medicine
Dr Yusuke Iida, Mechanical Engineering
Dr Thilini Ishwara, Physics
Mr Stephen Johns, Chemistry
Mr Aaron Joseph, Security Services
Dr Yoshiaki Kawano, Surgery and Cancer (8 years)
Ms Magdalena Kudyba, NHLI
Dr Laurent Lamy, Physics
Dr Christian Landles, Surgery and Cancer

Dr Tom Lissauer, Public Health
Dr Erwu Liu, EEE
Mrs Melissa Matthias, Medicine
Miss Ellen McDonagh, NHLI
Mr Dominic Mikulski, Medicine (5 years)
Ms Fatima Monaf, Sport and Leisure Services
Mr Dimitris Mostrous, Computing
Dr Thomas Newsom-Davis, Medicine
Dr Scot Ouellette, Life Sciences
Dr Timoleon Papagatsias, Medicine (8 years)
Dr Ruth Pepper, Medicine
Dr Dorothee Petit, Physics (5 years)
Ms Antonia Polorecka, Catering
Miss Jolene Retallick, Human Resources
Mr Antonio Roldao Lopes, EEE
Ms Nicola Ruivo, Medicine
Dr Len Sash, Health Centre (14 years)
Professor Nicholas Severs, NHLI (30 years)
Dr Andrew Singleton, Physics
Mr Timothy Smallie, Kennedy Institute (6 years)
Dr Alastair Smith, EEE
Ms El Tham, NHLI
Miss Victoria Thomas, Surgery and Cancer
Dr Ricardo Torres La Porte, Physics
Mrs Anna Traverse, International Office
Dr Kim Van Der Heiden, NHLI
Dr Eugen Varvaruca, Mathematics
Dr Manuel Vogel, Physics
Mrs Marie Wilcox-Perks, Medicine
Mr Eric Yeboah, Security (5 years)

retirements

Mr Philip Blissett, Medicine (35 years)
Mr Nick James, ICT (37 years)
Mrs Karen Jones, Human Resources (22 years)

This data is supplied by HR and covers the period 26 May–15 June. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (*) indicates where an individual will continue to play an active role in College life.

long service

Reporter shares the stories of staff who have given many years of service to the College. Staff featured celebrate anniversaries on 19 August–1 September. Data is supplied by HR and is correct at the time of going to press.

20 years

- Mrs Mary Bowe, Postgraduate and International Officer (International Office)
- Ms Annette Winter, Secretary/PA (Kennedy Institute)
- Mr Guljar Singh, Technician (Mechanical Engineering)
- Professor Alun Hughes, Professor of Clinical Pharmacology (NHLI)
- Professor Dorian Haskard, Director, The Eric Bywaters Centre (NHLI)
- Mrs Danuta Mahiouz, Senior Chief Biomedical Scientist (NHLI)
- Mr Colin Rantle, Chief Technician (Medicine)
- Dr Imad Jaimoukha, Senior Lecturer (EEE)

Please send your images and/or comments about new starters, leavers and retirees to the Editor at reporter@imperial.ac.uk

The Editor reserves the right to edit or amend these as necessary.



9 JULY ▶ SYMPOSIUM

GSLSM summer research symposium 2010

The keynote speaker for the Graduate School of Life Sciences and Medicine's annual research symposium will be evolutionary biologist and journalist Dr Olivia Judson, who is also a research

fellow at Imperial. Dr Judson's award-winning book, *Dr Tatiana's Sex Advice to All Creation: The Definitive Guide to the Evolutionary Biology of Sex*, has been translated into more than 15 languages and was also made into a TV show. For the past two years, she has written a regular online column for *The New York Times*.



13 JULY ▶ SYMPOSIUM

GSEPS Research Students Research Symposium

The Graduate School of Engineering and Physical Sciences annual symposium will begin with the judging of an annual competition, which sees research students producing posters about their

work. The announcement of the winners will be followed by a keynote speech by Dr Nicholas Harrigan (Physics). Dr Harrigan will draw on his experiences as an award-winning science communicator to explain why it is crucial for scientists to tell the world about their work. He believes communication is a key skill for inspiring both the general public and potential employers.

5 JULY ▶ MEDICAL WRITING EVENT

An insight into medical writing as a career

Postdoc Development Centre in collaboration with Network Pharma

6 JULY ▶ SYSTEMS BIOLOGY OPEN DAY

Modelling host pathogen interactions

G16 Sir Alexander Fleming Building

8 JULY ▶ SYMPOSIUM

Cardiovascular technology

Hosted by the IBM Cardiovascular Technology Network, the Cardiovascular and Renal Medicine clinical programme group and the BHF Centre of Research Excellence

9 JULY ▶ SYMPOSIUM

GSLSM summer research symposium

Glad to have evolved – keynote speech by Dr Olivia Judson, evolutionary biologist and writer

12 JULY ▶ PERVASIVE SENSING AND GAMING WORKSHOP

Potential applications of pervasive sensing technology in games

Lower Ground Floor, Business School

13 JULY ▶ SYMPOSIUM

GSEPS research symposium

Selling your science – keynote speech by Dr Nicholas Harrigan (Physics)

take note



Discounts on summer accommodation

Imperial halls of residence operate as bed and breakfast facilities during the summer vacation period and College staff are entitled to a 20–50 per cent discount in Beit, Eastside and Southside Halls (dependent on date of booking and subject to availability). The accommodation is also available to friends or family visiting London over the summer. To benefit from the discount, enter the promotional code 'IC Staff' when booking online.

www.imperial.ac.uk/summeraccommodation

VOLUNTEERING

Community volunteer

Project ID: 2342
Organisation: British Transport Police
Date(s): Ongoing
Time(s): Any day, any time
Location: SE1 (nearest tube Waterloo)



British Transport Police (BTP) – the policing force of the rail transport across England, Scotland and Wales – is looking for volunteers to assist the organisation with everyday duties. Volunteers could find themselves doing anything from helping to develop BTP's work with the local community and monitoring CCTV footage, to answering calls at reception. Police officers will spend time getting to know all volunteers to ensure the jobs they are given utilise their skills, experiences and interests.

For more information

To take part in a scheme or to hear more about volunteering in general, contact Marco Benozzi:

☎ 020 7594 8141
✉ volunteering@imperial.ac.uk

For full details of over 250 volunteering opportunities please visit:
www.imperial.ac.uk/volunteering

✉ Subscribe to the weekly newsletter by emailing volunteering@imperial.ac.uk

PHOTO EXPO

Exhibition Road Music Day returned to London on 20 June for the sixth year running, giving people's ears a treat with a full programme of free musical events in the area. One of the Imperial bands performing was The Techtonics (pictured right) – an all-male vocal group, who sang a variety of their own arrangements of well-known (and some less well-known) rock and pop songs, with one or two off-the-wall comedy numbers for good measure.



Stay in the loop

✉ Visit www.imperial.ac.uk/events for more details about these events and others. To sign up for regular updates about Imperial events please email: events@imperial.ac.uk

