



Rock solid

Earth Science and Engineering's Lorraine Craig
on achieving 98% student satisfaction  **CENTRE PAGES**



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DAY 2011**
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EDITOR'S CORNER

Good cause

Over the last few weeks I've been inundated with **stories of energetic pursuits** that staff and students have been involved with, all in the name of charity. From students who worked in a *sake*-making factory in Japan over the summer to help the businesses recover from the devastation of the tsunami (see page 11) to the **group of intrepid explorers** in the Faculty of Engineering who are taking on a 17-mile fundraising trek in Derbyshire this month (see page 13). Closer to home last week I watched 60 students break into dance in the JCR as part of a flash mob to raise money for Breast Cancer Care, organised by the Imperial College Women in Science, Engineering and Technology Society. "It was really embarrassing" one of the students admitted but when asked if he'd do it again: "For breast cancer? Of course". The **desire to make a difference** drives many Imperial activities - as the Autumn Telethon gets underway to raise funds for the Rector's Scholarships Fund involving student volunteer callers, good luck to everyone involved in charitable work.

EMILY ROSS-JOANNOU, EDITOR

Reporter is published every three weeks during term time in print and online. The next publication day is 24 November.

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New scholarships for Chinese postgraduates

Imperial and the China Scholarship Council (CSC) have created a new scholarship programme to allow the most talented Chinese postgraduate students to study at the College.

An agreement signed on 27 October established the new CSC Imperial Scholarships, with an initial 15 full scholarships being available next academic year. They will enable Chinese students of outstanding academic merit and potential to study towards a PhD at Imperial.

The scholarships are supported jointly and equally by both Imperial and the CSC, which is a non-profit institution supporting the exchange

of students between China and other countries. They will cover all tuition fee costs, provide an allowance to cover maintenance and additional costs, and include a return air fare for the student.

The agreement establishing the scholarships was signed at Lancaster House in London by Sir Keith O'Nions and Dr Liu Jinghui, Secretary-General, China Scholarship Council. It was witnessed by David Willetts MP, the UK's Minister of State for Universities and Science and Yuan Guiren, China's Minister of Education.

Sir Keith said: "We're fortunate that Chinese students are well rep-



resented within our community and we're very excited by this opportunity to deepen and extend our strategic relationship with China. These scholarships will ensure there is no barrier for some of the most talented Chinese students to come and develop their talents at Imperial."

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

Student finance made easy

Prospective Imperial students will have easier access than ever before to specific information on the financial support available to them, thanks to a new online calculator recently launched at the College.



side staff in ICT, Registry and Student Finance, said:

"There is a lot of confusion about the new system and the different types of support available. We hope that through the new student finance calculator we can give anyone thinking of Imperial for their undergraduate studies a comprehensive overview of the cost and financial assistance they can expect if they join the College."

Imperial's financial aid package for 2012 will provide a maximum of £6,000 in support to eligible Home undergraduate students, and operates on a sliding scale for household incomes up to £60,000 per annum. Currently, government support extends only to household incomes up to £40,000. The amount varies depending on circumstance, and may include a tuition fee waiver alongside a cash bursary or an accommodation fee waiver.

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Visit the student finance website to learn more about the support package and to try the calculator: <http://www3.imperial.ac.uk/studentfinance>

Imperial College London

Join the Big Christmas Party!



Teams and departments across the College are invited to join the Big Christmas Party in the Queen's Tower Rooms on Friday 9 December from 15.00–21.00 and experience a spectacular Christmas celebration with a three course lunch, mince pies, festive fizz and dancing.

For more information and tickets, please visit <http://bit.ly/bigpartyimperial>

Families gather at largest ever Commemoration Day



On Wednesday 19 October over 2,200 graduands crossed the stage of the Royal Albert Hall to receive their undergraduate degrees in front of around 6,000 guests, making this year's Commemoration Day the largest ever hosted by Imperial.

Offering insight into the experiences of the families gathered at the event, mother of Mechanical Engineering graduate Stephen Thorne said, "We've come all the way from Hong Kong and I'm here with my sister and my mother who is 86. It was a long trip and it's been a very hectic day, especially for my mother, but so worthwhile!

It was very exciting to see my son graduate in the Royal Albert Hall."

On hand to congratulate the new graduates at her first Commemoration Day was the Chair of Imperial's Court and Council, Eliza Manningham-Buller, the former Director of the Security Service who took up her position in July.

Alongside the presentation of degrees Imperial honoured three retired staff members with the award of the Imperial College Medal. The Medal is given in recognition of long-standing contributions to the College which enhance its reputation, mission and objectives. The recipients were

Mrs Susan Hartman, former Assistant Secretary to the Faculty of Medicine, for long standing support of one of the medical schools that merged with Imperial and subsequently the Faculty; Emeritus Professor Bob Schroter for his contributions to student activities, including the Imperial College Boat Club, and his research spanning the disciplines of biology, medicine and veterinary science, and physical and engineering science; and Dr Anna Thomas-Betts for her work in academia and student welfare over 45 years.

For more from Commemoration Day 2011, including more details of the Medal winners' achievements, see: <http://bit.ly/commem2011>

For an interview with Eliza Manningham-Buller, see page 11

Researchers receive over €12 million in grants from the European Research Council

Nine Imperial researchers are beginning new projects this autumn, after winning more than €12 million in grants from the European Research Council (ERC).



Thomas Anthopoulos is a Reader in Experimental Physics. He is one of nine Imperial researchers who are beginning new projects in 2011 thanks to ERC grants.

The researchers from the Faculties of Engineering, Medicine and Natural Sciences have received ERC Starting Independent Researcher Grants, which aim to support up-and-coming research leaders who are about to establish or consolidate a research team and start conducting independent research. Competition for the awards is fierce, with only around 400 granted annually across all member states of the European Union.

Rector Sir Keith O'Nions said: "I know I speak on behalf of the heads of each faculty and the College generally when I say congratulations to all our ERC grant recipients on a job well done. These grants are really important because they give academics the flexibility to further develop their own research direction. Glancing back at the early stages of my career, I know what an important boost funds like this can do for your research. We look forward to watching how they progress with their research in the coming years."

This year's recipients are: Dr Thomas Anthopoulos (Physics), Dr Joshua Edel (Chemistry), Dr Robert Endres (Life Sciences), Dr Rob Ewers (Life Sciences), Dr Darrel Francis (NHLI), Dr Pier Luigi Dragotti (Electrical and Electronic Engineering), Dr Andre Neves (Mathematics), Dr Natasa Przulj (Computing) and Dr Natalie Stingelin (Materials).

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

To see a slideshow of this year's ERC grant recipients and for more information about their projects visit: <http://bit.ly/rAzWoi>

in brief

Deputy Principal (Research and Business Engagement)



Professor David Gann has become the new Deputy Principal (Research and Business Engagement) of the Business School, taking on responsibility for developing the Business School's research strategy and building links with business

and industry. Professor Gann joined the College in 2003 as Chair in Technology and Innovation Management, a joint appointment between the Business School and the Department of Civil and Environmental Engineering. He became Head of the Innovation and Entrepreneurship Group in 2005 and has led the Digital Economy Lab since 2010.

Director of Student Recruitment and Admissions

Dr Nicola Rogers, Senior Lecturer in the Department of Medicine, has become the new Director of Student Recruitment and Admissions. Dr Rogers will have academic oversight of the strategic direction of all aspects of undergraduate and postgraduate recruitment, reporting to the Pro Rector for Education and Academic Services. Dr Rogers became Senior Lecturer in 2007 and has also held the position of Course Director of the BSc in Infection and Immunity within the Department of Medicine. Alongside her new role she will spend a day a week working on her academic activities.

Felix's 1,500th edition

Reporter would like to congratulate the student newspaper Felix on its 1,500th edition published on 4 November 2011. Log onto Reporter online later this week to hear from previous Editors and to read more about the history of Felix.

To delve into the Felix archive visit: <http://felixonline.co.uk/issuearchive>

“On several occasions I've spent hours talking to alumni about their student experiences, from tales of being one of 40 women in the College, to working on a nuclear reactor for submarines after graduating.”

PHYSICS STUDENT ELLIOTT BAJEMA SPEAKING ABOUT THE AUTUMN TELETHON WHICH IS RAISING MONEY FOR THE RECTOR'S SCHOLARSHIP FUND.



Space mission scientists share their cosmic vision

Imperial scientists are planning to take physics research into new territories, following a proposal last month by the European Space Agency (ESA), to develop two new space missions known as Solar Orbiter and Euclid.

The Solar Orbiter mission will travel closer to the Sun than any other, measuring its magnetic field and improving our understanding of how solar activity and the harsh solar wind affect the Earth.

Professor Tim Horbury from the Space and Atmospheric Physics Group in the Department of Physics, who leads Solar Orbiter's magnetometer team, said: "Solar Orbiter will give us our first good view of the Sun's polar regions and a unique close-up view of the Sun's atmosphere and how it blows past the Earth and out to the far solar system."

The Euclid mission will address key

questions of dark energy and dark matter, which are fundamental to physics and cosmology, and search for clues to the early expansion of the universe. Through a massive near-infrared digital camera, Euclid will survey far distant parts of space using faint light that started its journey shortly after the event of the Big Bang.

Professor Steve Warren from the Department's Astrophysics Group, who coordinates Euclid's legacy science teams, said: "Euclid's highly detailed deep space maps will contain images of more than a billion galaxies and a treasure trove of rare and fascinating objects like brown dwarfs, faint halo stars, luminous giant galaxies and quasars."

ESA announced funding for the Solar Orbiter and Euclid projects on 5 October. The crafts will be designed, tested and built across the continent, and launched between 2017 and 2019. Scientists and engineers from the Department have been closely involved in the development of both projects, which draw on academic expertise and collaborations with high-tech industries.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT DIVISION

To hear Professor Horbury and lead engineer Helen O'Brien, from the Solar Orbiter mission, explain why it won't be possible to send a manned mission to the Sun just yet, visit <http://bit.ly/solarorbiter>

"Euclid's highly detailed deep space maps will contain images of more than a billion galaxies and a treasure trove of rare and fascinating objects"



Welcome to new Fellows

Imperial has welcomed the third cohort of Fellows to its Junior Research Fellowship (JRF) scheme, bringing the total number of researchers supported by the scheme to almost 60. Fellows receive a competitive salary for three years, and the freedom to focus on their research, with no obligatory teaching or administration.

Speaking at the development day dinner for new Fellows on 24 October, champion of the scheme Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, said: "Many senior people at the College, including myself, were lucky to start our careers with a Fellowship that gave us time to make the leap from postdoc to lecturer. I am delighted that the College's scheme has attracted yet another round of exceptional new Fellows, and I look forward to watching your progress towards becoming the professors of tomorrow".

Fellows from the first cohort have won significant research grants, published widely in high-impact journals, and received international awards, such as the Royal Astronomical Society's award for the UK post-doc whose career has shown most promise, which went to Dr Sugata Kaviraj (Physics). Several JRFs have secured lectureships at Imperial and other universities. The College has renewed its investment in the scheme and will be making offers to a fourth cohort in spring 2012.

—NATASHA MARTINEAU, COMMUNICATIONS AND DEVELOPMENT

Lord Coe opens Imperial conference

The head of the London Olympic organising committee, Lord Sebastian Coe, along with around 150 delegates from a range of sporting organisations, attended a conference organised by Imperial's Institute of Global Health Innovation's Hamlyn Centre and UK Sport on 10 October.

The annual Elite Sport Performance Research in Training with Pervasive Sensing (ESPRIT) conference was held at Dorney Lake, which is the venue for rowing and kayak events for the 2012 Olympic Games. The event provided Imperial researchers with the opportunity to talk about new sensor technologies that they are developing for elite athletes to improve their training in the lead up to the London 2012 Olympics as part of the ESPRIT project.

The ESPRIT project is a five-year collaborative research consortium that is funded by EPSRC and led by Imperial. The aim of the programme is for researchers to work with elite athletes and develop new sensor technologies that can help them to improve their training and performance. The long-term plan is to use these sensors and the knowledge gathered during the project to improve healthcare in the UK.

Lord Coe (pictured left) was the keynote speaker at the conference and he gave his personal insights into how sport science has evolved over the years. Professor Yang, Director of the Hamlyn Centre and ESPRIT research programme (pictured right), said:

"Sensor technology is set to revolutionise the way we monitor our health and wellbeing. Working with elite athletes using sensor



technology provides us with an incredibly unique insight into how the body performs, especially under stressful situations. The conference gave us an opportunity to showcase advances in our research. London 2012 is on our doorstep and we hope that our work on the side lines contributes to UK athletes winning gold. We also hope to yield valuable insights into the body to improve healthcare in the future."

—NEHA OKHANDIAR, INSTITUTE OF GLOBAL HEALTH INNOVATION

For more conference highlights: <http://bit.ly/s5wW18>

media mentions

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT



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MANAGEMENT TODAY ▶ 1.10.11

Failing, to succeed



The role, and even usefulness, of failure when starting businesses has been under-rated, according to academics and entrepreneurs. A number of successful businesses now attribute that success to the experience and insight gained through failing early on, with those false starts opening up new opportunities or enabling valuable expertise to be developed. In an interview with *Management Today*, Professor David Gann (Business School) used the example of London's Millennium Bridge, saying: "Everybody said it was a big failure, but it was turned into a success because the engineering company behind it, Arup, learnt about what had gone wrong with the bridge design, published its findings and then actually won new work off the back of it. So it turned it into a business success as well."

NEW SCIENTIST ▶ 5.10.11

The end of medication for kidney recipients?

Researchers have been developing a new cellular therapy which could eliminate the need for kidney transplant recipients to take immunosuppressant drugs for the rest of their lives, reported *New Scientist*. The treatment involves killing some, but not all, of the recipient's white blood cells, and replacing them by injecting millions of white blood cells from a kidney donor who, in the trial, was a closely matched relative. Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, said that the new therapy was less traumatic than the alternative, a bone marrow transplant, but noted that "the real test will come when this is used for mismatched organs" which would greatly expand the number of organs available for the procedure.

BBC NEWS ▶ 6.10.11

Weight loss regime light on evidence



Step-by-step behavioural approaches to losing weight show little evidence of success, according to Professor Azeem Majeed and Dr Nik Tuah (both Public Health). The BBC reported how they analysed research from around the world and discovered that five-step behaviour-focused processes that encourage people to change their mindsets lead to weight loss of 2kg or less. Professor Majeed said: "Changing people's dietary patterns is very difficult – that's why we've got such a problem with obesity." Dr Tuah added: "This does not necessarily challenge the notion that diet and exercise are effective weight loss strategies but, instead, raises questions about how to approach lifestyle changes for individuals who want to adopt them."

BBC TWO ▶ 19.10.11

Faster than the speed of light

In September 2011, scientists claimed to have observed neutrino particles that travelled faster than the speed of light, a finding that could have profound implications for some of the fundamental laws of physics, if it is confirmed. Professors Fay Dowker, Joao Magueijo and Michael Duff (all Physics) appeared on a special hour-long BBC programme to explain what such a discovery could mean, and why it matters. Professor Magueijo said: "The neutrino is being the bad boy of physics, basically putting physicists out of their comfort zone. A lot of unusual things have been revealed by the neutrino, so maybe you shouldn't be so surprised by this novelty."



awards and honours

MEDICINE

Holden's membership of European Molecular Biology Organisation



Professor David Holden, Chair of the Microbiology Section in the Department of Medicine, is among 46 renowned life scientists whose excellence in research has been acknowledged by the European Molecular Biology Organisation (EMBO) this month. He has been granted lifetime membership of the organisation

in the 2011 annual election. Professor Holden's research focuses on Salmonella bacteria, which cause diseases including gastroenteritis and typhoid.

ENGINEERING

Promoting German academic excellence

Professor Sandro Macchietto (Chemical Engineering and Chemical Technology) has been appointed to an international panel by the *Wissenschaftsrat*, the German council for science and humanities. Professor Macchietto will be part of a panel whose goal is to help universities in Germany develop centres of international excellence and establish themselves as internationally leading research universities in the future.

NATURAL SCIENCES

Recognition for Franks and Stumpf



Professors Nick Franks (pictured) and Michael Stumpf (both Life Sciences) were elected Fellows of the Society of Biology, the UK's professional body for biosciences, on 19 September. Professor Franks' research focuses on understanding how general anaesthetics act, while Professor Stumpf's research includes exploring how cells respond to and interact with their environment. Professor Franks was also awarded an honorary doctorate by Montreal University at an awards ceremony

in Montreal in June, and has been named the 2011 Distinguished Lecturer in Neuroscience at the University of Toronto.

ENGINEERING

Bell honoured in Italy

Professor Michael Bell, Professor of Transport Operations (Civil and Environmental Engineering), was honoured by the Italian Society of Transportation Scholars (SIDT) at their annual conference in Venice on 7 October. He was invited to be an Emeritus Member of SIDT. Professor Bell has contributed to a wide range of research projects focussed on developing transport networks, including evaluating the impact of congestion charging in London and working on a Swiss national travel model.



Faulty molecular switch can cause infertility or miscarriage

Imperial scientists have discovered an enzyme that acts as a 'fertility switch' in a study published in *Nature Medicine* on 17 October. High levels of the protein are associated with infertility, while low levels make a woman more likely to have a miscarriage, the research has shown.

The findings have implications for the treatment of infertility and recurrent miscarriage, and could also lead to new contraceptives. Around one in six women has difficulty getting pregnant and one in 100 women trying to conceive has recurrent miscarriages, defined as the loss of three or more consecutive pregnancies.

Researchers looked at tissue samples from the womb lining, donated by 106 women who were being treated at Imperial College Healthcare NHS Trust either for unexplained infertility or for recurrent pregnancy loss.

The women with unexplained infertility had been trying to get pregnant for two years or more and the most common reasons for infertility had been ruled out. The researchers discovered that the womb lining in these women had high levels of the enzyme SGK1. Conversely, the women suffering from recurrent pregnancy loss had low levels of SGK1.

Madhuri Salker (Surgery and Cancer) said: "We found that low levels of SGK1 make the womb lining vulnerable to cellular stress, which might explain why low SGK1 was more common in women who have had recurrent miscarriage. In the future, we might take biopsies of the womb lining to identify abnormalities that might give them a higher risk of pregnancy complications, so that we can start treating them before they get pregnant."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Premature babies at risk of ill health in later life

Young adults who were born prematurely show multiple biological signs of risks to future health, research by scientists at Imperial has found. The study, which was published in the journal *Paediatric Research* on 18 October, indicates that urgent work is now needed to monitor preterm babies into adulthood to improve the detection of early signs of disease.

The study of 48 volunteers aged 18–27 found that those who were born at 33 weeks of gestation or less had higher blood pressure and more fat tissue, despite

having a normal body mass index, and more fat in their muscles and liver. These traits are linked to heart and circulatory disease and type 2 diabetes. The differences in fat around the abdomen were most marked in men. The number of preterm babies born each year is rising and in developed countries around 2 per cent of babies are born before 33 weeks of gestation.

Medical advances mean that a higher proportion of babies born early are surviving, however, a few studies have suggested that the impact of preterm birth persists into adulthood, putting prema-

ture babies at risk of ill health in later life. The biological pathways involved are unknown.

"This was only a small study but the differences we found were quite striking," said Professor Neena Modi (Medicine) the lead investigator in the study.

"Preterm men and women might be at greater risk of cardiovascular and metabolic diseases but if we look out for the warning signs, we can help them to stay healthy with lifestyle interventions, and treatment where appropriate."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT



Solar variability helps explain cold winters



Research published in the journal *Nature Geoscience* in October, which was led by the Met Office and involved scientists from Imperial and Oxford, has shed new light on a link between decadal solar variability and winter climate in the UK, northern Europe and parts of America.

The study shows that low UV output from the sun can contribute to cold winters over parts of the northern hemisphere, as recently seen in the UK, while years of higher UV have the opposite effect.

While some studies have observed a link between solar variability and winter climate, the research

establishes this as a consistent climate pattern.

New data from sensitive satellite equipment shows UV variability over the 11-year solar cycle may be much larger than previously thought and this finding has been key to the research. By using this information in the Met Office's climate model, researchers were able to reproduce the effects of solar variability apparent in observed climate records.

Co-author Professor Joanna Haigh (Physics), whose research in atmospheric physics laid the groundwork for this study, said: "Compared with the effect of manmade emissions over the last century, solar variations still have a very minor effect on long-term global climate trends, but this study shows they may have a detectable influence on winter climate.

"Even with the most sophisticated atmospheric models, it is very hard to predict weather patterns on seasonal timescales. This study, along with our ongoing research through the NERC Solar Variability and Climate (SOLCLI) consortium, is adding much detail to our current understanding."

—ADAPTED FROM A PRESS RELEASE ISSUED BY THE UK MET OFFICE

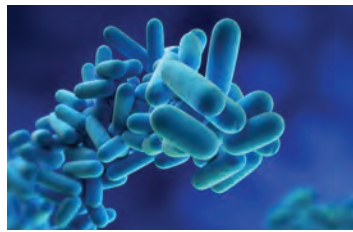
Scientists create computing building blocks from bacteria and DNA

Imperial researchers have successfully demonstrated that they can build some of the basic components for digital devices out of bacteria and DNA in a study published in the journal *Nature Communications* in October. The research could pave the way for a new generation of biological computing devices.

The scientists have demonstrated that they can build logic gates, which are used for processing information in devices such as computers and micro-processors, out of harmless gut bacteria and DNA. These are the most advanced biological logic gates ever created.

Although still a long way off, the team suggested that these biological logic gates could one day form the building blocks in microscopic biological computers. Devices could include sensors that swim inside arteries, detecting the build-up of harmful plaque and rapidly delivering medications to the affected zone.

Professor Richard Kitney (Bioengineering) said: "Logic gates are the fundamental building blocks in the silicon circuitry



that our entire digital age is based on. Without them, we could not process digital information. Now that we have demonstrated that we can replicate these parts using bacteria and DNA, we hope that our work could lead to a new generation of biological processors,

"Logic gates are the fundamental building blocks in the silicon circuitry"

whose applications in information processing could be as important as their electronic equivalents."

The next stage of the research will see the team trying to develop more complex circuitry that comprises multiple logic gates.

Professor Martin Buck (Life Sciences) added: "We believe that the next stage of our research could lead to a totally new type of circuitry for processing information."

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Bigger brain, smarter child?

Research published in mid-October in the journal *Neurology* suggests that the growth rate of the brain's cerebral cortex in premature babies may predict how well they are able to think, speak, plan and pay attention in later childhood.

The cerebral cortex is the outer layer of the brain, which is responsible for cognitive functions, such as language, memory, attention and thought.

The study looked at brain growth rates of 82 infants who were born before 30 weeks' gestational age, using MRI scans of their brains between 24–44 weeks. Brain scans were collected repeatedly from birth until the due date. The babies' cognitive abilities were tested at two years old and again at six years old.



The study found that a faster rate of cerebral growth in infancy correlates with higher scores in developmental and intelligence tests in childhood. A five to 10 per cent reduction in the surface area of the cerebral cortex at full-term age predicted a score of approximately one standard deviation lower in the intelligence tests in later childhood. Motor skills did not appear to be affected by the rate of cerebral cortex growth, and overall brain size was not related to general cognitive ability.

Professor David Edwards (Clinical Sciences) said: "In babies born preterm, the more the cerebral cortex grows early in life, the better children perform complex tasks when they reach six years old. These findings show we should focus on the growth of specific regions of the brain, like the cortex, when trying to understand or diagnose potential problems in babies and fetuses."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Genetic study of liver function could lead to new treatments



An international collaboration, led by researchers at Imperial, has identified a large number of areas in the human genetic code that are involved in regulating the way in which the liver functions. The new study involved over 61,000 people and was published in October in the journal *Nature Genetics*.

The work identifies 42 genetic regions associated with liver function, 32 of which had not been linked to liver function before.

The work should lead to a better understanding of precisely what goes wrong when the liver ceases to work normally. Ultimately, it could point the way to new treatments that can improve the function of the liver and help to prevent liver damage.

The liver is the body's largest internal organ and around two million people in the UK have a liver problem at any one time. The liver carries out hundreds of different tasks, including making proteins and blood clotting factors, and helping with digestion and energy release.

The researchers assessed the function of the volunteers' livers by looking at the concentrations of liver enzymes in their blood. People who have liver damage have high concentrations of these enzymes, which are associated with an increased risk of conditions such as cirrhosis, type 2 diabetes and cardiovascular disease.

"Our new study is a big step towards understanding the role that different genes play"

Dr John Chambers (Public Health) said: "Our new study is a big step towards understanding the role that different genes play in keeping the liver working normally, and towards identifying targets for drugs that can

help prevent the liver from functioning abnormally or becoming susceptible to disease."

—LAURA GALLAGHER, COMMUNICATIONS AND DEVELOPMENT



A rock solid education

Earlier this month Dr Lorraine Craig, Academic Tutor for the Department of Earth Science and Engineering, crossed the stage in the Royal Albert Hall to rapturous applause from staff and cheers from students, as she collected her Rector's Award for Excellence in Supporting the Student Experience on Commemoration Day.

Reporter met with Lorraine to find out how she led a change in the Department's culture, boosting its overall satisfaction rating in the National Student Survey (NSS) from 74 per cent in 2008 to 98 per cent in 2011.

When Lorraine joined Imperial in 2006, she was keen to find out how the Department was perceived by its students. Looking at the results of the Student Online Evaluation (SOLE), completed every spring and autumn term by all undergraduates, and the NSS which offers the views of final year undergraduates, she found strong evidence of student dissatisfaction.

In particular students raised concerns about lack of feedback, feeling overloaded with assessment and feeling unsupported. "At the time, all the Department's efforts were focused on the 2008 Research Assessment Exercise. But I realised the emphasis needed to shift to both teaching and the student experience or we were going to start losing the best students," she says.

Over the next three years, with the help of the Head of Department, Professor Martin Blunt, and Professor of Geophysics Mike Warner, Lorraine set about convincing staff and students of the importance of the student experience. To guide her strategy Lorraine dissected the NSS results and asked staff what could be done to address areas of concern.

Working environment

One of the first things Lorraine wanted to tackle was the atmosphere in the Department. She believes that respect and open communication between staff and students is the cornerstone of student satisfaction.

"It's about smiling at students in the corridor or when they come to your office and not being afraid to show you care," she says. "These small things really make a difference to how the students feel about their environment."

You only have to speak to students in the Department to hear how this ethos has filtered through. Jay Shah, a third year Geology and Geophysics student, says: "There's a feeling that lecturers and students can both learn from each other – it's not just one-way and there is a community spirit which I haven't seen in other departments."

Lorraine explains that the Department's active social life brings together staff in varied roles and students across all year groups. Bar nights, departmental lunches, sports games and pub quizzes help build connections between staff and students.



Personal touch

Lorraine has also made huge steps to create a more personal induction for new students. She has a team who phone up prospective students and invite them to their interviews and, if they are accepted for a place, Lorraine sends them a personal, handwritten note attached to their acceptance letter. "I think it's really important that each student is treated as an individual rather than just another student," she explains.

Once prospective students become undergraduates, Lorraine organises lunches for first years every couple of weeks and meets with them as a group three times a year.

"I feel very lucky to be part of a department that's not just an academic department but an actual community," says Hannah Bungey, a fourth year geologist. "It's such a supportive and encouraging environment and everyone knows each other's names."

It's this environment which allows Lorraine to tackle problems which have gone unnoticed in the past. In the 2008 NSS, only 54 per cent of students said that they received sufficient support for their studies whilst today Lorraine makes herself easily contactable via email and Twitter and has an open-door policy. In 2011 this figure went up to 94 per cent. "I act like a go-between when students or staff have a problem either academically or personally," Lorraine explains.



“It’s about smiling at students in the corridor or when they come to your office and not being afraid to show you care”



Evolving the course

As well as pastoral changes, the Department has taken steps to tackle the problem of students feeling overworked. Lorraine started by working out how they could simplify the structure of the degree and reduce the amount of assessment for both staff and students. From SOLE Lorraine learnt that deadlines for coursework frequently clashed, with every member of staff thinking that their course had to have assessed assignments submitted every week for the student to learn the material. Lorraine now has an overview of the coursework timetable and she is able to minimise the amount of clashes.

Christopher Dean, a third year geology student says what makes the Department stand out is that things really do change. “For example, if a lecture isn’t working or we don’t understand an aspect of a course, we can go to Lorraine and tell her. If we have a personal interest in an area, she can ask a lecturer to factor in more content in the course to cover that. Whatever it is, she’ll suggest a different teaching method and our lecturers will try to ensure it works for us.”

“Our lecturers understand how much time we’ve spent doing the work and, in return, they give us an appropriate amount of feedback”

Feedback

Lorraine explains that reducing the amount of assessment has also had a knock on effect of giving staff space to provide better and more timely feedback for the coursework which is submitted.

Not getting enough quality feedback on assignments or assessments is a common concern for students across the College and Lorraine was keen to tackle this. The Department came up with a policy that all coursework is handed in by 9.00 on a Monday morning and returned within 10 days. “Everybody in the Department signed up to this as it was one of the areas where we knew we were failing our students,” explains Lorraine.

In the 2008 NSS results 43 per cent of students were satisfied with feedback and assessment and this has risen to 92 per cent in 2011. Hannah, Jay and Christopher confirm that feedback has really improved. “I think it’s a sign of respect when we get proper feedback. Our lecturers understand how much time we’ve spent doing the work and, in return, they

give us an appropriate amount of feedback,” says Hannah.

In order to help the Department keep track of the coursework assignments that are being set and the feedback that follows, Senior Lecturer Dr Mark Sutton created an online database called Earth Science and

Engineering Student Information System (ESESIS). It enables students to see all the feedback they have had over the course of their degree and it also shows all their modules, lecture timetables, and information about exams. To monitor the coursework policy, ESESIS includes a traffic light system – green and red – which Lorraine uses to keep tabs on feedback that’s outstanding. “It’s something I’ve had to be tough on. If coursework isn’t returned, I find a member of staff and remind them to do it,” she explains.



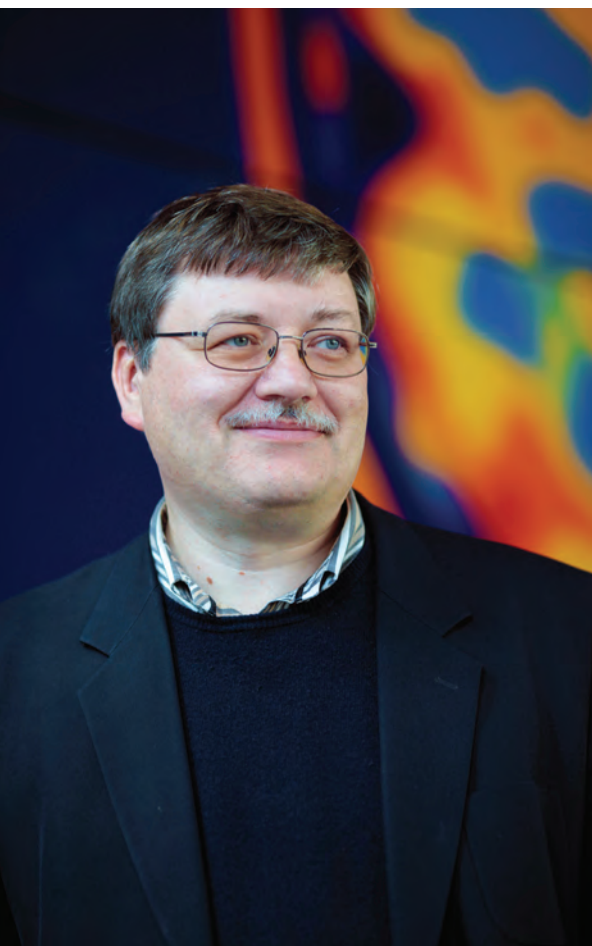
Encouraging participation

Another thing Lorraine noticed when reviewing the feedback several years ago was that the students who were responding to surveys were the ones who weren’t happy. “There were lots of people who were satisfied but we just weren’t picking up on them.” With the help of the student year-group representatives, Lorraine encouraged all students to respond to SOLE and in the 2011 NSS, the Department achieved 98 per cent participation compared to just 49 per cent in 2008. “As more and more students responded, our overall percentage of good or very good comments went up,” she says. Staff also benefited from doing this as their improved teaching scores now help towards promotion.

Lorraine admits that what worked for Earth Science and Engineering might not work for every Department but for her it has all been worth it. “It is so rewarding to see students develop during the course of their degree, and to leave university having enjoyed their time here. They’ve benefited from the many opportunities that we offer them, worked hard and so feel prepared for a career in the future that is right for them.”

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

Read Imperial College Union’s response to the 2011 NSS results: <http://bit.ly/NSSresults>



Rooted in research

Reporter speaks to Professor Donal Bradley CBE, FRS, one of the most highly cited scientists in the fields of physics and materials science, about his hopes for his new role as Pro Rector (Research), his ideas on technology transfer and why he doesn't intend to give up on his own research any time soon.

When did you first discover science?

As a child I had my heart set on being a marine biologist, influenced by Jacques Cousteau, a French researcher who presented a popular television programme on ocean life. But as I started studying it was physics that had the biggest draw for me.

What attracted you to physics?

Unlike many physicists it wasn't the grand sweep of the cosmos that excited me – I had a more general desire to understand how everyday things work. My dad, Dan Bradley, a pioneer in laser research, was Head of the Department of Physics at Imperial from 1976–80, so I was following in his footsteps when I arrived here as an undergraduate in 1980.

What does the Pro Rector (Research) do?

The Pro Rector (Research) is the College's champion for research. He or she has to take a strategic overview across the whole of the College and look to see what can be done to promote excellence at a more local level. Another key part of the role is external facing and involves representing the research interests of the College, and engaging and influencing research funders and policy makers.

What qualifies you for the job?

Anyone who knows me would say that research is what motivates me the most. I've had a very successful research career to date and I continue to be strongly motivated by the research that I do. Establishing and developing the College's activities in plastic electronics, which culminated in the 2009 launch of the Centre for Plastic Electronics, has been a very rewarding experience. I've also enjoyed the opportunity to support other people's research and help them develop their careers both while Head of the Department of Physics and then Deputy Principal of the Faculty of Natural Sciences.

Can you explain what plastic electronics is and what potential applications it has?

Plastic electronics is a rapidly growing field of research with the potential to bring significant developments in energy, healthcare and communications. There are so many potential applications such as solar power generation, new, low-energy computer displays, solid-state lighting, pervasive electronics, imaging and sensing arrays, and photonics.

“I've enjoyed the opportunity to support other people's research and help them develop their careers”

What are you most looking forward to in your new role?

I'm looking forward to engaging with people from across the College who are working in research and getting the chance to really understand what drives them, what they see as the issues, where they need support and what their ambitions are in taking their research forward.

What are the key challenges of your role?

There are many. Developing a research strategy that people can identify with and feel part of, is going to be one. I think it's important that people feel engaged with where the College is heading, and that they have a chance to influence that direction. I'm also keen to use good relationships with external organisations to help us achieve our strategic priorities.

How important is technology transfer to you?

From a personal perspective, close interactions with companies – including those I have helped to create – have always provided me with good research opportunities, and interesting challenges and problems to work on. It's also really exciting to see outputs from your research being translated into commercial products.

Are there dangers in focusing too much on research that targets current commercial interests?

Yes, and also in focusing too much on interdisciplinary themes. There are many areas of excellent research not naturally close to application or a boundary between disciplines and we cannot easily anticipate where the next breakthroughs are going to come from. An institution like Imperial should strive to maintain a healthy balance of core strengths in the underlying disciplines.

Will you still find time to do research with your new role?

For the last six years I've had major administrative roles, so I've had experience of holding down senior positions whilst still doing research. Part of this Pro Rector role is about being an active researcher and being someone who is credible to represent and talk about Imperial's research activities, so actually doing research is an inherent part of that. On a personal note I don't think I'd find it possible to stop doing research at this point in my career – it's very much a part of who I am!

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

inside*

story

mini profile

Eliza Manningham-Buller

Eliza Manningham-Buller succeeded Lord Kerr as Chair of Imperial's Court and Council earlier this year. *Reporter* spoke to the former Director-General of the Security Service about her initial impressions of the College and how she enjoyed her first Commemoration Day.



How are you finding working in a scientific environment?

When I retired from my previous job in 2007, I thought that I'd like to try and do something that had a scientific bias, and I was lucky enough to be appointed a governor of the Wellcome Trust. When the opportunity came up to apply to be Chairman here, I saw this as a complementary position, with the added advantage of my having a genuine interest in education. When I left university the first thing I did was teach and I am particularly interested in this area.

What are your priorities?

I think it is right to say that at this stage it is early days – I've got a lot to learn about Imperial. Priorities will emerge and there are some big issues to discuss. Such as, are our undergraduates getting the best teaching to the highest standard that we can give them? And other issues such as giving proper financial support to students so we continue to attract the best regardless of background.

How did you find your first Commemoration Day ceremony?

It was an honour to shake the hands of all the new graduates and prize winners who have already achieved so much and whom I expect are already building on those achievements.

As someone with insider knowledge, is *Spooks* close to fact, or just complete fiction?

I only watched a little of the first series – but the only thing I believe that is accurate about *Spooks* is the entry pods they use to get into the building. The notion that half a dozen people with a highly developed sex drive sort out appalling crises in 40 minutes, ignoring every law in the land, is a wonderful fantasy.

— SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

For the full interview see: <http://bit.ly/Elizainterview>

Japanese volunteering project

From the 11-25 September, five Imperial students Ryan Browne (Chemistry), Francesco Ferroni (Mechanical Engineering), Kuo Jian Wong (Chemical Engineering and Chemical Technology), Jiahui Tan (Computing), and Jingyi Yu (Chemistry), visited and worked in five *sake* breweries in the region of Tohoku that had sustained damage in the 11 March earthquake and tsunami. The *Sake Volunteer Project* was organised by student-led Action for Japan UK and the Japan Affairs Forum.

Despite being hard hit by the earthquake, *sake* breweries are optimistic and determined to get back on their feet and there is a strong desire to hold onto the invaluable tradition of *sake*-making in Japan.

The trip first stopped in the village of Sambongi at the Niizawa Jozoten brewery, a 148-year-old establishment famous for their Hakurakusei *sake*. The natural disaster left the foundations of the brewery damaged beyond repair, forcing the relocation of operations to new facilities. Volunteers took part in what was left of *sake* production on-site, while equipment was being transferred, and were allocated a variety of



tasks involved in the brewing process. There was plenty to be done from washing, shovelling and steaming rice, to making koji-steamed rice that has had koji-kin, or koji mold spores, cultivated onto it, or bottling the finished product.

The last few days included a visit to the Urakasumi brewery. Here, work involved road and gutter clearance in an area that had been paralysed with rubble and mud. "The scale and amount of rubble and devastation really was jaw dropping" says Francesco Ferroni, a fourth year mechanical engineer at Imperial, but he explained that they got the chance to see the difference their hard work made: "Seeing a road that was once dysfunctional then being used by the local townspeople after a day's work was very satisfying."

—KATHERINE PORTILLA, THIRD YEAR UNDERGRADUATE IN THE DEPARTMENT OF MECHANICAL ENGINEERING

► SCIENCE FROM SCRATCH

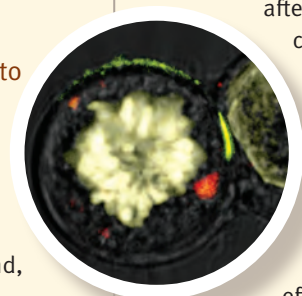
Natural killer cells

As explained by Dr Hugh Brady, Reader in Immunology (Life Sciences).



"The immune system is constituted by several cell types that work together to protect us from the germs we meet in our everyday lives. Natural killer cells are white blood cells and act as the body's first response to certain pathogens, such as some bacteria and viruses. Natural killer cells multiply rapidly, shortly after the first contact with the pathogen, and selectively kill infected cells. In addition, they produce molecules able to stimulate the activity of other cell types involved in the immune response. This unique ability of natural killer cells allows the body to effectively eliminate many pathogen-infected cells. Natural killer cells are also involved in the recognition and elimination of tumour cells, which makes them a promising tool for the treatment of cancer, and their name originates from this distinctive feature. Scientists are currently placing significant effort in developing molecules able to increase the production of natural killer cells in cancer patients."

—ROBERTA SOTTOCORNOLO, RESEARCH ASSOCIATE (LIFE SCIENCES)



IMPERIAL STUDENTS SHARE THEIR EXPERIENCES OF LIFE AT THE COLLEGE ON THE STUDENT BLOGGERS WEBSITE.

Student blogger Charlotte on starting back at university:

"I forgot how quickly time passes when uni starts! Freshers' Week seemed to be over in 30 seconds, including welcoming freshers in EEE/ISE with the buddies lunch, recruiting new members for the fencing club, hosting try-outs for those who want to fence for the teams, getting installed in my new flat and preparing for the upcoming year.

Luckily, I spent the weekend in Barcelona, trying to do as little as possible to just charge the batteries before it all kicked in. It was more than welcome, despite the fact that it made me look like a properly cooked lobster at the end of it!"

www.imperial.ac.uk/campus_life/studentblogs

blog
SPOT

FoodCycle

Last month 25 children in Imperial's Early Years Education Centre (EYEC) celebrated harvest festival by supporting the food sustainability charity, FoodCycle. Brigid Buckley, Early Years Educator for three to five-year-olds reports:

"Every year the EYEC try to do something different to celebrate harvest festival. This year I decided to get in touch with biology undergraduate Boncica Tam who is a project leader for FoodCycle. I asked her to come in and speak to the children about the charity. FoodCycle was founded in 2008 and aims to reduce food waste in local areas by finding sources of surplus food and distributing it to people who do not have access to regular healthy meals. It started in London and now there are committees across the UK – many of which are based at universities and make use of their kitchens. The Imperial-based FoodCycle links up with local businesses and every Sunday volunteers take surplus food from Wholefoods Market in Kensington and Marylebone Farmers' Market back to the Union Kitchen to cook meals and then deliver them to a homeless shelter in Leicester Square.

Boncica and FoodCycle volunteers put on a play about a grocery store for the children, asking them to join in and act like the last bananas on the shelf. Instead of being thrown away they are given to FoodCycle. Over the next two weeks we asked the children to bring in spare tinned or dried food and then we all walked over from Prince's Gardens to the Student Union and presented their food to members of FoodCycle. It was great to be able to show them sustainability in practice."

To get involved with FoodCycle contact: imperial@foodcycle.org.uk



cross culture



Albania

by Bora Trimcev, Programme Administrator at the Health and Care Infrastructure Research and Innovation Centre (Business School)

"I am originally from Tirana, the capital of Albania. I'm really proud to be Albanian, but my country has had a troubled past.

We were a communist country up until 1991 when a revolution brought in a new democratic regime. The current prime minister of Albania was instrumental in the revolution and he was also my mother's boss. When I was seven, I remember going to one of the political rallies in the main square in Tirana, and he said to me, "Bora, come on stage". I was scared of the crowd though, so I just hid in my mother's skirt.

There was a really tough period after the fall of communism, when riots occurred because food and other essentials were unavailable. But slowly things have changed, the economy has picked up, and Albania is increasingly a top tourist destination now."

Why Albania's a great place to visit

Food • Albanian cuisine is very Mediterranean, so there are lots of delicious cheeses, vegetables, and lamb dishes. I recently took some friends from London to visit Albania. The highlight of their trip was the lunch that my brother Eno arranged. The lamb we feasted on that day was from a special village called Llogara which is rumoured to produce the best lamb in the country! We also had lots of raki, the national drink. It's a little like vodka but much tastier.

Beaches • Another thing I did with my friends when they came to Albania was to hire a car, which meant we could spend each day at a different, beautiful beach. The Ioanian coast is pretty spectacular and, best of all, the beaches are often empty. My favourite beaches are Llanan (pictured) and Drimades.

Music • Most people in Albania listen to pop music, which I think is pretty terrible, although it's better than when we were under communism when music wasn't allowed at all! Luckily, we have great folk music. When my brother arranged the lunch for my friends he also organised for two folk singers to come along. We all spent six hours dancing, singing and laughing.



About cross culture

Cross culture is a scrapbook for staff and students to fill with their local recipes, cultural traditions and experiences of moving from another part of the world to work or study at Imperial.

✉ To contribute to cross culture please send your ideas to reporter@imperial.ac.uk



Run to the Beat

On 25 September, Alexandra Williams, Dr Shamini Gnani, and Dr Adrian Raby (all Public Health) competed in the Run to the Beat half marathon challenge to raise money for charity. Adrian reports on their experiences:

“The challenge was to run a half marathon around very hilly terrain on a very bright and hot Sunday morning commencing from and finishing at the O2 Arena in Greenwich. To

“The challenge was to run a half marathon around very hilly terrain on a very bright and hot Sunday morning”

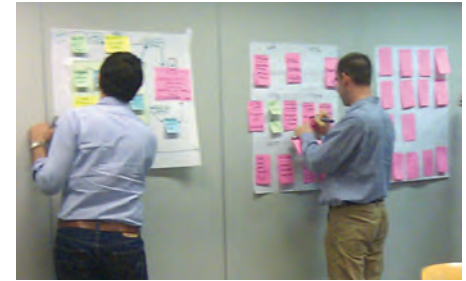
prepare for the event Alex had arranged a number of evening and weekend runs in some of London’s parks.

I recently recovered from a hip injury, which forced me to pull out of the 2011 London marathon, but I’m now busy preparing for the 2012 event, and raising some more money for the Teenage Cancer Trust. Alex ran to raise funds for the NSPCC and Shamini was supporting both charities. I am pleased to announce that we all made it around the course – I finished at a pace of 01:24:25 and came in sixty first out of the 17,000 runners. So far over £1,500 has been raised for the two charities.”

To support the team please follow the links below: Teenage Cancer Trust <http://uk.virginmoneygiving.com/Adrian>

NSPCC <http://uk.virginmoneygiving.com/AlexandraWilliamsNRTBSEP11>

The team is looking for staff or students to join them on 3 December in their next challenge – the Santa Run. For more information visit: <http://bit.ly/v81GaH>



Harnessing potential

The first cohort of participants in the College’s new Academic Development Centre (ADC) are nearly halfway through the programme and making the most of their new skills.

The ADC, headed up by the Deputy Rector, Professor Stephen Richardson, and Organisational Development Consultant Dr Magdalena Bak-Maier, works to support the career development of academic staff from across all Departments.

The ADC, which began in March, aims to support participants in realising their ambitions, through connecting people, ideas, and strategies to improve individual career development, and involves workshops, coaching and networking events. The Centre also provides a carefully customised tool to help academics keep track of their development.

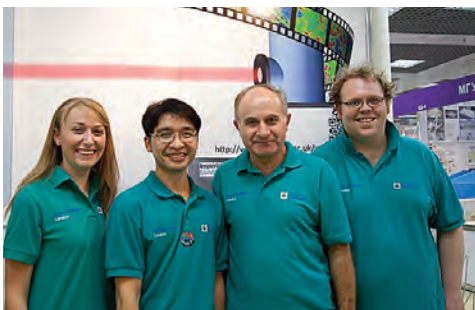
“It has given me the confidence to attempt projects that I perhaps otherwise would have shied away from”

Participant Dr Eric Kerrigan (Electrical and Electronic Engineering) shared his experiences: “The ADC has given me a structured framework in which to reflect on my career and life, meaning I feel much more in control of my career direction now. I really enjoyed the storytelling and pitching masterclasses – I’ve started bringing the principles into various activities in my professional life, such as presentations, proposals and papers, and have already seen people responding positively to it.

It has also given me the confidence to attempt projects that I perhaps otherwise would have shied away from and to think much bigger than I used to,” he added.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

For more information visit: <http://bit.ly/shCe8F>



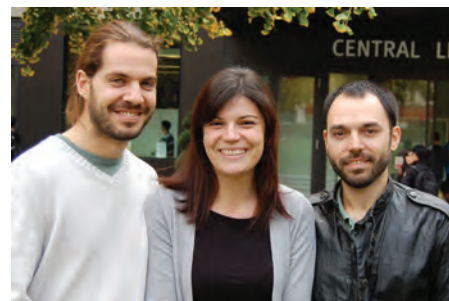
Festival of Science

Professor Sergei Kazarian (Chemical Engineering and Chemical Technology) and members of his group demonstrated their research at the Festival of Science, which was held in Moscow, Russia, this October. The team are using a new method of chemical photography to solve problems in areas as diverse as forensics, pharmaceuticals, cultural heritage and medicine.

Professor Kazarian was also invited by the British Embassy in Moscow to give a lecture about his research in chemical photography to Russian scientists, embassy staff, industry and local British people currently based in Russia.

As a measure of gratitude for their efforts while in Russia, Professor Kazarian and his team were awarded a certificate of thanks from the Rector of the Moscow State University.

A winter challenge



On 20 November Dr Apostolos Georgiadis (Chemical Engineering and Chemical Technology), Dr Avgoustinos Filippoupolitis and Nikolitsa Markou (both Electrical and Electronic Engineering) will be participating in a 17 mile fundraising trek in Derbyshire called the High Peak Trail-Winter Challenge 2011 to raise money for the British Heart Foundation (BHF). The BHF is a national heart charity dedicated to saving lives through pioneering research, patient care, campaigning for change and by providing vital equipment and information.

To sponsor the team, scan the QR code:

Visit www.facebook.com/BrightSparks2011 to see photos and updates of the team’s preparations



Finding patterns

A used Starbucks cup featuring a hastily drawn diagram isn't something most of us would think to rescue. Not so for Geraldine Cox, who not only saved the cup, but then transformed it into a work of art.



Geraldine is the Blackett Laboratory's current artist-in-residence.

Her degree in physics from Loughborough combined with her degree in Fine Art Painting from the City and Guilds London School of Art means her background is exceedingly well suited to her current undertaking; a collaborative art project with Imperial's physicists called *Finding Patterns*, which has been funded by the Leverhulme Trust.

The cup's diagram was drawn by Reader in Physics at Imperial, Dr Terry Rudolph, Geraldine's chief collaborator. It illustrates how light and matter interact and serves as an elegant entry point into the project as both are concerned with, as Geraldine puts it, "how we see the world through a physics lens."

Geraldine is currently in the research phase of the project. Much of her time has been spent in conversation with students and academics, talking about a range of subjects including art and physics. These exchanges are being written up and added to the project's website alongside a growing collection of musings and illustrations, creating a supply of material to inspire future works.

Geraldine says, "One of the things I'm interested in is how physics sits alongside other things. Science and art are both ways of understanding and communicating about the world and I'm interested in breaking down the current separation, and mixing it up."

How this and other insights will play out artistically is yet to be seen, but if the Starbucks cup is anything to go by, it's going to be interesting.

—JESSICA ADAMS, COMMUNICATIONS AND DEVELOPMENT

www.findingpatterns.info

long
service

Reporter features staff who have given many years of service to the College. Staff listed below celebrate anniversaries in the period 1–9 October. Data is supplied by HR and is correct at the time of going to press.

—JESSICA ADAMS, COMMUNICATIONS AND DEVELOPMENT

20 years

- Mr Geoff Bruce, User Helpdesk Officer (Computing)
- Dr Juan Lalaguna, Visiting Lecturer in Spanish and Translation (Humanities)
- Dr Elizabeth Lightstone, Reader in Renal Medicine (Medicine)

30 years

- Professor Steve Marston, Professor of Cardiovascular Biochemistry (NHLI)
- Mr Ian Moor, Teaching Assistant (Computing)
- Dr Julia Sedgbeer, Senior Lecturer (Physics)

SPOTLIGHT

Dr Elizabeth Lightstone (Medicine) 20 years



In 1991, Dr Elizabeth Lightstone (Medicine) joined the Royal Postgraduate Medical School, which merged with Imperial in 1997, on a MRC Clinician Scientist Fellowship. She celebrates 20 years at the College this month.

Liz's academic interests lie in renal disease in ethnic communities and a kidney disorder called lupus nephritis. The investigative scientific research which defined her early career has been increasingly complemented by her clinical and educational work. Liz now devotes much of her time to her role as Inerim Director of the North West Thames Foundation School, which provides a structured transition for medical graduates to become practising doctors. Liz considers this work to be especially rewarding, particularly mentoring young doctors and "seeing them find their niche". Liz says: "The opportunity for translational medicine, where research is taken straight from the bench to the bedside, is one of the many things which make Imperial distinctive. I can't think of many other places like it."

High Flier

This year's Commemoration Day ceremonies on 19 October were particularly poignant for Flight Lieutenant Chris Shone, who studied Aeronautics at Imperial from 2004- 2008: but due to commitments in the RAF has been unable to attend his graduation ceremony until this year. Reporter spoke to Chris to find out how his degree has served him in the Forces and how he felt about finally making it to the Royal Albert Hall.

How did you keep up your training when you were studying at Imperial?

I joined the University of London Air Squadron which is based in Brompton Road. I got the chance to fly in a variety of RAF aircraft, experience life on RAF Stations and receive regular training sessions on the RAF's role in the world.

You started your official RAF training shortly after you finished your degree – did your degree help you?

By having a firm grounding from my Imperial degree, I have a real appreciation of what design features affect an aircraft's ability to operate, so I can confidently understand the impact of something like

a crack in the airframe or a missing aerodynamic fairing, for example.

How did you manage to miss three graduation ceremonies?

Missing a day of training is really significant in the RAF as a lot of it is practical. In 2008 I had just started my Initial Officer Training at RAF Cranwell, in 2009 I was doing my Engineer Officer Foundation Training and last October I was tied up with my job as Officer Commanding Puma Component Servicing Flight. Just last week I returned from Afghanistan, working as a Military Assistant to a US General, based at Kandahar Airfield. I am currently on post operational leave which has afforded me the first opportunity in three years to graduate from Imperial.



How did it feel to return and finally graduate?

It was really nice to return to the College, catch up with lecturers and it was especially nice for my parents to finally get that photo on the wall!

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

Welcome new starters

Dr Ali Abbara, Medicine	Miss Georgina Davies, NHLI	Dr Michael Hughes, Computing	Miss Michela Ottobre, Mathematics	Mrs Kalaivani Thuvagan, Chemical Engineering and Chemical Technology
Mr Joan Alabort Medina, Computing	Professor Mark Davis, Mathematics	Ms Robina Ibanda, NHLI	Dr Casian Pantea, EEE	Mr Jakub Trzebinski, EEE
Dr Sarah Ali, Clinical Sciences	Mr Martin De Borbon, Mathematics	Dr Nicholas Jones, Mathematics	Miss Elena Phoka, Mathematics	Ms Chiamaka Ukegbu, Life Sciences
Mr Khalid Ali, Life Sciences	Mr Kees de Vries, Physics	Dr Ourania Kakisi, Medicine	Ms Nisha Pillai, Bioengineering	Dr Antonio Urbina, Physics
Dr Trevor Almeida, ESE	Dr Michael Debney, NHLI	Dr Eric Keaveny, Mathematics	Ms Oana Pocovnicu, Mathematics	Mr Povilas Uzdaviny, Life Sciences
Dr Christoforos Anagnostopoulos, Mathematics	Dr Aniko Deierl, Clinical Sciences	Mrs Helen King, Public Health	Miss Thurka Poobalasingam, NHLI	Dr Koen Van Dam, Chemical Engineering and Chemical Technology
Dr Sarah Anderson, Humanities	Dr Ioannis Dimitriou, EEE	Mr Sebastian Kupka, Medicine	Miss Samantha Price, Medicine	Professor Marin van Heel, Life Sciences
Dr Sonal Arora, Surgery and Cancer	Ms Saloni Dosani, Medicine	Dr Sylvain Laclef, Chemistry	Dr Jonathan Pritchard, Physics	Mr Christos Vasilakos Konstantinidis, EEE
Mr Hari Arora, Mechanical Engineering	Mr Lucky Dube, Medicine	Dr Ferdinand Lali, Surgery and Cancer	Dr Pawel Prociow, Computing	Ms Valentina Vitiello, Computing
Miss Appitha Arulappu, NHLI	Dr Zaoxia Eckel, Humanities	Miss Laura Lambert, NHLI	Dr Julie Prytulak, ESE	Mr Edward Waddingham, Public Health
Mr Pascal Assani, Catering Services	Ms Theofano Eftaxiopolou, Bioengineering	Mr Dangyuan Lei, Physics	Mr Philip Pucher, Surgery and Cancer	Ms Danielle Wagner, NHLI
Mr Zaid Awad, Surgery and Cancer	Dr Zeynep Farooqui, Business School	Miss Jolanta Leonaite, Business School	Dr Simon Ralphs, Medicine	Dr Rosemary Wall, CHOSTM
Dr Maggie Awadalla, Humanities	Miss Eleanor Fielding, Human Resources	Miss Joy Liao, Medicine	Miss Laura Ratcliff, Materials	Dr Caiwen Wang, Humanities
Miss Iram Awan, Public Health	Mr Jason Filos, EEE	Professor Trevor Lindley, Materials	Dr Matthew Rathbun, Mathematics	Miss Shiyao Wang, Humanities
Dr Nigel Bagnall, Surgery and Cancer	Dr Joana Fonseca, Materials	Mr Jens Loebbermann, NHLI	Miss Michelle Rogers, Bioengineering	Mr Robert Waran, Security Services
Mr William Bailly, Humanities	Miss Esther Forte Serrano, Chemical Engineering and Chemical Technology	Dr Rosa Lopez-Cobollo, Life Sciences	Mr Samuel Roseveare, Planning	Mr Alexander Warren, Computing
Dr Anjali Bakhr, Business School	Professor Kim Fox, NHLI	Dr Enkeleida Lushi, Mathematics	Dr John Rossiter, Life Sciences	Dr Julian Waung, Medicine
Dr Thomas Barbour, Medicine	Mr Stefano Franco, Public Health	Dr Laura Luzzi, EEE	Ms Valentina Ruffini, Mechanical Engineering	Ms Amanda Welford, Chemistry
Dr Anthony Barron, NHLI	Mr Oriol Garcia Rovira, Catering Services	Miss Subashini M, Surgery and Cancer	Mr Oscar Salgado Suarez, Humanities	Mr Andre Wilmes, Aeronautics
Mr Mariano Beguerisse Diaz, Chemistry	Mr Christos Gavriel, Computing	Dr Yue Ma, Medicine	Mr Muir Sanderson, Finance	Mr Patrick Wray, Chemical Engineering and Chemical Technology
Miss Fathema Begum, Faculty of Medicine	Professor John Gibbon, Mathematics	Mr Andrew Macey, Chemical Engineering and Chemical Technology	Ms Somita Sarkar, Surgery and Cancer	Mr Dionysios Xenos, Chemical Engineering and Chemical Technology
Dr Thomas Bell, Life Sciences	Miss Alexandra Godlee, NHLI	Mr Hugh Mackenzie, Surgery and Cancer	Miss Anushruti Sarvaria, Medicine	Dr Junaid Zaman, NHLI
Dr Martin Block, Public Health	Mr Fernando Gonzalez Grueso, Humanities	Dr Kaisey Mandel, Physics	Mr Alberto Scaccabarozzi, Materials	Ms Chunling Zhang, Humanities
Dr Andrea Brini, Mathematics	Dr Ioana Gozar, Clinical Sciences	Mr Jose Marciano Belisaro, Public Health	Dr Guy Scadding, NHLI	Dr Rongkuo Zhao, Physics
Miss Sara Budinis, Chemical Engineering and Chemical Technology	Dr Felix Greaves, Public Health	Mr Kevin Maringer, Medicine	Mr Safa Sharaf, Chemical Engineering and Chemical Technology	
Professor Jose Carrillo de la Plata, Mathematics	Miss Elisabetta Grecchi, Medicine	Dr Antonio Martin Bastida, Medicine	Dr Alexander Shaw, Medicine	
Mr Thomas Carter, Library	Mr Ricardo Guerrero Moreno, Computing	Mr Richard Matthewman, ESE	Dr John Shaw, Chemistry	
Dr Angela Cassidy, CHOSTM	Dr Laura Gunn, Public Health	Dr Dara McCutcheon, Physics	Mr Kunal Shetty, Surgery and Cancer	
Miss Kirandeep Chana, NHLI	Ms Feng Guo, Humanities	Miss Lisa McElhinney, Registry	Dr Aran Singanayagam, NHLI	
Ms Lynda Chandler, Registry	Professor David Hand, Mathematics	Mr John McGonigle, Medicine	Mr Pritam Singh, Surgery and Cancer	
Mr Ching Cheung, Physics	Miss Salma Haque, Surgery and Cancer	Mr David Mendive Tapia, Chemistry	Miss Michelle Sleeth, Medicine	
Ms Youngeun Choi, Chemistry	Miss Eleanor Harding, Human Resources	Dr Antonio Martin Bastida, Medicine	Mr Jeremiah Smith, Computing	
Dr Graham Cole, NHLI	Mr George Harrington, Materials	Mr Han Muammar, EEE	Mr Jean Souvignet, Humanities	
Dr Caroline Colijn, Mathematics	Mrs Mary Harrison, Medicine	Dr Laura Muirhead, Surgery and Cancer	Miss Luxumi Sridharan, NHLI	
Mr Graham Conner, Finance	Dr Ming He, Materials	Dr Cesc Murria i Farnos, Life Sciences	Ms Yijia Sun, Computing	
Miss Rosa Cookson, Chemistry	Mr Mark Hession, Life Sciences	Dr Aifric Campbell Ni Chathmhaoil, Humanities	Dr Vito Tagarielli, Aeronautics	
Dr Robert Craven, Computing	Mr Daniel Hollington, Physics	Dr Sukhjinder Nijjer, NHLI	Miss Natasha Tanna, Human Resources	
Dr Stefano Cremonesi, Physics	Ms Ann-Marie Howell, Surgery and Cancer	Miss Damaris Njoroge, Library	Dr Carmen Tenorio Jimenez, Medicine	
Dr Thomas Cundy, Surgery and Cancer	Mr Frank Huang, Surgery and Cancer	Mr Alastair Nuttall, Human Resources	Ms Gabrielle Thomas, Physics	
Miss Shreelata Datta, Surgery and Cancer		Ms Karen Ofosu-Orchard, Life Sciences	Mrs Hazel Thomson, Medicine	
		Ms Yinghong Huang Okuse, Humanities		

The dates above cover staff Moving In from 26 September–16 October. To see the list of staff Moving On and Retirements for the same period, visit: www.imperial.ac.uk/reporter

This data is supplied by HR and was correct at the time of going to press.

✉ 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.



8 NOVEMBER ▶ PUBLIC LECTURE

Tropical tales from the front line

Over two million children worldwide die each year from curable illnesses such as malaria and septicaemia. Sophisticated levels of medical care in resource-rich countries have substantially increased survival rates, but it is not

always possible to transfer such approaches to sub-Saharan Africa where access to intensive care and the range of technologies is limited. Conducting clinical trials in Africa in real-life situations can result in unexpected and controversial findings, providing important advancements for global health. In her inaugural lecture, Professor Kathryn Maitland talks about her experiences on the frontline of emergency childcare in Kenya.



31 NOVEMBER ▶ CONFERENCE

Education Day

Join the Strategic Education Committee and the Educational Development Unit for an afternoon of talks and debates looking at the wider role of teaching and education in preparing students for life after university. Speakers including Dr Evan Harris MP and the Master of

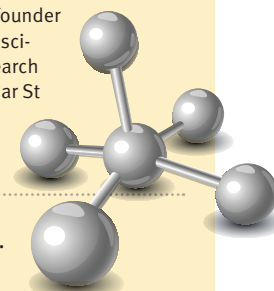
Wellington College, Dr Anthony Seldon, will be answering questions, such as "Is university education failing our students?" and "How broad should an Imperial education be?" Baroness Manningham-Buller, Chair of the Court and of the Council, will also present the 2011 Rector's Awards for Excellence in Teaching, Pastoral Care and Research Supervision.

take note

Visits to the Francis Crick Institute

Staff are invited to take part in a site visit to witness progress in building the Francis Crick Institute, of which Imperial is a founder member. The interdisciplinary medical research institute situated near St Pancras is due for completion in 2015.

To arrange a visit, please contact: alex.hartnall@crick.ac.uk



8 NOVEMBER ▶ SEMINAR

The rise and rise of rhinovirus

Professor Philip Bardin, Monash University, Melbourne



16-17 NOVEMBER ▶ CONFERENCE

Institute of Systems and Synthetic Biology autumn symposium

Speakers from Imperial, Oxford and Yale

17 NOVEMBER ▶ SEMINAR

Antigen-specific enhancement and suppression of immunity by adoptive T cell transfer

Professor Hans Stauss, UCL

17 NOVEMBER ▶ MUSIC

Lunchtime concert

Tippett Quartet

22 NOVEMBER ▶ PUBLIC LECTURE

What is life?

Sir Paul Nurse, President of the Royal Society



23 NOVEMBER ▶ SEMINAR

The lung in intensive care in moments of change: a time to reflect

Professor Didier Payen, Laribosiere Hospital, Paris

23 NOVEMBER ▶ PUBLIC LECTURE

Spies, secrets and science: reflections from the history of MI6

Professor Keith Jeffery, Queen's University Belfast



23 NOVEMBER ▶ PUBLIC LECTURE

The big bang of evolution and the engine of life

Professor James Barber, Molecular Biosciences

24 NOVEMBER ▶ SEMINAR

The role of the lymphoid microenvironment in immunosenescence

Dr Donald Palmer, Royal Veterinary College

25-26 NOVEMBER ▶ PUBLIC LECTURE

Iq2 If conference – big thinking about the future

Including speakers from Imperial



8 NOVEMBER ▶ PUBLIC LECTURE

Celebrating chemistry – past, present and future

Emeritus Professor David Phillips, President of the Royal Society of Chemistry

9 NOVEMBER ▶ PUBLIC LECTURE

Hustling for health

Professor Helen Ward, School of Public Health

10 NOVEMBER ▶ MUSIC

Lunchtime concert

Maggini Quartet



15 NOVEMBER ▶ MUSIC

Lunchtime concert

Ian Clarke (Flute) and Tim Carey (Piano)

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

MEET THE READER



Tracy Halsey, Early Years Supervisor (EYEC)

What are you doing in the picture?

I'm in the woodland area at the back of the EYEC, which is an area where children can be themselves, explore and hunt out mini beasts hiding under the logs! It's really important to have natural areas like this where children can gain confidence outdoors.

What would you do if you were editor of Reporter for a day?

I'd do a feature on the people who work hard behind the scenes but don't get recognised like the team in HR. People who make the College tick.

Who would be your cover star?

Every summer the EYEC holds an International Day where we celebrate Imperial's diversity and all the children dress up in national dress and we invite the parents along too – it would be great to have a picture of the activities on the front page of Reporter.

Want to be the next reader featured in Reporter? Send in a picture of yourself with a copy of Reporter in your location of choice to: reporter@imperial.ac.uk