



Imperial's Olympic hopefuls
on striving to be
the best in the world

... CENTRE PAGES

Eyes on the prize



BBSRC FUNDING

£4.5 million
to equip life
scientists of
the future

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Imperial's new
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CROSS CULTURE

Discover the
origins of New
Zealand's
famous haka

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EDITOR'S CORNER

Naked street

Love it or hate it, everyone seems to have an opinion on the **transformed Exhibition Road**, which was officially opened on 1 February. From the protester I chatted to who was concerned about the amount of money the government had spent on the project, to Arunima Misra, a wheelchair user, who explained how crossing Exhibition Road without help was virtually impossible before the renovation. “Now we can come independently to visit the museums and places like Imperial and **not have to worry about access**. It means we can have a great day out just like everyone else,” she said. See page 13 to hear what shopkeepers in South Kensington think about the new layout. For me, while the opening parade gave a glimpse of the new kerb-less road’s potential for festivals and markets, the best flavour of the event came in the form of a Heston Blumenthal Exhibition Road chocolate given to all the guests (pictured on page 16). **Despite the gravelly texture** and familiar criss-cross pattern of the road, it was delicious!

EMILY ROSS-JOANNOU, EDITOR

Reporter is published every three weeks during term time in print and online. The next publication day is 8 March.

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Boris Johnson, brass bands and a mechanical elephant reopen Exhibition Road

Crowds of Imperial staff and students joined members of the public on 1 February to watch the Mayor of London Boris Johnson, the Welsh Guards, a mechanical elephant, and a team of somersaulting acrobats celebrate the transformation of Exhibition Road.

The finale of the parade took place outside Imperial’s Main Entrance, where the Mayor cut a ribbon, held by four young people from Whizz Kids (a charity supporting children who use wheelchairs) to mark the official opening of the new-look

Exhibition Road. The event was also attended by leaders of the Royal Borough of Kensington and Chelsea and the City of Westminster.

The project to revamp Exhibition Road was completed late last year after three years of construction work which led to the removal of kerbs, barriers and street clutter. The aim was to improve access for all users and in particular for those using wheelchairs or pushchairs. Cars using the road have also been slowed down by the introduction of a 20 mph speed limit.

Talking to *Reporter*, Boris



Johnson said: “I hope that Imperial students will enjoy the extra amenity we have helped to bring to one of the greatest universities in the world!”

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

To read the full story, see a video of the parade and a slideshow of photos of the event visit <http://bit.ly/Exhibitionroad>

Drive to eliminate neglected tropical diseases

Renewed support from the British government will enable research groups based at Imperial to distribute an additional 100 million treatments for schistosomiasis in Africa. The Schistosomiasis Control Initiative (SCI) and the Partnership for Child Development (PCD) will play a key role in a global push to eliminate infectious tropical diseases announced on 23 January by the International Development Minister Stephen O’Brien.

The Department for International Development (DfID) has pledged a five-fold increase in Britain’s support as part of an international effort to help rid the world of neglected tropical diseases (NTDs).

NTDs can often lead to mobility problems, meaning adults are unable to work to support their families and children are forced to miss school for weeks, or even months, at a time. The diseases can force communities into deep poverty as disabled and unemployed adults struggle to afford



food and basic services, including healthcare, and generations of children grow up with little education and few prospects for the future.

The SCI and the PCD at Imperial, in partnership with the Centre for Neglected Tropical Diseases at Liverpool School of Tropical Medicine, will receive £25 million over four years to provide 100 million treatments to protect 40 million people from schistosomiasis in at least eight African countries, including Uganda, Tanzania and Zambia.

Professor Alan Fenwick, Director of the SCI, based in the School of Public Health, said: “The DfID announcement increasing the funding for neglected tropical diseases is fantastic news and it will allow the programmes implementing treatment to expand their coverage much quicker than had been anticipated.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Imperial College London

iCycle Scheme

Take to the road on a new bike bought through iCycle, Imperial’s cycle loan scheme. Staff can benefit from an interest-free loan of up to £2,000 to purchase a new bike, making repayments via monthly deductions from their salary.

For more information and to find out how to apply visit: <http://bit.ly/iCyclescheme>



New College Secretary and Registrar appointed

John Neilson, currently Director of Financial Management at the Ministry of Defence, will become Imperial's new College Secretary and Registrar, on 1 May 2012.

Prior to working in the Ministry of Defence, Mr Neilson spent six years as Director, Research Base in the Department for Business, Innovation and Skills and its predecessors, where he advised on the £6 billion spent annually on public research in universities and institutes.

The College Secretary is one of the College's principal administrative officers, and Mr Neilson will be responsible for core functions of the university including the Registry, the Central Secretariat, and health and safety. Alongside these, he will be Clerk to Imperial's Court and Council. Reporting to the Rector, he joins the College's Management

Board which develops the vision and overall strategy for the College.

Mr Neilson will take up his appointment following the retirement of Dr Rodney Eastwood after almost 25 years' service to the College. Dr Eastwood has been College Secretary since 2007.

Rector Sir Keith O'Nions said: "I am delighted to welcome John to the College. He has a wealth of understanding and experience in complex

organisations, and brings many strengths that will aid the College in the coming phases of its development.

"Rodney Eastwood has served the College for almost a quarter of a century, and his influence and skilful handling have taken Imperial through many key moments in its history. He heads into retirement with the gratitude and fond appreciation of the entire Imperial community."

Speaking about his



John Neilson (above) and Rodney Eastwood

appointment, Mr Neilson said: "I am delighted to be joining Imperial. While helping to develop government policy on research funding, I have understood what it takes to keep our world class universities in their pre-eminent position, and I look forward very much to contributing to Imperial's continued success alongside its outstanding staff."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Funding announced to support Doctoral Training Partnership

The Biotechnology and Biological Sciences Research Council (BBSRC) has awarded approximately £4.5 million to Imperial, Royal Holloway, University of London, and the Research Complex at Harwell to establish a joint Doctoral Training Partnership.

The funding is part of a £67 million investment in postgraduate training and development in the biosciences announced by the Minister for Universities and Science, David Willetts in late January which will support 14 Doctoral Training Partnerships (DTP) across the country.

The DTP awarded to Imperial and its partners will aim to provide research-led training with a focus on the development of quantitative, technological and bioscience skills. It will draw on the partners' shared experience of interdisciplinary approaches to research, encouraging interaction between students on the programme.

As part of the training students will undertake a three-month professional internship outside of the lab in areas like policymaking, media, teaching and industry. These internships will help to widen the students' experience of the areas of work



in which they can apply their PhD skills and training.

Professor Martin Buck (Life Sciences), Imperial's academic lead on the project, said: "Doctoral students increasingly play a major role in the interface between different research disciplines. Being able to cross these interfaces is in many cases key to how we tackle major research challenges in the basic and applied sciences. Interdisciplinary approaches lie at the heart of our Doctoral Training Partnership with Royal Holloway, and will help ensure we develop a new generation of scientists with the expertise and scope to truly innovate in their work."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

in brief



International delegation visit Imperial

Health delegates from countries including Saudi Arabia, Cuba and Sudan visited Chelsea and Westminster Hospital on 7 February to hear about innovations in the treatment of chronic obstructive pulmonary disease (COPD). Staff from the World Health Organisation Collaborating Centre for Public Health Education and Training at Imperial, led by Professor Salman Rawaf (Public Health), learned how a new "care bundle" has helped patients with COPD. <http://bit.ly/WHOvisit>

Children test the air for pollutants

Primary school pupils from Brighton have been testing the air quality in their school playgrounds with the help of Imperial physicist Dr Mark Richards to monitor how pollution from neighbouring roads might affect them and their environment. Dr Richards hopes to use data to assess the impact that vehicle emissions have on human health. <http://bit.ly/brightonscienceproject>

Acting Head of Humanities

Professor Nigel Gooderham, Professor of Molecular Toxicology, has been appointed Acting Head of the Department of Humanities. He will lead the Department while a search is underway for a successor to Professor Andrew Warwick, former Head of Department, who has left the College after 19 years of service for an appointment at the University of Pennsylvania. Professor Gooderham continues as Dean for the Faculty of Medicine (Non Clinical).

Boost for asthma research

Research into acute asthma attacks has been given a helping hand with a £4 million award from the Medical Research Council (MRC) and GlaxoSmithKline (GSK). The grant, to the MRC-Asthma UK Centre in Allergic Mechanisms of Asthma at Imperial and King's College London, will enable researchers to investigate how acute asthma attacks, which can be life-threatening and are often resistant to the few available treatments, are linked to allergy and viral infection. Professor Sebastian Johnston (NHLI) and Dr Roberto Solari of GSK will lead three teams of scientists at Imperial, King's and GSK.

Ford scholarships help drive Imperial students

Ford of Britain announced at an event on 1 February that it has selected Imperial as one of 12 universities who will take part in the Ford Blue Oval Scholarship Programme. This £1 million programme will help to develop 100 of the UK's next generation of student engineers, scientists and innovators at leading UK universities.



Courtesy of a £100,000 donation, Ford will provide sponsorship of £10,000 per student over the course of their undergraduate programme for 10 Imperial undergraduates on a selection of engineering, science, manufacturing and technology courses.

When making the announcement, Joe Greenwell, Ford of Britain chairman, met with Universities and Science Minister, David Willetts, and a selection of senior university representatives at the Department for Business, Innovation and Skills in London. The group discussed how government, businesses and universities could work together to benefit UK manufacturing and engineering.

“Partnerships such as these help us to better understand what industry needs from our graduates”

Speaking at the event, Rector Sir Keith O’Nions said: “I am delighted Ford has chosen to support Imperial students, and I applaud their initiative and foresightedness in working with universities. Partnerships such as these not only benefit the students in receipt of support, they also help us

to better understand what industry needs from our graduates, and how we get them ready for the workplace of the twenty-first century. There is huge scope for increasing activities between business and universities, not only in research and education within the institution, but in encouraging greater participation in science and technology at a younger age.”

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Imperial rubbishes desk bins



There were some noticeable absentees when staff in the Faculty Building on the South Kensington Campus returned from their winter break, as they discovered that all their desk bins had disappeared.

Championed by the Facilities and Property Management Division,

the ‘Bin the Bin’ initiative aims to make Imperial more sustainable by encouraging staff to separate out their day-to-day rubbish, disposing of it in the designated recycling or general waste bins. As well as

increasing the amount of material sent for recycling, the initiative is expected to significantly reduce the amount of bin liners used. A further benefit will be the cost savings resulting from the College sending

a reduced volume of waste to landfill sites, waste disposal is paid for by the tonne. ‘Bin the Bin’ has already been trialled and adopted on level 5 of the Sherfield Building, but the Faculty Building is the first entire building to dispense with the desk bins. One of its occupants, Deputy Rector Stephen Richardson, said: “Losing my desk bin took a moment of adjustment but it’s been an incredibly helpful nudge to think more about what I’m throwing away and to ensure it is going in the right place.”

The initiative at Imperial is contributing to a nationwide ‘Bin the Bin’ campaign, led by London Recycling Ltd which has already

resulted in a 10 to 20 per cent improvement in recycling rates across large organisations. The Facilities Management and Property Services Division hope to roll out the

approach across the College soon.

The desk bins that are no longer required will be recycled, becoming other useful products like paint trays and benches.

— JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

“Losing my desk bin took a moment of adjustment but it’s been an incredibly helpful nudge”

Imperial marathon runner raising funds for scholarships

Sam Bell, Services Manager for Sport Imperial, will be running the London Marathon in April to raise funds for the Rector’s Scholarship Fund.

The Rector’s Scholarship Fund, highlighted in *Reporter*, issue 242, was launched in June 2011 to increase the amount of support available to students in financial need. As the government’s investment in higher education continues to decrease, the need for scholarships and bursaries has become more important than ever.

As Sam’s training for one of the world’s most famous marathons gets underway, she describes how supporting the College’s fundraising priority acts as a motivator: “I’ve run the London

Marathon three times before, but this time it means so much more to be running to raise funds for students in need.”

On top of building up her fitness and stamina to cover the 26.2 miles of the marathon course, Sam has set herself a further challenge – to raise awareness of the Rector’s Scholarship Fund and encourage others to contribute. Sam plans to achieve this by arranging a number of events including a quiz for staff, students and alumni on 21 February (see page 16 for more details). She says: “We’ve set a target of £5,000 which will go a long way to supporting students through their studies, but if we can top this target the funding will go even further. In fact, I’ll



even run in fancy dress if we beat it!”

— CLARE DODDS, COMMUNICATIONS AND DEVELOPMENT

Find out more about Sam and support her challenge by visiting: <http://bit.ly/Sambelljustgiving>

media mentions

—TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT



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THE INDEPENDENT ▶ 12.1.2012

Hooked on the web



Internet addiction has for the first time been linked with changes in the brain similar to those seen in people addicted to alcohol,

cocaine and cannabis, reported *The Independent*. Researchers used MRI scanners to reveal abnormalities in the brains of adolescents who spent many hours on the internet, to the detriment of their social lives. Dr Henrietta Bowden-Jones (Medicine), who runs Britain's only NHS clinic for internet addicts and problem gamblers, said: "The majority of people we see with serious internet addiction are gamers – people who spend hours in roles in various games. I have seen people who stopped attending university lectures, failed their degrees or whose marriages broke down because they were unable to emotionally connect with anything outside the game."

NEW SCIENTIST ▶

16.1.2012

Weird science

Cool a piece of metal or a bucket of helium to near zero and, in the right conditions, you'll see the metal levitating above a magnet and the liquid helium flowing up the walls of its container. "We love to observe these phenomena in the lab," Professor Ed Hinds (Physics) told *New Scientist*. "This weirdness is not mere entertainment, though. From these strange phenomena we can tease out all of chemistry and biology, find deliverance from our energy crisis and perhaps even unveil the ultimate nature of the universe. Welcome to the world of superstuff."

THE DAILY TELEGRAPH ▶ 17.1.2012

Angel networks fail to bless investors



Business angel networks do not offer value for money for their membership of entrepreneurs and investors, reported *The Daily Telegraph*. According to analysis, the groups, which filter investment opportunities, are frustrating so called 'angel investors' with poor quality business propositions. Postgraduate student Anca Enica (Business School), who surveyed start-ups seeking funding and angel members of a variety of networks found that most networks were 'sub standard' at connecting members. She said: "This lack of coordination left frustrated entrepreneurs searching for investors through other networks... Most networks failed at this process and this was seen as a flaw in their intermediary role."

BBC NEWS ▶ 23.1.2012

The Leaning Tower of...Ben?

Renovation work on the Palace of Westminster will not begin until at least 2020, a committee of MPs has said. The decision came after surveyors found that parliament's clock tower – better known as Big Ben – was leaning. Emeritus Professor John Burland (Civil and Environmental Engineering) told the BBC that the tower was "moving incredibly slowly and always has done so there really is no immediate danger at all". He added: "There's no such thing as an old building that isn't cracked. In fact [cracks are] beneficial because... movement's concentrated around the cracks and, if they [weren't there], there'd be cracking elsewhere."



awards and honours

NATURAL SCIENCES

Top breakthroughs for 2011

Research that has led to the invention of an 'event cloak' was judged to be one of the top 10 breakthroughs for 2011 by *Physics World* magazine in December. The findings of Professor Martin McCall and Dr Paul Kinsler (both Physics), were ranked in third place in an expert panel's assessment of the impact of over 350 physical sciences research papers. Their paper described a way of manipulating the speed of light as it

passes over an object, making it theoretically possible to 'cloak' the object's movement. Read the article: <http://bit.ly/physicsworld>

Young Scientist Award for Weyand

Dr Simone Weyand (Life Sciences), pictured below right, was selected to receive the European Molecular Biology Laboratory (EMBL) John Kendrew Young Scientist Award 2012 earlier this month. The award recognises excellence



in science communication or academic achievement after leaving EMBL. Dr Weyand will present her work at an award ceremony at EMBL Heidelberg.

Wolfson awards announced

Three Imperial professors received funding between £10,000 and £30,000 from the Wolfson Foundation and the Department for Business Innovation and Skills in the latest round of the Royal Society's Wolfson Research Merit Awards. The awards, announced in December 2011, recognised Professor Austin Burt (Life Sciences) for work on malaria control, Professor Stefan Maier (Physics) for research into

how to control electromagnetic fields using nanotechnology, and Professor Xiaodong Zhang (Life Sciences) for studying the body's response to damaged DNA.

ENGINEERING

Government advisor role for Smith

Professor Roderick Smith, Royal Academy of Engineering Network Rail Research Professor of Railway Engineering (Mechanical Engineering), has been appointed Chief Scientific Advisor to the Department of Transport. Professor Smith will provide advice on transport issues to government ministers, ensuring that science and engineering evidence and advice is robust and relevant.

Patients' online hospital reviews reflect data on hospital outcomes

Patients' ratings of hospitals tally with objective measures of the hospital's performance, according to an independent study published on 13 February in *Archives of Internal Medicine*.



Since 2008, patients have been able to post comments on and rate hospitals using the NHS Choices website, in the same way as they might rate a hotel on Tripadvisor. The system's proponents suggest that it helps patients to choose the best services, but no previous study has investigated whether these online ratings are related to clinical measures of healthcare quality, such as mortality rates and incidence of hospital-acquired infections.

Imperial researchers examined 10,274 ratings of all NHS acute hospital trusts in England submitted on NHS Choices in 2009 and 2010. They found that hospitals with better patient ratings tend to have lower death rates in addition to lower readmission rates. Hospitals rated by patients as being cleaner have lower rates of MRSA infections.

"There is a lot of data available to the public on hospital performance, but people rarely use conventional measures and often find them difficult to understand," said Dr Felix Greaves, (Public Health), who led the study. "Our results suggest that NHS Choices ratings may provide useful and relevant information for patients making choices about their care."

When the 25 per cent of hospitals with the best ratings on NHS Choices are compared with the 25 per cent rated worst, mortality rates were 5 per cent lower and readmission rates were 11 per cent lower in the more highly-rated hospitals.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Surface of Mars an unlikely place for life after 600-million-year drought

Mars may have been arid for approximately 600 million years, making it too hostile for life to survive on the planet's surface, according to researchers who have been carrying out the painstaking task of analysing individual particles of Martian soil, published in the journal *Geophysical Research Letters*. Lead author on the study Dr Tom Pike (Electrical Engineering), discussed the team's analysis at a European Space Agency (ESA) meeting on 7 February.

The researchers have spent three years analysing data on Martian soil that was col-

lected during the 2008 NASA Phoenix mission to Mars. Phoenix touched down in the northern arctic region of the planet to search for signs that it was habitable and to analyse ice and soil on the surface.

“We think the Mars we know today contrasts sharply with its earlier history”



Dr Pike explains: "We found that even though there is an abundance of ice, Mars has been experiencing a super-drought

that may well have lasted hundreds of millions of years. We think the Mars we know today contrasts sharply with its earlier history, which had warmer and wet-

ter periods and which may have been more suited to life. Future NASA and ESA missions that are

planned for Mars will have to dig deeper to search for evidence of life, which may still be taking refuge underground."

The team also estimated that the soil that they analysed had been exposed to liquid water for, at most, 5,000 years since its formation billions of years ago and this sample may be indicative of soil across the whole planet. They also found that Martian and Moon soil is being formed under the same extremely dry conditions.

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Black holes

Giving life as well as dealing death

Imperial astrophysicists have identified a black hole that appears to be helping new stars to form amongst its encircling gas clouds.

Black holes had been thought to hinder the birth of stars, since their gravitational forces propel a strong flow of material that sweeps away the gas clouds from which stars are made. Now the scientists have found evidence that these same flows can also compress regions of gas and form them into new stars. The team, led by Dr Sugata Kaviraj (Physics) and colleagues at the Universities of Tasmania and Oxford, have published their results in the February edition of the journal *Monthly Notices of the Royal Astronomical Society*.

Dr Kaviraj, said: "Black holes may have a significantly more complicated effect on the universe than scientists previously thought they did. We knew that the outflows produced by black holes could



remove gas and quench star formation but few imagined that they could somehow help the birth of completely new stars."

The centre of just about every galaxy is thought to host a black hole, a highly dense point in space with a strong gravitational pull. The black holes 'switch on' from time to time, driving material around them into outflows that can stretch for millions of light years. This flow ploughs through galactic gas, compressing, heating and pushing it out of the way. Much of this gas is the raw material from which stars are made, so the outflows significantly affect star formation in the galaxies that host them.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

Magic mushrooms' effects illuminated in brain imaging study

Psilocybin, the active ingredient in magic mushrooms, suppresses activity in areas of the brain that regulate our experience of the world, according to a study published in *Proceedings of the National Academy of Sciences* in January.

Thirty healthy volunteers had psilocybin infused into their blood while inside magnetic resonance imaging scanners, which measure changes in brain activity. The intensity of the effects that participants reported, including visions of geometric patterns, unusual bodily sensations and an altered sense of space and time, correlated with a decrease in oxygenation and blood flow in the medial prefrontal cortex (mPFC) and the posterior cingulate cortex (PCC).

The function of these areas is the subject of



debate among neuroscientists. The PCC is proposed to have a role in consciousness and self-identity. The mPFC is known to be hyperactive in depression, so psilocybin's action on this area could be responsible for some reported antidepressant effects.

A second study, published in the *British Journal of Psychiatry*, found that psilocybin allowed people to experience memories more vividly, when they looked at cues prompting them to think about positive moments in their life.

Dr Robin Carhart-Harris (Medicine) said: "Previous studies suggested that psilocybin can improve people's sense of emotional well-being and even reduce depression in people with anxiety. This is consistent with our finding that psilocybin decreases mPFC activity, as many effective depression treatments do. The effects need to be investigated further, and ours was only a small study, but we are interested in exploring psilocybin's potential as a therapeutic tool."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Body clock linked to diabetes

A study led by Imperial researchers and published in *Nature Genetics* in January has found new evidence for a link between the body clock hormone melatonin and type 2 diabetes. It found that people who carry rare genetic mutations in the receptor for melatonin have a much higher risk of type 2 diabetes.



The findings should help scientists assess personal diabetes risk and could lead to the development of personalised treatments.

Previous research has found that if volunteers have their sleep disrupted repeatedly for three days, they temporarily develop symptoms of diabetes.

The body's sleep-wake cycle is controlled by the hormone melatonin. In 2008, a genetic study led by Imperial discovered that people with common variations in the gene for MT₂, a receptor for melatonin, have a slightly higher risk of type 2 diabetes.

The new study reveals that carrying any of four rare mutations in the MT₂ gene increases a person's risk of developing type 2 diabetes six times. The release of insulin, which regulates blood sugar levels, is known to be regulated by melatonin. The researchers suggest that mutations in the MT₂ gene may disrupt the link between the body clock and insulin release, leading to abnormal control of blood sugar.

Professor Philippe Froguel (Public Health), said: "Blood sugar control is one of the many processes regulated by the body's biological clock. This study adds to our understanding of how the gene that carries the blueprint for a key component in the clock can influence people's risk of diabetes."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Developing Star Trek-style scanners



New, stronger and more efficient terahertz waves (T-rays) could be used to make better biomedical detective devices, and could lead to innovations similar to the handheld 'tricorder' scanner used in *Star Trek*, according to research published in *Nature Photonics* on 15 January.

Researchers from Imperial and the Institute of Materials Research and Engineering, a research institute of A*STAR (Agency for Science, Technology and Research) in Singapore, have made T-rays into a stronger directional beam than was previously thought possible, and have done so at room temperature.

Current T-ray imaging devices are expensive and

operate at only a low output power, since creating the waves consumes large amounts of energy and needs to take place at low temperatures. This breakthrough should allow future T-ray systems to be smaller, cheaper and easier to operate.

The scientists say that, in the future, T-rays could provide part of the functionality of a *Star Trek*-like medical 'tricorder' – a portable sensing, computing and data

communications device – since the waves are capable of detecting biological phenomena, such as increased blood flow around tumorous growths. Research co-author Professor Stefan Maier (Physics), pictured, said: "T-rays promise to revolutionise medical scanning to make it faster and more convenient, potentially relieving patients from the inconvenience of complicated diagnostic procedures and the stress of waiting for accurate results."

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

"T-rays promise to revolutionise medical scanning to make it faster and more convenient"



Eyes on the prize

In July 10,500 Olympic athletes from around the world will arrive in London in peak condition. Their focus will be to perform at their very best after years of preparation. Hoping to be among them are two Imperial students — Melanie Wilson and Adam Scholefield. *Reporter* spoke to them about their rigorous training and the final push to earn a place in the Olympic Games.

MELANIE WILSON MEDICAL STUDENT AND MEMBER OF THE GB ROWING TEAM

In March 2009 Melanie Wilson received two pieces of news — she'd got onto the GB rowing team and had been accepted to do a graduate entry medical degree at Imperial with a rowing scholarship. "I never thought either of those things would happen!" she says. Although the GB team wanted Melanie to train full-time she was keen to start her course at the College that October and train with former Head Coach at the Imperial Boat Club Steve Trapmore, who won gold in Sydney in 2000.

"Training at the Boat Club is amazing," enthuses Melanie. "We have some excellent coaches and athletes and they've all been so supportive of my training." Despite the opportunities as a rower at Imperial, Melanie found juggling her passions hard. She attended weekend training sessions and

camped with the GB team and made it to the World Championships in 2010 as a reserve, but unable to give her sporting pursuits her full attention, she wasn't selected to race. Melanie knew that if she was going to have a shot at the Olympics she'd need to dedicate herself to rowing so she put her studies on hold.

Melanie hopes to be chosen to row in the quad scull (a boat with four people with two oars each) in the Olympics and has another trial coming up in mid-March. "It's so competitive at the moment as everyone wants to get chosen for the boats but, despite that, there is a really good team spirit," she says. "It's really important to get to know and understand each other as it helps you to work better on the water."

Melanie lives in Mortlake and commutes six days a week to train with the GB rowing team at the Olympic Centre just outside Reading. On Sundays she joins the Imperial teams at the Boat Club. "To train for the Olympics you have

to have exceptional motivation levels and be incredibly competitive and robust to handle the pressure," says Imperial's Head of Sport Neil Mosley. "We are incredibly proud of our students and excited they might have a chance to make it to the Games," he adds.

A typical day of training starts at 7.30, and the team uses the adrenalin-fuelled music of Beyoncé to spur them on through 100 minutes on the rowing machine. Having burned around 1,500 calories they refuel with a cooked breakfast and a rest. After the break, the team head to the river to practise with their individual coaches for another couple of hours. "Normally the coach makes me work on a specific technique," says Melanie. "For example, when you race you slide forward and then put your blade in the water, so he might tell me to do that a bit quicker or put my body in a different position," she explains.

Melanie describes the sound during a race when everything is going to plan: "When you have got a good rhythm going and all you can hear is the carbon oars lightly hitting the water, you can really relax into it."

It's undoubtedly hard work but Melanie is motivated by the memory of her team missing their goal in the 2011 World Championships. "We messed up one of our races and it was the biggest disappointment I've ever had in my life. Since then I've been finding it much easier to train because I think whatever happens this summer, I'll kick myself if I didn't try everything that I could, to be as good as I can be. It really is amazing to have the opportunity to try and be the best in the world at something."

Melanie finds it reassuring to know that beyond the Olympics she still has something to look forward to in September when she returns to the third year of her medical degree at Imperial. "I really love studying and when the Olympics are over, I want to finish off my degree and become a doctor for the rest of my life. My plans definitely help to give me perspective when it gets stressful."

ADAM SCHOLEFIELD ENGINEERING PHD STUDENT AND VICE-CAPTAIN OF THE GB WATER POLO TEAM

Adam first took part in a game of water polo on his 10th birthday and was immediately hooked. The team sport, water polo, involves passing a ball down the pool to score goals and for Adam the competition was addictive. “I remember I hated getting out of the pool and I couldn’t wait for the next session,” he recalls. As his sporting skills improved, he moved from competing at local level to playing for Rotherham, one of the top water polo clubs in the UK, and was invited onto the GB team at the age of 17.

Adam joined Imperial in 2003 to begin a

four-year undergraduate course in Electrical Engineering, gaining a scholarship that allowed him to continue his water polo training alongside his undergraduate degree. After graduating, he moved up to Manchester to join the GB team but continued his studies at the College, commuting once a week to Imperial to work on his PhD in image processing. Since early 2011, like Melanie, he has interrupted his studies to focus on the Olympics, but he has regular Skype meetings with his supervisor at Imperial and, when he has time, he returns to London to work on his research.

The Olympic water polo team won’t be picked until days before the Games but Adam is quietly confident. “As long as I stay

fit and don’t get any injuries I should have a good chance,” he says. Adam trains for two two-hour sessions in the pool every day, concentrating on shooting, tactics, passing the ball and legwork. In addition, the team does weight training in the gym two to four times every week.” When asked what he does to relax he laughs and says: “My PhD!”

“What do I do to relax? My PhD!”

On the day of a water polo game the team starts mentally preparing several hours before, going over their tactics. “I definitely think the logical thinking I developed during my degree helps me recognise what other teams are planning,” says Adam.

In training for the Olympics, athletes can feel disconnected from friends and family. Both students have tales of missing weddings, birthday celebrations or meeting newborn relatives, as well as everyday sacrifices such as declining friends’ invitations to the pub due to training commitments. “Sometimes it is really hard for people to understand,” says Adam. “To train every day you have to be motivated by getting to the highest level – it’s something I’ve always wanted to do,” he says.

After the Olympics, Adam is keen to finish his PhD and he is convinced that the focus he’s developed through training will help him in his career. “Being in the water for four hours a day might sound a lot but professional sport teaches you to get the best out of every opportunity. I hope to translate that ethos into my studies.”

Taking part in the Olympics in London will be unlike anything either of the students has ever experienced. “The support we’ve had so far has been insane,” says Melanie, “Over the next five months I’m going to put everything into my training – I know I’ll never have an opportunity like this again.”

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT



ALSO... Keep your eyes peeled for our Olympic fencing hopefuls, Hannah and Maiyuran, both of whom study medicine at Imperial. *Reporter* asked them what first attracted them to fencing:



“You fence because you love it and you fight because you have a point to prove and want to be top dog!”

—HANNAH BRYARS, FIFTH YEAR MEDIC AND GB WOMEN’S FENCING TEAM. FOR THE FULL INTERVIEW VISIT: WWW.IMPERIAL.AC.UK/REPORTER

“Sabre fencing is dynamic and fast paced – but above all else, the ability to use a sword in a contact sport is awesome!”

—MAIYURAN RATNESWARAN, FOURTH YEAR MEDIC AND GB SENIOR FENCING TEAM





Smart tactics

As any football fan knows, a win is forged through hard preparation in training and a plethora of decisions off the pitch. Success requires careful investment, the right combination of players and smart tactics. For committed Chelsea fan, and new Chief Financial Officer Muir Sanderson, the activities at home ground Stamford Bridge are the subject of much discussion with his family, who are also ardent supporters of the team.

While the Sanderson household weighs up the outlook for Chelsea's year of transition under the questionable new management of Andre Villas-Boas, in Muir's role at Imperial he considers the impact of Higher Education's own transitional period: public funding for universities is declining, preparations continue for the Research Excellence Framework (REF) in 2014, and this year sees the introduction of a new fees and financial support regime for Home and EU undergraduate students.

"For me this role is about supporting Imperial's research and academic mission and to help consider the economic tradeoffs of the decisions we make in the next 5 – 10 years. My job is to say, 'these are the implications,'" says Muir, who joined in November 2011.

After three months, Muir is still getting to know the College. "As a CFO it's very easy to just focus on the numbers, and sit in my office disconnected from reality. But you have to go out and talk to people, understand what the challenges are, and what it is that is on people's minds."

Muir's fact-finding mission has included trips to Silwood, Hammer-smith, St Mary's and Imperial West, as well as to the student accommodation sites. "I've been to visit departments, see the research that is going on, sit in on lectures and talk to students. It's been fascinating, and the picture of what Imperial looks like is starting to take shape."

Passion for physics

As a child Muir's desire to 'get to the heart of the problem' drew him to physics, which he then went on to study at Cambridge. "For me, physics is about how things work in a fundamental way. You can take a disparate range of phenomena and break them down to a set of simple equations, which then describe what is going on," he explains. "If you are going to be a good CFO, you have to cut through a large amount of conflicting data and say, 'this is what it boils down to,'" he adds.

Career path

Following his time at Cambridge, Muir joined automotive components manufacturer, Turner and Newell as a manufacturing engineer and spent time working in Italy and Germany.

This led to positions at management consultants Booz & Company, advising companies on operations and business strategy, and in his most recent role as partner he undertook consultancy work within the Higher Education sector. Whilst at Booz he spent time as the UK managing partner where one of his main challenges was to get a group of entrepreneurial partners to align in a common direction, which he described as 'like herding cats'. By contrast, at Imperial Muir praises the willingness of staff to work in partnership towards a common goal. "There's a strong sense of purpose," he says. "It's a fascinating environment to be part of, and that is what makes it so motivating to come to work and go home and tell my family what I've been doing."

Away from the office, Muir can be found baking sourdough bread, or perfecting his score on the computer game Angry Birds. "My family say my success is through persistence rather than natural talent." Asked what talent he wishes he had, Muir responds: "To be musical - I can't even clap in time. I'm always off the beat, and not in a Jazz sense."

Forecasting the future

Muir's initial assessment on the longer term challenges facing the College include how research is funded, and the changing view of students as consumers. "Universities thrive on capital investment for new buildings, facilities, and research. And students

have aspirations and demands, and we need to invest to meet their expectations. The difficult question is how the College balances the trade-offs between all these factors and more."

For a man whose career has been spent looking to the future identifying threats and opportunities, Muir is used to making predictions. And his current forecast? "I think Chelsea will finish fourth in the Premiership behind Tottenham and Andre Villas-Boas will survive the season."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

"Universities thrive on capital investment for new buildings, facilities, and research. And students have aspirations and demands, and we need to invest to meet their expectations"

inside*

story

mini profile

Kath Maitland

Professor Kath Maitland, Clinical Senior Lecturer (Medicine) leads a group at the KEMRI-Wellcome Trust Research Programme in Kilifi, Kenya, researching diseases and conditions including malaria and malnutrition. She talks to *Reporter* about her experience of living in Kenya for the past 12 years.



children with the conditions we were treating. We're preparing a paper to give further insight into why we think this controversial result challenges practice internationally.

When did you first realise that you wanted to work in Africa?

The momentum to go overseas was meeting my husband when we were doing our MRCP exams (Membership of the Royal College of Physicians of the UK). We both knew we really wanted to go overseas and were very focused on finishing our clinical training and getting out there. We were engaged within three months, resigned from our jobs and thought, 'let's do it'. We started in Vanuatu in the South Pacific over 20 years ago but felt that the real epicentre of malaria was in Africa.

What are you working on at the moment?

Last year we stopped a trial of fluid resuscitation to treat shock – standard treatment for very sick children in hospitals globally. The Data Monitoring Committee, an independent body set up especially for the trial, said the results showed the treatment did not benefit African

What makes you get up in the morning?

I feel a great sense of responsibility to my extremely humane, hard-working colleagues. I'm also incurably curious – I enjoy trying to work out what the next question is.

What have you learned from the people you have met in Africa and what have they learned from you?

When we first went to hospitals where research had never been done, I thought, 'How can people work in such awful conditions?' I was really impressed at how calm and pragmatic the staff are – they've seen many awful things. We painted the wards, put in emergency equipment, and trained everybody in the hospital in acute paediatrics. That was the momentum for them developing their own training programme and taking pride in their hospital.

—NATASHA TANNA, COMMUNICATIONS AND DEVELOPMENT

Metabolic profiling in Ivory Coast

From 12–14 January, Dr Jasmina Saric, a lecturer in biomedical parasitology in the Department of Surgery and Cancer, held a workshop about metabolic profiling hosted by the Centre Suisse de Recherches Scientifiques (CSRS) in Abidjan, Ivory Coast, and supported by the Swiss Tropical and Public Health Institute (Swiss TPH) and the Wellcome Trust. She reports on her experience.



healthy mice with samples from mice suffering from malaria and see which metabolites are changing in response to the infection.

"The aim of the conference was to strengthen links between Imperial and our main science and public health contacts in Abidjan that I have developed through my research. We wanted to investigate whether the time is right to think about transferring the metabolic profiling strategy we employ to a local partner institute, increasing local research flexibility and improving the exchange of local public health expertise and technology know-how. The profiling strategy introduced by Professor Jeremy Nicholson (Surgery and Cancer) applies tools, such as nuclear magnetic resonance spectroscopy and mass spectrometry, that can characterise the metabolic composition of tissue or urine. We can compare, for instance, urine samples of

“a great event ... exploring potential applications, and identifying a suitable strategy for a potential long-term technology”

Twenty-four people participated in the workshop, including local and external public health and science experts, students and the speak-

ers from CSRS, Swiss TPH and staff from Imperial, including Professor Elaine Holmes (Surgery and Cancer) and Professor Alan Fenwick (Public Health). The mix of people and backgrounds made it a great event that succeeded in introducing new technology to Abidjan, exploring potential applications, and identifying a suitable strategy for a potential long-term technology transfer.”

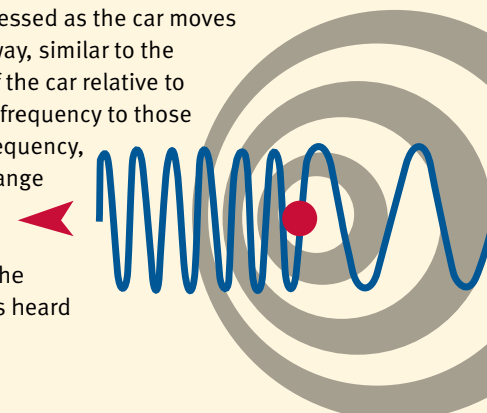
SCIENCE FROM SCRATCH



Doppler effect

explained by Nicola Guttridge, MSc Science Communication

Imagine a police car as it speeds past you, sirens blazing. The sounds you hear as it rushes towards, past and away from you are all very different in pitch. This is due to the Doppler effect; an effect that occurs when the distance between a radiation source and observer changes, i.e. if one is moving. The sound waves travelling from the siren to your ear are compressed as the car moves towards you, and stretched out as it moves away, similar to the dynamics of a spring. Due to the movement of the car relative to your ear, the received waves are of a different frequency to those emitted. A wave is characterised by a given frequency, wave speed and associated wavelength. A change in wavelength – the distance from peak to peak of the wave – corresponds to a shift in the wave's period. A higher pitch is heard as the sound emitter approaches and a lower pitch is heard as it moves away.



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

Student blogger Jun on Chinese New Year back home:

blog SPOT

“On Chinese New Year, my family have a big dinner together, we eat dumplings at midnight and welcome in the new year.



Fireworks are undoubtedly a hallmark for Chinese New Year. You cannot imagine what kind of atmosphere there is at 0.00. So many beautiful and loud fireworks are let

off, it feels like an earthquake! Before Chinese New Year, people usually spend up to 10 days preparing, buying new clothes, decorations and food, in particular, meat and sweets. And people spend a lot of time visiting and giving gifts to relatives and friends, and wishing them luck in the coming year.”

www.imperial.ac.uk/campus_life/studentblogs

A passion for global energy



MSc Sustainable Energy Futures student Leslie Hayes-Labruzzo (Mechanical Engineering), pictured, describes being inspired by a lecture at the College in December given by solar energy researcher Dr Nate Lewis from the California Institute of Technology.

“When I heard that Nate Lewis was speaking at Imperial, I was immediately taken back three years ago to Nashville, Tennessee where I first saw his awe-inspiring talk comparing

renewable energy resources of the future and was impressed by his inquisitiveness and passion for renewable energy. Through years of exploration, Nate has proved that in order

to meet the global energy demand of 13-15 terawatts (human consumption over the course of a year), the only feasible option to provide this

much power for a sustained period of time is solar, which provides over 120,000 terawatts annually – enough to meet human demand. The second runner-up was nuclear – to meet our energy demand sustainably, we would have to build one new power plant every other day

for the next 40 years! When I looked at my friends from class who had attended the lecture with me, I saw their jaws drop. Nate’s practical research coupled with his contagious devo-

“My fellow classmates, and attendees of the lecture agreed that a move away from fossil fuels in any direction is necessary”

tion to bettering the world’s energy supply drove those of us on the Sustainable Energy Futures Masters Programme to think more critically about the sources of energy we choose to

endorse for the future. While Nate, my fellow classmates, and attendees of the lecture agree that a move away from fossil fuels in any direction is necessary, the deployment of solar power became more pressing and persuasive than ever before.”

cross culture



New Zealand

Russell Watson, Marketing and Recruitment Coordinator (Business School).

“I hail from New Plymouth on the north island of New Zealand and moved to London in 2009. It was strange to be on the other side of the world when New Zealand hosted the Rugby World Cup last year. Although it felt amazing when we won the final, it was the traditional haka at the start of the game which made the hairs on the back of my neck stand on end. The haka makes me proud to be a Kiwi.”

The haka

A haka is a dance which comes from Māori culture that was traditionally performed before warring tribes went into battle. Now it’s most often seen during ceremonies, in cultural competitions, or before sports games.

My school rugby and volleyball teams used to perform a haka before games and we spent a lot of time learning how to do it properly. It really does make you focus on the task ahead and get you in the right frame of mind.

The pukana is a really important part. It’s when you show expression with your whole face including your tongue and eyes, and it’s unique.

The words in a haka are always emotive since the point is to get you fired up. A good example comes from *Kapa o pango*, which is a haka the All Black’s sometimes perform. The first lines are “*Kia whakata hoki au i ahau. Hi aue, hi.*” These powerful words, when translated, mean “Let me go back to my first gasp of breath. Let my life force return to the earth.”

Not everyone agrees that we should be allowed to perform the haka before sporting matches because it might give an unfair advantage. I think it’s an important part of New Zealand’s history, and people should respect that.



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



INVENTOR'S CORNER

Spike-sorting

Dr Timothy Constandinou (Electrical and Electronic Engineering) has been working on a technology to improve brain machine interfaces (BMIs) – devices which enable direct communication between the brain and an external device.

How are BMIs useful and what have you developed?

BMs are a platform technology which enable the development of various neuroprosthetics: tools which can help people whose brains function normally but where the connections between function and body response are faulty in some way, for example people with spinal cord injuries. We're developing an implantable BMI consisting of a chip connected to a micro-electrode array, which records, detects and transmits data from a large number of neurons.

What are the challenges involved?

Firstly, it's most useful to monitor signals from individual neurons, but an implanted microelectrode typically picks up signals from multiple neurons at close proximity. The second challenge is in extracting data. BMIs typically use

a wireless means of transmitting data using electromagnetic waves to avoid breaking the skin and risking infection. However, this method limits the data rate to 10Mbps/second, as higher bandwidths need higher frequencies, which are absorbed by tissue. 10Mbps/second is sufficient for 30 parallel channels which is insignificant in comparison to the 100 billion neurons in the brain.

What's your solution?

Our main innovation is conducting spike-sorting in hardware and at the front-end (within the implant). Spike sorting determines which neuron generates each spike (within a single channel). The key information is which neuron fires and when. Usually neuroscientists conduct offline spike-sorting using computer algorithms to determine this but we have developed spike-sorting hardware within the implant. Our chip can sort spikes in real time, so the BMI need only transmit spike-sorted data, enabling us to look at thousands of neurons simultaneously. Recent studies show signals recorded from 100 neurons can control a robotic arm sufficiently to facilitate self-feeding.

"We're developing an implantable Brain Machine Interface which records, detects and transmits data from a large number of neurons"

---GAVIN REED, IMPERIAL INNOVATIONS

Insights into GlaxoSmithKline



On 24 January Dr Moncef Slaoui, the Chairman of Research and Development at GlaxoSmithKline, shared his insights into the philosophy behind the company's work, in a distinguished guest lecture at the Business School. *Reporter* caught up with him after his talk to ask him what he considers the main challenge for pharmaceuticals when looking to act in the best interests of patients and shareholders.

"I would say ensuring delivery of new medicines and vaccines, so that they are approved by the reimbursement bodies [the health technology assessment that decide what gets paid for and what doesn't in public healthcare systems – organisations such as The National Institute for Health and Clinical Excellence (NICE) in the UK] and made available to the people that need them and made available to the people that need them. If we provide differentiated medicines and vaccines that are better than what is currently used, then the rewards for shareholders will follow. But it is not always that simple, especially in cases where there is great medical need but no expected commercial return on the investment. For example, a malaria vaccine for Africa, or a new class of antibiotic be kept in reserve for use when resistance develops to currently used antibiotics. In these cases we must draw on our expertise but also find sustainable solutions, often through the involvement of partners."

---TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT

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

VOX POP

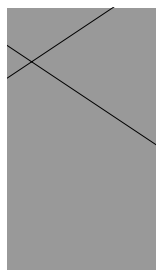
What do you think of Exhibition Road?

After three years of construction work in Exhibition Road and South Kensington, the new look, kerb-free single surface road with no barriers has been completed. *Reporter* spoke to people working in shops in South Kensington to gauge their opinions.



"The new renovation looks beautiful – very clean and lots of space. As people are buying food to go and sit outside in the pedestrianised area, it's also been good for business as we get more customers."

NAWSHAD, TREATS



"I think it's a positive thing although they did take away a bus stop from outside which has reduced the flow of customers coming in a bit. I like that there are no kerbs and that the area is being used more by people walking than those driving cars. I think it will be really nice in the summer. I hope in the future they'll use the open space for things like food or book markets."

CHARLIE, MEDICI GALLERY



"South Kensington is a major tourist site and the road was a mess before – it was due for an upgrade – the new look is much more attractive! Today there are more people walking around, which is good for the shop, and the area hasn't lost its old wealthy London appeal. It blends in well."

TOBY, THE SOUTH KENSINGTON BOOK SHOP



"We had two years of disruption which has been really hard on business but now we have 10 per cent more customers than before the renovations. Lots of people now walk along this bit of the road rather than using the tunnel to Imperial or the museums."

FATA, QUATRE SAISONS CAFÉ

obituaries



LORETTO O'CALLAGHAN
Loretto O'Callaghan, former Disabilities Officer, died on 4 December 2011. Emeritus Professor Rees Rawlings (Educational Quality Office) pays tribute:

"Loretto was born in March 1944 at Ventnor on the Isle of Wight. She came to London aged 18, where she worked in PR and publishing, before joining the College in 1988 as a Student Accommodation Officer. Her role was to administer the allocation of students to halls of residence. Over time she became more and more involved with students with disabilities, and this was acknowledged by her appointment in December 2001 as the College's first Disabilities Officer, a post she held until her retirement in December 2007.

Loretto was always willing to go into battle on behalf of deserving students and took every opportunity to promote awareness of disabilities through formal and informal discussions with both staff and students. She gained respect and confidence from the College community, which was essential for the development of her role.

From the late 1960s she lived in Queen's Club Gardens, where she remained for the rest of her life. It was here that she met her constant companion, Christopher. Her diligence and hospitable nature led to many calls on her time and she worked hard for More House, the Roman Catholic Chaplaincy for Imperial, and the Queen's Club Gardens Residents' Association.

Loretto will be greatly missed by all those who knew her."

To share your memories of Loretto please visit: <http://bit.ly/lorettoocallaghan>

long
service

Staff featured in this column have given many years of service to the College. Staff listed below celebrate anniversaries during the period 15 February–27 March. The data is supplied by HR and is correct at the time of going to press.

—JESSICA ADAMS COMMUNICATIONS AND DEVELOPMENT

20 years

- Miss Helen Bell, Undergraduate Course Organiser, Surgery and Cancer
- Ms Sally Baker, Graduate School Manager (Postgraduate Development), Graduate School
- Ms Serena Dalrymple, Secretary, Mechanical Engineering
- Ms Tanya Clark, Finance Assistant, Civil and Environmental Engineering

30 years

- Mr Christopher Metcalfe, Technical Manager – Architecture, ICT

40 years

- Mr Peter Sulsh, Chief Services Technician, Chemistry
- Mr Philip Cunnington, Technology Analyst – Network Infrastructure, ICT

SPOTLIGHT

Peter Sulsh, Chief Services Technician (Chemistry) 40 years



Peter Sulsh joined Imperial in 1972 as a Junior Technician in the Department of Chemistry and this February he celebrates an impressive 40 years at the College. His job involves leading a team of six, who provide technical support to the College's chemistry researchers. The support can range from engineering projects, electronics design, mechanical work or even bespoke glass blowing. One of the innovations Peter and his team have developed is a special tube for carrying samples across campus, so they can be tested for nuclear magnetic resonance.

"Like many of the projects I've worked on, this was about making life easier and safer for researchers," explains Peter. Peter notes that interacting with staff and students from all over the world is the best part of his job. "Being here for 40 years means I've got a lot of stories about the College, some of which shouldn't be repeated!" he adds.

A head (and heart) for business



"This Glaswegian has something to shout about," reported the *Financial Times* about Professor David Begg, and how right they were. After nine years as Principal of the Business School, David has seen the School double its income, rise 45 places in the *Financial Times* rankings and establish a world-class reputation in innovation and entrepreneurship. Reporter caught up with

him on the eve of his retirement to look back on his career at the College.

What do you consider your greatest achievement during your time as Principal?

I think I leave the Business School in a much better place than I found it. We are very proud of having beaten Oxford and Cambridge in the last Research Assessment Exercise and of our operational and academic staff who do a fantastic job.

How do you see the relationship between the Business School and the rest of the College?

Imperial has been magnificently supportive. Quite rightly, they were a bit sceptical at first, but as we have proved ourselves, they have seen the benefits and created the opportunities for us to be able to achieve our aims.

What are you going to miss the most?

The 6.00 starts! No, seriously, in this job, you build a community of colleagues and friends and that will be a very big change. Though, I will be looking for my next challenge in retirement...

Do you know what that is likely to be?

Head of English cricket perhaps?! Everyone says take your time, so I'm following this advice and am relaxed about it. Indeed, for the immediate future, I am going to support Dot [Griffiths] in her role as Acting Principal and ensure a smooth transition.

Any words of wisdom for your successor?

Go for it! A Principal cannot achieve much single-handedly and a great part is the team you build around you. I've been very fortunate. With a School that is in great shape, it should be a great challenge for whoever follows.

—TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT

What do you want to be when you grow up?



Last year Dr Shane Bergin, Intra European Fellow in the Department of Chemistry, pictured, conducted a survey of postdocs to find out about their career ambitions. He explains why it's important for postdocs to have an exit plan.

"The majority of PhD graduates become postdocs on the completion of their theses. Better money for more or less the same work is extremely appealing. Principal Investigator are often eager to employ postdocs rather than PhD students as they are a quantifiable risk – you have either a strong publication record from your days as a graduate student or you don't. Simply put, postdoc positions are reasonably paid and not extremely difficult to obtain.

For most people, the big question is what to do after your time as a postdoc. Such positions are a means to an end, seldom an end in themselves. Thus, one would imagine that those who set off down this path have well thought out career plans. I recently surveyed the postdocs in the Department of Chemistry and found more than 50 per cent of postdocs do not have any plans. More worryingly, I found the longer they remained as a postdoc, the less likely they were to have an exit plan. Female postdocs took career planning more seriously than their male colleagues but they secure significantly fewer academic posts when they leave. Why is this?

In the coming weeks, postdocs will receive a survey probing career ambitions and career planning. This will be run jointly between the Postdoc Development Centre (PDC) and postdoc reps in every department. I would encourage all postdocs to take part. This data will be invaluable – sparking much needed debate and perhaps help mould future college strategies in this area. As with research in all of our disciplines, well grounded arguments based on figures will carry the most weight."

For more information about the survey contact: sbergin@imperial.ac.uk

CORRECTION AND CLARIFICATIONS

In the article 'Book review' on page 9 of the last issue, printed on 23 January, *Reporter* should have attributed the second edition of *The Mechanics of the Circulation* to Emeritus Professors Bob Schroter and Kim Parker, (both Bioengineering), Emeritus Professor Anthony Seed (NHLI) and Emeritus Professor Tim Pedley, University of Cambridge, as well as Emeritus Professor Colin Caro (Bioengineering). Also Professor Ross Ethier's interest in 'thermodynamics' should have read 'hemodynamics'.

Welcome new starters

Dr Eduardo Aguilar Pelaez, EEE
 Miss Kate Allen, ESE
 Dr Wojciech Bialek, Life Sciences
 Dr Luca Biancofiore, Mechanical Engineering
 Ms Fatima Bibi Mannan, Accommodation
 Mr John Blamey, Chemical Engineering
 Ms Sandra Bovens, Bioengineering
 Mr Matthew Bowman, Imperial College Union
 Mr Richard Browning, Clinical Sciences
 Miss Charlotte Broyd, Public Health
 Ms Lisa Cheung, NHLI
 Miss Angela Cousins, Sport and Leisure
 Mr Martin Dansey, Bioengineering
 Dr Alessandra de Paula Alves Sousa, Medicine
 Dr Peter DiMaggio, Chemical Engineering
 Mrs Hannah Dolby, Faculty of Medicine
 Ms Kelly Dunagan, Life Sciences
 Miss Clare Dwyer, Faculty of Medicine
 Dr Aarif Eifan, NHLI
 Dr Rosy Favicchio, Surgery and Cancer
 Dr Sairam Geethanath, Clinical Sciences
 Miss Sam Gillatt, Business School
 Ms Eva Gledhill, Physics
 Mr Juan Gonzalez Maffe, Public Health
 Ms Emma Hill, Library
 Miss Agnieszka Ignatowicz, Public Health
 Miss Shiromani Jayawardhana, Life Sciences
 Mrs Kanta Jhalli, Medicine
 Dr Biraj Kakati, Chemistry
 Miss Niovi Karathodorou, Civil and Environmental Engineering
 Dr Gabor Kiss, Mathematics
 Dr Elodie Lafont, Medicine
 Dr Thiago Lopes, Chemistry
 Ms Anj Mahal, ICT
 Mrs Julia Makinde, Medicine
 Miss Catherine Mansfield, NHLI

Dr Nikolaos Mastellos, Public Health
 Dr Sophie Matthews, Medicine
 Miss Ellen McRobie, Public Health
 Dr Borja Mora Peris, Medicine
 Dr Venkata Naranammalpuram Sundaram, Chemistry
 Mr Peter Nash, Mathematics
 Ms Sarah Nolas, Life Sciences
 Mr Joshua Petersen, Mechanical Engineering
 Mr MD Rashid, Physics
 Mr Mark Reid, Sport and Leisure
 Dr Charles Romain, Chemistry
 Dr Andreas Roussakis, Medicine
 Mr Tariq Saeed, Aeronautics
 Dr Vanesa Sancho Shimizu, Medicine
 Dr Ananthi Sankaran, Materials
 Mrs Eileen Scott, Careers Advisory Service
 Mr Matthias Seher, Mechanical Engineering
 Dr Nazneen Siddiqui, NHLI
 Dr Evan Spadafora, Chemistry
 Mr Clement Stevens, Humanities
 Miss Geetika Tewari, Registry
 Miss Helen Thomas, Faculty of Engineering
 Miss Amy Townsend, Careers Advisory Service
 Miss Arwen Tyler, Chemistry
 Ms Elisa Voros, NHLI
 Mr James Wild, Faculty of Medicine
 Dr Kathrin Witmer, Life Sciences
 Mr Nir Yaacobi-Gross, Physics
 Dr Poonam Yadav, Computing

Farewell moving on

Mr Vladimir Ajvaz, ICT
 Mr Olle Akesson, Imperial College Union
 Mr David Armes, Medicine
 Ms Ligia Bernardeli, Catering Services
 Mr Shriram Bhosle, Clinical Sciences
 Dr Clare Bishop, Materials
 Miss Samah Bouchaara, Public Health
 Mr Yann Casas, Catering Services
 Dr Melissa Chan, NHLI
 Mr Graeme Cleugh, Chemistry
 Dr Rachel Davis, Surgery and Cancer (7 years)

Dr John Druce, Materials
 Mrs Beverley Hull, Medicine
 Mr Owain Jones, Environmental Policy
 Dr Khurum Kiyani, EEE
 Dr Jon Knight, Environmental Policy (16 years)
 Dr Manish Kushwaha, Life Sciences
 Mr Ben Love, Catering Services
 Dr Emily Lyons, Public Health
 Mr Srdan Marinovic, Computing
 Miss Neelam Nigah, Public Health
 Mrs Thilini Perera, EYEC
 Ms Meg Perumal, Surgery and Cancer (9 years)
 Mr Ross Potter, ESE
 Dr Zuzana Price, Life Sciences
 Dr Christopher Rhodes, Public Health (6 years)
 Dr Christopher Smith, ESE
 Dr Yeong-Ah Soh, Materials
 Mr David Stevens, Medicine (22 years)
 Miss Betelhem Tewoldemedhin, Sport and Leisure
 Mr Kieran Thompson, Faculty of Natural Sciences
 Dr Sean Tokunaga, Physics
 Dr Corina Tudor, NHLI
 Mr Marc Turley, Catering Services (5 years)
 Dr Konstantinos Velis, Civil and Environmental Engineering
 Miss Jemma Wells, NHLI
 Mr Joseph Wright, Medicine

retirements

Ms Janet Phipps, Life Sciences (12 years)
 Mrs Evelyn Rouse, Faculty of Medicine (18 years)
 Dr Ying Xu, NHLI

This data is supplied by HR and covers the period 5–29 January. This data 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.



29 FEBRUARY ▶ PUBLIC LECTURE

Sex, drugs, rock and mental health

Mental health problems are the single largest cause of disability in Europe. In addition to the emotional distress that people experience, the economic and social costs are over £100 billion each year in England alone. Much progress

has been made in developing psychosocial treatments involving art, music or talking therapies, but the effectiveness of these 'complex' interventions varies greatly and little is known about the reasons for this. Professor Mike Crawford from the Centre for Mental Health Research in the Department of Medicine, explores the findings from clinical trials of such treatments in his inaugural lecture.



7 MARCH ▶ PUBLIC LECTURE

Graphene: materials in the flatland

When you write with a pencil, you leave thin flakes of graphite on the paper. Some of these are less than a nanometre thick, and can be thought of as individual atomic planes cleaved

away from the bulk of the pencil tip. This two-dimensional material is called graphene, and was only discovered in its free state in 2004. Professor Sir Konstantin Novoselov FRS, joint recipient of the 2010 Nobel Prize in Physics for that discovery, explains how graphene may revolutionise the electronics industry in the 2012 Kohn Award Lecture.

take note

Explore the Francis Crick labs

Staff are invited to visit mock-ups of the labs planned for the Francis Crick Institute, on show near Heathrow from 15–23 February 2012. Staff will see a typical lab bay built to specification. The Francis Crick Institute, of which Imperial is a founder member, is an interdisciplinary medical research institute due for completion in 2015.



To register your interest contact:
hannah.stevenson@crick.ac.uk

21 FEBRUARY ▶ SOCIAL

Fundraising quiz night

In support of the Rector's Scholarship Fund



22 FEBRUARY ▶ PUBLIC LECTURE

The God species

Mark Lynas, author

23 FEBRUARY ▶ PUBLIC LECTURE

Form and function of the developing heart

Professor Thomas Brand (NHLI)

23 FEBRUARY ▶ PUBLIC LECTURE

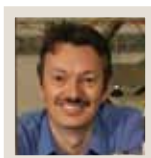
A CEO's perspectives on global business challenges

Jean Stephens, CEO, RSM International

27 FEBRUARY ▶ SEMINAR

Creating and building a university spin-out

Professor Nigel Brandon (EFL)



1 MARCH ▶ MUSIC

Lunchtime concert

Belcea Quartet



6 MARCH ▶ MUSIC

Lunchtime concert

Brahms Piano Quartet no 2 in A, Op 26

8 MARCH ▶ PUBLIC LECTURE

Financial econometrics

Professor Paolo Zaffaroni (Business School)

8 MARCH ▶ MUSIC

Lunchtime concert

Amy Dickson (saxophone)

9 MARCH ▶ PUBLIC LECTURE

Ig Nobel Awards Tour

'Improbable' research

MEET THE READER



Fred Diacon, Senior Programme Coordinator, Business School

What are you doing in the picture?

I'm in Hyde Park checking out the snowfall. It's lovely to look at but absolutely freezing! I was tempted to make a snow angel but without a spare change of clothes it would have made for an uncomfortable afternoon in the office.

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

I'd join a research expedition heading for a tropical location – Brazil is supposed to be pretty nice right now. The type of research being conducted on the expedition wouldn't bother me, I'd just like to be going somewhere warmer than London!

Who would be your cover star?

I would feature some of the students from the MSc Management programme I work on, as they so enthusiastic. Either that or someone from the Business School café, to say thanks for the excellent coffees and muffins they've supplied on many occasions.

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

PHOTO EXPO

The criss-cross design and towering silver-grey lampposts are distinctive features of the transformed Exhibition Road. Exhibition Road chocolates given to guests of the official opening ceremony on 1 February.



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