super scholars

The drive to raise more funds for students like Vaishali

ROYAL RECOGNITION
Professor Bloom among those honoured by the Queen
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BRIGHT IDEAS
Graduate School’s Elaine Walsh on how to cultivate creative research
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IMPERIAL BRAZIL FORUM
Alexandre Strapasson builds bridges with Brazil
PAGE 11
Global tides

Four national teams of triathletes will be training at Imperial’s swimming pool in **Ethos** during the Olympics.

The British, Swiss, French and Australian Olympic teams have all booked sessions during the period 31 July–7 August to use the 25 x 12-metre pool, in the run up to the women’s triathlon on 4 August and the men’s triathlon on 7 August. Both events will be held in Hyde Park.

“We are very much looking forward to hosting a range of triathlon national teams during their Olympic stay in London and are delighted that they have chosen to use our facilities,” said Neil Mosley, Assistant Director of Commercial Services.

“Staff and students will witness a truly international mix of coaches and athletes in action if they’re using the **Ethos** pool during the Olympics. The triathlon sporting event has grown significantly in popularity over the last few years and we hope that our Olympic visitors will boost participation amongst Imperial students.”

In some sessions, only a couple of lanes will be used by the Olympians, so staff and students will be able to swim alongside them, while in other sessions all five lanes will be reserved for Olympic training.

The Japanese fencing, volleyball and badminton Olympic teams, who will be staying at Imperial in the run up to the games, will also have access to the pool, as well as to other facilities in **Ethos** and on the South Kensington Campus.

 **—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT**

New Principal of the Faculty of Medicine

One of Ireland’s foremost medical leaders is to become the Principal of the Faculty of Medicine. Professor Dermot Kelleher, a pioneer in the field of immune response and infectious disease, will join the College on 1 July 2012, taking up his new appointment on 1 October 2012.

Currently Vice-Provost for Medical Affairs and Head of the School of Medicine at Trinity College Dublin, Professor Kelleher graduated in medicine from Trinity in 1978, and subsequently completed specialist training in gastroenterology. His research considers the immune response to many of the leading causes of gastrointestinal infectious disease worldwide, and he is the author of over 200 publications and 14 patents. Professor Kelleher is also a Fellow of the Academy of Medical Sciences, Royal College of Physicians, Trinity College Dublin, and the American Gastroenterology Association.

Welcoming the appointment, the Rector said: “Professor Kelleher is an international leader, with an outstanding record in academic medicine. His emphasis on translating research from the laboratory to frontline patient care fits perfectly with Imperial’s vision.”

Professor Dermot Kelleher said: “Imperial’s Faculty of Medicine has an international reputation for excellence and a global reach that I have long admired. I share in its vision for research translation, both through its activities in the Academic Health Science Centre and the future partnership with health providers in north west London. I look forward to collaborating with all colleagues across the College.”

Professor Kelleher succeeds Professor Sir Anthony Newman Taylor who has been Principal since December 2010.

 **—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT**
Knighthoods and a CBE for Imperial researchers

An obesity researcher and a mathematician from Imperial have been awarded knighthoods, and an Imperial chemist has received a CBE, in the 2012 New Year Honours.

Professor Sir Stephen Bloom (Medicine) was made a Knight Bachelor for services to chemistry. He is Head of the Division of Diabetes, Endocrinology and Metabolism and Chair of the Section of Investigative Medicine at the College. He is also Lead Clinician for Clinical Chemistry at Imperial College Healthcare NHS Trust.

He joined the Royal Postgraduate Medical School in 1974, and became part of the Imperial College School of Medicine in 1997.

Professor Sir Simon Donaldson (Mathematics) was named a Knight Bachelor for services to mathematics. Professor Donaldson has been Professor of Mathematics at Imperial since 1998 and works on geometry, algebraic geometry and the topology – the study of shapes.

Professor David Phillips (Chemistry), who was awarded an OBE for services to science education in 1999, received a CBE for services to chemistry. Professor Phillips is currently the Senior Science Ambassador for Schools, and Professor Emeritus and Senior Research Investigator at the College. He is also the President of the Royal Society of Chemistry.

Sir Keith O’Nions said: “The honours for Steve, Simon and David mark a great start to 2012 for Imperial.”

Rector

Sir Keith O’Nions said: “The honours for Steve, Simon and David mark a great start to 2012 for Imperial. Steve, as a clinical academic, has pioneered new approaches to tackling obesity and diabetes – one of the major societal challenges of the day.

Simon is one of the great mathematicians of our age whose work is extending our understanding of the world around us, and David is a leading figure in chemistry in the UK, who is also dedicated to enabling children and the wider public to share his enthusiasm for science and understand why it is so important.”

—LAURA GALLAGHER AND SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Planning submission for new campus

The College submitted a planning application in December to the London Borough of Hammersmith and Fulham for its masterplan to develop the former BBC site on Wood Lane. The masterplan includes proposals for world class teaching and research facilities, space to support the College’s technology transfer activities, postgraduate facilities, conference and leisure amenities, new homes and a publicly accessible square.

The submission follows extensive consultation with the borough and members of the public over the summer and autumn 2011, including meetings with local residents’ groups and exhibitions held in public spaces and on Imperial’s South Kensington and Hammersmith Campuses, led to refinements to the original proposals.

John Anderson, Project Director for Imperial West, said: “Imperial West will enable the College to expand upon the success of its South Kensington site to create a second, open access academic campus that provides the physical infrastructure for world class research and teaching, leading edge facilities for business development and technology transfer, and to create an attractive environment to live and work in.”

“We have consulted widely with the planning authorities and local residents and this process has helped inform the basis of our planning application. We have refined the designs of the residential building, the academic health building and the office building to respond positively to our stakeholders’ comments.”

The first phase of the development, which is already underway, with 606 postgraduate studios and nine homes for key workers already under construction and due for completion in August 2012. A decision on the planning submission is expected in the spring.

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Visit www.imperial.ac.uk/newcampus

Contrary proposals

The £1.19 million project will front on to Exhibition Road. The £1.19 million project will front on to Exhibition Road. The £1.19 million project will front on to Exhibition Road.

Imperial-NTU degree

The course to be offered by the Lee Kong Chian School of Medicine, the medical school in Singapore run jointly by Imperial and Nanyang Technological University (NTU), was approved by Imperial’s Senate in December 2011 and the School’s Academic Affairs Committee in January 2012. The curriculum is now progressing through NTU’s committee structures. The Imperial-NTU Bachelor of Medicine Bachelor of Surgery degree will first be delivered in August 2013.

www.lkcmedicine.ntu.edu.sg

Pro Rector appointed V-C of Brunel

Professor Julia Buckingham, currently Pro Rector (Education and Academic Services), has been appointed the next Vice-Chancellor of Brunel University and will take up duties on 1 October 2012.

Commenting on the appointment the Rector, Sir Keith O’Nions, said: “Julia has made huge contributions to the College over the last 15 years. She has led and championed many initiatives to improve the quality of education at Imperial, including launching our Education Days, which have put the spotlight on innovation in teaching. We wish her every success in her new role.”

www.imperial.ac.uk/reporter

In brief

Chinese Ambassador visits

The Chinese Ambassador paid a visit to Imperial on 16 January, to find out more about the College and to share his insights on his country’s current and future priorities. Mr Liu Xiaoming, who has been ambassador to the UK since 2009, met Chinese staff and students, and researchers with academic links to China, before touring the Imperial Incubator, which houses early-stage technology companies spun out of research at the College. Mr Xiaoming then delivered a special lecture on the importance of innovation in China’s economic and social development. See Reporter online for the full story.

Recladding Mechanical Engineering Annex

Construction work has begun on recladding the Mechanical Engineering Annex which fronts on to Exhibition Road. The £1.19 million project will improve the appearance of the existing building and the heat it retains, delivering energy savings that will help to reduce the College’s carbon footprint. The work is expected to be completed in time for the London 2012 Olympics.

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www.lkcmedicine.ntu.edu.sg
Eyeing up the possibilities with novel technology

Researchers have developed novel technology that could enable people with disabilities to control wheelchairs with the blink of an eye, reported Metro. Scientists at Imperial have developed prototype eye-tracking technology that enables the user to navigate around a computer without a mouse to play a computer game. They now aim to incorporate this functionality into a wheelchair to improve mobility for people with disabilities. “The user interface traces out the path and if that’s the path you want to drive, you would simply wink twice with your left or right eye and the wheelchair will start driving,” said Dr Aldo Faisal (Bioengineering). He believes the wheelchair technology could help more than five million Britons with conditions such as arthritis.

Hints of Higgs

Scientists say they have found hints of the existence of the Higgs boson, a subatomic particle thought to be a fundamental building block of the universe. The researchers announced that two independent experiments at the Large Hadron Collider (LHC) in Geneva have turned up signs of the particle. “The Higgs boson is the last missing piece of our current understanding of the most fundamental nature of the universe,” Martin Archer (Physics) told CNN. “Only now with the LHC are we able to really tick that box off and say: ‘This is how the universe works, or at least we think it does.’”

Bidding spectrum widens with fresh plans for sale of frequencies

Italy may raise more than two billion euros ($2.6 billion) from the sale of television frequencies, in an effort to reduce borrowing costs amid Europe’s debt crisis, reported Bloomberg News. Prime Minister Mario Monti, who won broad backing in December 2011 for his 30 billion-euro emergency budget in the parliament’s lower house, withdrew plans to assign six digital frequencies for free after consumer and industry groups called on the government to sell the spectrum to the highest bidders. An auction “could be a Big Bang for Italy’s TV industry and finally open it up to real competition,” commented Professor Tommaso Valletti (Business School).

Healthcare trial begins

Doctors in the USA have drawn up plans to sequence the full genetic code of thousands of people in a pilot project to personalise their medical care, reported The Guardian. Volunteers taking part in the project will have all six billion letters of their genome read, stored and linked to their medical records to help doctors prescribe more effective drugs and other therapies. The trial will help physicians work out how best to store a person’s genetic code, explain the information to patients and direct their medical care. “This is a trend that will definitely be found across the developed world in the coming two to five years,” commented Professor Tim Aitman (Life Sciences).

awards and honours

Shamji wins best allergy abstract

Dr Mohamed Shamji (NHLI) won an award for his abstract at the World Allergy Congress held in Cancún, Mexico in December 2011. The research presented by Dr Shamji at the conference identified a way to monitor the effectiveness of immunotherapy for the treatment of hayfever. Immunotherapy, which involves repeatedly exposing an allergy sufferer to gradually increasing doses of allergen, is increasingly popular as a treatment but it is currently difficult to measure its effect.

Careers Advisory Service team praised

The Careers Advisory Service (CAS), pictured right, has received the national Matrix Standard certificate in recognition of the careers guidance services it offers to students and alumni of the College. Imperial was praised for its varied programme of workshops and seminars, drop-in sessions for students, extensive resources library and award-winning website. The Matrix Standard looked at eight different elements of the CAS, from how aware people are of the service to the quality of the information available. For more information about the CAS please visit www.imperial.ac.uk/careers

Seven EPSRC Fellowships

Dr James Bull (Chemistry), Drs Amelle Zair and Piers Barnes (both Physics), and Dr Thomas Reddyhoff (Mechanical Engineering) have been awarded Career Acceleration Fellowships by the Engineering and Physical Science Research Council (EPSRC). Each will receive a five-year grant to support them at the early stages of their career, with the expectation that they will have established an independent career of international standing by the end of the award. EPSRC has also made awards to Dr Fernando Bresme (Chemistry), Dr Simon Colton (Computing) and Professor Claire Adjiman (Chemical Engineering) in the form of Leadership Fellowships. The Fellowships provide funding for up to five years and aim to help academics develop into international research leaders, who can set and drive new research agendas. Read the full story at: http://bit.ly/EPSRCawards
Iron levels in blood give clue to clot risk

People with low levels of iron in the blood have a higher risk of dangerous blood clots, according to research by Imperial scientists published in the journal Thorax on 15 December.

Annually, one in every 1,000 people in the UK is affected by deep vein thrombosis – blood clots in the veins. These can be fatal if the clot travels into the blood vessels of the lungs. Although some risk factors for blood clots are recognised, such as major surgery, immobility and cancer, often there is no clear reason for a clot.

To identify new risk factors, researchers analysed blood from 609 patients with hereditary haemorrhagic telangiectasia (HHT), an inherited disease of the blood vessels. Previous research had found that HHT patients have a higher risk of blood clots, but the reason for this was unclear.

The scientists looked for differences between the patients who had blood clots and those who did not. The study found that low levels of iron in the blood were a strong risk factor for blood clots. Patients who took iron supplements did not have higher risk, suggesting that treatment for iron deficiency can prevent blood clots.

Dr Claire Shovlin (NHLI) said: “There are small studies in the general population which would support these findings, but more studies are needed to confirm this. If the finding does apply to the general population, it would have important implications in almost every area of medicine.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

New pike species doing too well in Italy

Researchers working in Italy including Dr Diego Fontaneto (Life Sciences) have called for wildlife managers to stop relocating freshwater pike (pictured above) from European countries north of the Alps to Italian freshwaters, where they are caught by anglers. This follows the discovery that fish from these geographically separate regions belong to two distinct species -- they were previously thought to have been members of the same species.

Pike are easily recognisable by their elongated torpedo-like body shape and are a popular choice for anglers across Europe, North America and Asia. Heavy fishing has caused populations to dwindle in some areas, a problem that is being solved by replacing them with juvenile fish from more healthy populations.

The researchers have called to ban this practice in Italy, since the northern pike species native to central and northern Europe is potentially in danger of driving the native southern pike species to extinction.

Until now only one species of pike was known to live in Europe Esox lucius, which is also found in North America and Asia. Its taxonomy has remained unchanged since it was described by the zoologist Linnaeus in 1758. Dr Fontaneto, co-author of the research, said: “The discovery of a new species of a large fish in Europe is a rare surprise. Most new discoveries of fish species are of small, obscure and understudied fish that live only in geographically remote and inaccessible small lakes.”

Dr Fontaneto and his colleagues from the University of Perugia have been studying the characteristic grey-green stripes and spots on the pikes’ scales. These broken patterns camouflage the fish against aquatic vegetation, hiding them from underwater prey and predators on the land, and are one of the physical characteristics that differ between the newly distinct species.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

Scientists reassess weight loss surgery for type 2 diabetes

Weight loss surgery is not a cure for type 2 diabetes, but it can improve blood sugar control, according to a new study published in January’s issue of the British Journal of Surgery. Whereas some previous studies have claimed that up to 80 per cent of diabetes patients have been cured following gastric bypass surgery, Imperial researchers from the Department of Medicine found that only 41 per cent of patients achieve remission using more stringent criteria.

The research was funded by the National Institute for Health Research (NIHR) Biomedical Research Centre, which was awarded to Imperial College Healthcare NHS Trust and Imperial College London.

Obesity is a major risk factor for type 2 diabetes. Worldwide, 80 per cent of people with type 2 diabetes are overweight or obese at the time of diagnosis. The new study revisited previous data on 209 patients with type 2 diabetes to evaluate the effectiveness of three types of weight loss surgery using new criteria set out by the American Diabetes Association. Researchers found that the remission rate was 41 per cent for gastric bypass, the most effective type of surgery.

“Using the new criteria, we don’t get such eye-catching figures as some that have been quoted in recent years,” said Dr Carel le Roux (Medicine), who led the study. “But it’s clear that weight loss surgery, particularly gastric bypass, has a significant beneficial effect on glucose control.”

“Diabetes is a chronic, multisystem disease. Stomach surgery may not mean that patients can stop taking diabetes medication, but surgery and medication together achieve better results than either treatment on its own.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT
Super scholars

When sixth former Vaishali Vora opened the email last August telling her she’d received a Rector’s Scholarship to support her medical degree, she felt both relieved and excited as she realised she’d get the Imperial experience she’d always dreamed of – without having to worry about money. Reporter investigates why scholarships are becoming increasingly important and how more scholarships were awarded last year than ever before.

Last summer as the debate on the new tuition fee arrangements settled, Imperial signalled its commitment to support students who win a place at Imperial but may struggle with university costs, by launching the Rector’s Scholarship Fund, alongside its financial aid package.

With the increase in tuition fees to £9,000 a year, the College needs to be even more competitive to attract the best Home and EU students regardless of their means, explains Rector Sir Keith O’Nions: “Scholarships are an integral part of this. Today we need to be able to offer students not only fantastic career prospects, access to teachers of the highest standing, world class facilities and an excellent campus environment, but we also have to provide students with the means to make the most of their time here”.

Rector’s Scholarships provide £1,000 for undergraduates per year, £10,000 for MSc students and £15,000 per year for PhD students for the duration of their courses.

In 2011 the College focused its fundraising activities on generating philanthropic support for Rector’s Scholarships, targeting Imperial’s network of 150,000 alumni and its longstanding non-alumni supporters. The Rector has been at the fore of the scholarships campaign, asking undergraduates to get involved with two fundraising telethons, writing to all alumni for the annual direct mail appeal and travelling across the globe to meet alumni and speak to them directly about the need for scholarships.

To support these in-house efforts, the College also set up a fundraising board for scholarships last year. Its members include alumni and donors who have volunteered to work on behalf of the College, using their networks around the world to get further support for scholarships.

The College’s fundraising team and volunteers also try to secure major endowed gifts, as well as gifts from foundations and corporations. In 2010–11 donations to the full suite of philanthropically funded scholarships ranged from £1 to £845,000 and the total given to scholarships in major gifts (of £50,000 or more) was £2.9 million.

As a result of the direct mail campaign, telethons and other mass appeal initiatives, the College secured £673,176 of philanthropic contributions to the Rector’s Scholarships Fund during the 2010–11 financial year. Donations like this enabled the Rector’s Scholarship Fund to award 61 undergraduate scholarships (three times more than in 2010–11), 20 Master’s scholarships (five times more than in 2010–11) and four PhD scholarships (double the number awarded in 2010–11). As for this financial year (running August 2011–July 2012), by the end of December £310,982 had already been committed to the Rector’s Scholarship Fund by 1,197 donors responding to mass appeals, and the Division of Communications and Development will continue to fundraise throughout 2012.

Donors contribute to the Rector’s Scholarship Fund for a number of reasons – some say they give in memory of a partner who studied at Imperial, others said they received scholarships when they were students and are aware of how much the support helped them, while others simply want to support Imperial’s mission for excellence. “I donated to Imperial as I wanted to thank the College for the scholarship I received in 2003 to support my Materials Science and Engineering degree,” explains Malaysian alumnus, Gary Lee. “My years at Imperial gave me many great memories and some amazing contacts – the whole experience is something I’ll always value.”

“We’ve had a wonderful response from our alumni and donors,” says Tom Miller, Director of Communications and Development. “In 2009–10 the College had 1,848 donors. But this more than doubled in 2010–11 to 3,851 donors. Sir Keith has been instrumental in leading the appeals and encouraging alumni to support the College,” he added.
Face to face

Last year the Rector travelled to China, Hong Kong, India, Taiwan, Malaysia, the USA and Singapore to engage with alumni, and current and prospective donors, seeking support for the Rector’s Scholarship Fund.

“There’s huge merit in going to meet people face to face,” says the Rector. “The meetings we arranged gave alumni a chance to reflect on their time at the College. Hearing first-hand how the College has developed and what we need to do to continue to grow, many were galvanised into action on our behalf.”

Since the Rector’s trip to India, the alumni association has started to develop a scholarship scheme to support talented Indian students studying at Imperial.

“What constantly amazes me is how similar our alumni are, around the world,” says the Rector. “Whether they have just retired or graduated a couple of years ago, they share the same affection and enthusiasm for the College and the desire to see others benefit from the same educational experience that they were entitled to.”

Rector’s Scholar Vaishali Vora has just started the second term of her medical degree and reflects on her studies so far: “My favourite experiment was drawing blood from each other, then we analysed the samples. It was the first time we’d had to handle blood, which made everyone so nervous and excited!” Since she returned from the winter break, Vaishali has been enjoying being taught about endocrinology by Professor John Laycock. “He is so enthusiastic and undoubtedly the best years of my life.” He makes jokes along the way, relating it all back to the subject, which really helps the information stick,” she says.

Tom explains that donors who have given to the Fund see their gifts as investments. “From speaking to donors who have committed to donate an amount every month, we frequently hear that they see it as a chance to give someone opportunities that they wouldn’t have otherwise had,” he says.

In addition to giving students access to a world class education, the scholarships allow them to take full advantage of the College experience including extra-curricular events and volunteering work. Last term Vaishali got involved in a week of charitable activity and helped to raise around £42,000 for orphans and other needy children around the world by supporting Islamic Relief’s Orphans Campaign. “It was fantastic to meet lots of new people and to dress up as Elmo and walk down the streets of London, raising money for such a good cause,” she says.

On-going campaign

Those financially eligible for Rector’s Scholarships always outweigh the number of awards available and, over the next few months, a College scholarships panel will have the unenviable job of selecting which of the talented pool of students will be offered support for 2012–13 based on academic merit. The on-going scholarships campaign aims to ensure that the process of identifying the next generation of Rector’s Scholars will be a recurring milestone for years to come.

Tom explains that the long-term objective of Imperial’s development activities is to build up an endowment for the future, so that Imperial can compete with the best universities worldwide by offering the same level of scholarships and financial aid packages. Achieving this would mean that the most talented students, like Vaishali, regardless of their financial background could benefit from the educational and student experience offered by Imperial.

—EMILY ROSS-JONES, COMMUNICATIONS AND DEVELOPMENT

For more information about the Rector’s Scholarship Fund, visit: http://bit.ly/rectorrsscholars

What does being a Rector’s Scholar mean to you?

“Imperial is the place where I want to achieve my ambition of becoming a race car aerodynamicist, and where I can spend some of the best years of my life.”

“This scholarship means a lot to me as it will help me finance my studies during this difficult financial climate. It is encouraging to know that there are many people that are very supportive of students.”

“I’ve benefited from Imperial’s clubs and societies – from fencing to beekeeping to the cheese society – there’s something for everyone and I’ve joined all three!”

RECTOR’S SCHOLARSHIPS at a glance

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inside story

Jeremy Pitt

Heading off potential threats to the UK’s critical infrastructure by developing new technologies and improving the way that organisations communicate with one another is the focus of Dr Pitt’s role as Associate Director of the Institute for Security Science and Technology, which he took up last September. He talks to Reporter about his field of work.

What does your role involve?
I act as the contact point for researchers across the College who are working on ways to better protect the nation’s critical infrastructure. This includes physical infrastructure for water management, the electricity grid and transport, and also organisational infrastructure such as digital libraries. We hope our new collaborations will ultimately lead to new projects that will impact on policy making in the UK.

What would constitute a major threat to the UK’s infrastructure?
Many people may regard terrorism as a major threat to the UK and think in terms of increasing surveillance to improve safety. However, a more immediate and insidious threat to our infrastructure is present in the effects of climate change. As a result of globalisation, the world is increasingly interconnected, which means that a localised climate problem could have ramifications regionally and even globally.

Give me an example of a project that you are working on to protect critical infrastructure?
We have been working on a flagship initiative called Future Information and Communication Technology that promotes the idea that organisations share critical information more freely to be inclusive and proactive with their crisis management plans.

In the field of research?
Serendipity mainly though for me, sustainability has always been a key issue. I genuinely think that as parents, we should ask ourselves: What sort of world do we want to leave for our kids?

We should ask ourselves: What sort of world do we want to leave for our kids?

Olympic torch relay

On 1 December, Professor Alison McGregors (Bioengineering) attended an event held in London for higher education staff and students taking part in the Olympic flame torch relay in July. Each participant will ‘run’ the famous flame for 300 metres. Alison reports on her experiences at the event.

“The Higher Education Gala Dinner was my chance to meet the two students, Franca Hoffmann (Mathematics) and Kaushali Trivedi (Medicine), who will be joining me in representing the College in July and running with the torch for 300 metres each. The London traffic extended our journey time to the venue and gave us a chance to reflect on why we had been nominated. For Kaushali, a fifth year medical student, it reflected her long-term commitment to a charity. She runs called KEEN London – a playgroup for children with a range of special needs. Franca, who is currently in France as part of her mathematics degree, set up a mathematics camp run by a small team from Imperial for high school students in Accra, Ghana, and contributes actively to a range of College societies including two orchestral groups. For myself, I think it was for a range of student support activities, from treating injuries in our Boat Club in years gone past, to helping students organise conferences in both science and sport.

The event began with a champagne reception followed by dinner. Between courses we were inspired by film clips and the personal experiences of previous Olympic torch runners. We had an amazing talk from Sally Gunnell – an Olympic medallist at the 1992 Barcelona games – who even let us try on her gold medal. By the end of the evening we certainly felt a part of what is going to be one of the largest worldwide celebrations!”

For the full article see Reporter online.

Telomeres

The information contained in our genes is arranged within each cell of the body in structures called chromosomes. The tips of chromosomes are called telomeres. Telomeres can be pictured as disposable parts at the end of chromosomes that are progressively lost every time a cell multiplies. When telomeres reach a certain length the cell stops multiplying and gets destroyed. This control mechanism is important in preventing diseases like cancer. Without the telomeres shortening, a cell could become immortal and keep producing more identical cells to generate a tumour. Tumour cells are able to replenish their telomeres by switching on a protein called telomerase, which is normally found in cells that need to reproduce extensively, like cells of the immune system. Blocking the activity of telomerase represents a new approach for treating cancer and molecules that can inhibit its action are currently being tested.

—ROBERTA SOTTOCORNOLA, RESEARCH ASSOCIATE (LIFE SCIENCES)
**INVENTOR’S CORNER**

**Active innovation**

Dr Simos Evangelou, pictured above, holds a joint lectureship in the Departments of Mechanical Engineering and Electrical and Electronic Engineering and, over the last four years, has been working with Dr Daniele Dini (Mechanical Engineering) to develop a new suspension system for road vehicles.

Dr Evangelou’s suspension system which could be used in almost all road vehicles to improve handling, comfort and safety.

**What are you working on?**
The suspension system we’ve developed combines the performance improvements of fully active systems with the safety and economy of passive systems. A passive system is what you would find in most road vehicles. An active system includes components which react to an external stimulus and can alter certain parts of the suspension to react favourably to road conditions.

**How is your system different?**
Because of the nature of a passive system, car suspension systems must be built to work in most conditions, which can lead to shortcomings such as understeering. An active suspension system can, however, react to external information and correct these shortcomings to deliver improved handling, comfort and safety. We have sought to develop a system that retains most of these benefits, while reducing the extent of the active components and, thus, the complexity, cost and maintenance requirements.

**How does it work?**
Our system uses an electrical mechanism called an actuator to vary the geometry of the passive element of the suspension system. According to the studies we’ve done, this mechanism can be smaller than in fully active systems, which means there is a lower power requirement. In addition, we can integrate the system with current passive suspension systems. This reduces the cost and complexity of the design and means that the system is fail-safe, which will offer a more attractive proposition to vehicle manufacturers than a fully active system. We are in the process of developing prototypes to demonstrate our results.

—GAVIN REED, IMPERIAL INNOVATIONS

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**Book review**

The second edition of *The Mechanics of the Circulation* written by Emeritus Professor Colin Caro (Bioengineering), pictured, has been republished, 33 years after it was first printed. Professor Ross Ethier, Head of the Department of Bioengineering, reflects on its importance to the field.

“The first edition of the book was my faithful companion when I became interested in thermodynamics 20-plus years ago. It was, and continues to be, the standard reference text for those who seek to understand both physical principles of blood flow, and the biology and physiology of the cardiovascular system. It was distinguished by clear writing and a holistic view of the field. A measure of the impact of the book is to see how many colleagues at leading universities have a copy on their bookshelf. I’ve seen it in offices from Japan to Switzerland! The second edition will introduce an entire new generation to the field.”

For more information: www.cambridge.org/9780521151771

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**Royal College of Art student exhibit**

A Project for the Sun is a new exhibition in the Blyth Gallery on the South Kensington Campus featuring work from seven students of the Royal College of Art’s painting department: Christian Camacho Reynoso, Seokyeong Kang, George Little, Oscar Murillo, Hector Castells, Lucas Price and Marianne Spurr. Drawing on their studio interactions and conversations over the last year, the artists explore their relationships, and the way in which images and objects may lose, gain and shift meaning through circulation, juxtaposition and contextualisation.

Visit the exhibition in the Blyth Gallery, Level 5, Sherfield Building, until 27 January
Engineer beats trainee surgeons in hip replacement competition

On 5 December 2011, the Musculoskeletal (MSK) Lab ran an acetabular (hip joint) science and technology workshop on the Charing Cross Campus. The event involved Professor Justin Cobb (Surgery and Cancer) and Mr Derek McMinn, an orthopaedic surgeon from BMI Edgbaston Hospital in Birmingham, who discussed clinical applications and associated issues of hip surgery, with five companies and 20 trainees, attending to develop their surgical knowledge.

The morning session consisted of presentations from B Braun, Ceramtec, JRI, Mathys and Stryker, who gave an overview of their products and after lunch the attendees took part in practical activities with a competitive edge to give them hands-on experience of the components.

Each company had a workstation with a prosthetic hip and dry bone, into which the trainees had to impact acetabular cups (part of an artificial hip) in simulated surgery, using a robotic arm and navigation tool. The trainees were scored on their accuracy in the surgery and prizes were awarded to James Wong, who is working at Chase Farm Hospital, and Alvin Chen (Surgery and Cancer) but the winner was Dr Susannah Clarke (Civil and Environmental Engineering).

Zoe Williams, the lab’s Public Engagement and Patient Involvement Manager, said: “It was a close run competition and little did the attendees expect that the winner would be an engineer. Susannah is working on a hip project in the MSK Lab.”

For more information see: http://bit.ly/Msklab

Elaine’s creativity-boosting tips:

1. Clearly negotiate the balance of support and freedom that you offer your team members. Remember that this shouldn’t be a one-off decision – needs may shift considerably during the course of PhD programmes or projects, so review the balance regularly.

2. Establish a ‘there are no silly questions’ policy for all your group meetings and work discussions. That will help everyone to feel confident in contributing their ideas. Remember that unworkable ideas can be the catalyst for breakthroughs.

3. Optimise communication by creating a safe, open and democratic environment. For example, you can rotate the ‘chair’ to reduce hierarchy, or organise refreshments to help everyone to relax.

4. Remember that many great ideas originate during informal exchanges, so encourage your team to spend time together chatting, perhaps over coffee or lunch.

5. Imperial is full of successful researchers leading world class projects, but failure is a frequent occurrence on the way to success. Encourage colleagues to see setbacks as a valuable and interesting learning opportunity for all.

6. Encourage researchers to look out for interesting results and unexpected turns in their work and to share these with you, even when they are not sure what they mean.
Welcome new starters

Dr Anthony Abbatt, Chemical Engineering
Miss Samia Akhtar, NHLI
Miss Paisley Ashton, Environmental Policy
Ms Qian Bai, Mechanical Engineering
Mr Elange Banza, Imperial College Union
Dr Alice Bell, Humanities
Miss Yogeshwari Bhadsara, NHLI
Ms Joy Blackbum, NHLI
Mr Guido Bolognesi, Chemistry
Dr Leon Bon Chang, Physics
Mr Andrew Bosman, Sport and Leisure
Mrs Amanda Bravery, NHLI
Mr Michael Brown, Public Health
Dr Rajap Buim, Surgery and Cancer
Mr Ian Bush, Physics
Mr Ozan Cajik, Bioengineering
Mr Martin Casey, Human Resources
Miss Lida Castillo Rondon, Finance
Mr Enrique Castro Sanchez, Medicine
Dr Anil Chandrashekaran, Surgery and Cancer
Dr Hywagron Carpenter, Chemical Engineering
Dr Poonam Chouhan, Public Health
Dr Clara Clarke, Faculty of Medicine
Miss Laura Coates, Surgery and Cancer
Miss Hannah Cockerill, Business School
Dr Dana Cohen, Life Sciences
Dr Stuart Cook, Materials
Mr Christopher Cook, Faculty of Medicine
Professor Paul Curtis, Aeronautics
Mrs Karen Davies, Medicine
Mr Robert De Vries, Public Health
Ms Natalia Drews, Educational Quality
Dr Simon Foster, Physics
Prof Emma Francis, Faculty of Medicine
Mr Mandy Fraser, Medicine
Miss Silke Fuchs, Life Sciences
Mr Joel Gabel, Public Health
Dr Mathieu Gaudin, Surgery and Cancer
Mr Zsolt Gemesi, Climate KIC
Miss Tasmin Griffith, Estates
Miss Cristina Guallar Hoyas, Surgery and Cancer
Miss Nelgia Guerreiro Cantinho, Estates
Mrs Hansa Hafes, Library
Mr Gary Hahn, NHLI
Mr Mark Harrington, Faculty of Medicine
Miss Rosie Hart, Human Resources
Ms Saima Hasaan, Medicine
Mr Menashe Hazan, Aeronautics
Mrs Katherine Henry, Professional Development
Dr Caroline Howe, Grantham Institute
Mr Matthew Hughes, Chemistry
Mr Martyn Hutchings, Educational Quality Office
Dr Donatella Iacono, Mathematics
Dr AFM Islam, Computing
Mr Vuk Janjic, Computing
Miss Hardeep Johal, Surgery and Cancer
Dr Jill Johnson, NHLI
Mr Maliki Jumah, Business School
Dr Anne-Sophie Kaloghiros, Mathematics
Miss Evdokia Kardoulaki, EEE
Ms Andrea Karpati, International Office
Miss Karen Kiddaw, Faculty of Education
Dr James King, Mathematics
Miss Nicola King, Surgery and Cancer
Mr Reinder Koestra, Computing
Dr Giorgio Kapanos, Chemical Engineering
Dr Pantelis Koutoumpis, Business School
Dr Samuel Krower, ESE
Dr Saeheen Kumar, Surgery and Cancer
Mr Michael Lancaster, Imperial College Union
Dr Julian Le Roux, Mechanical Engineering
Mr Koon Lee, Chemical Engineering
Dr George Lesov, Catering Services
Dr Wenjun Li, Computing
Mr Marcin Lignowski, Surgery and Cancer
Mr Philip Liley, Finance Division
Ms Kaethe Lomme, Medicine
Mr Christopher Lord, Corporate Partnerships
Dr Pradeep Luther, NHLI
Mr Christopher Lynch, Medicine
Ms Yasmin Malliu, Medicine
Dr Philip Mannson, ESE
Ms Aishwarya Maneznacurrena Alton, Medicine
Dr Matthew Markiewicz, Chemistry
Mr Arran Matthews, Faculty of Medicine
Mr Kieran McGourty, Chemistry
Miss Ellen McSheedy, NHLI
Mr John Mole, ESE
Miss Jenna Mollyan, Public Health
Miss Eva Moreno, Professional Development
Dr Marta Moretti, Medicine
Dr Peyman Mostaghim Qomi, ESE
Dr Sergey Mostowy, Medicine
Miss Anna Mroz, Medicine
Miss Emma Mustafa, Faculty of Medicine
Mr Adrian Mylne, Public Health
Dr Nuno Neme, Mathematics
Professor David Newbery, EEE
Dr Aliisha Newsholme, Clinical Science
Miss Vanya Nikolaova, Surgery and Cancer
Mr Yary Oprean, Computing
Dr Mike Owens, Educational Quality Office
Dr Chryssoula Panathymitaki, Medicine
Dr Aoml Pathi, Chemistry
Dr Nicola Pavease, Medicine
Dr Alison Pease, Computing
Mr Jerzy PentaL, Chemical Engineering
Miss Anisha Perera, Surgery and Cancer
Dr Barbara Pernaute, NHLI
Dr Konstantinos Petridis, Physics
Dr Georgios Petrou, Surgery and Cancer
Mr James Pierson, Catering Services
Mr Silviu Pistalu, Imperial College Union
Ms Irina Polonsky, Surgery and Cancer
Mr Ahmadur Rahman, Medicine
Dr Nagesh Raskhi, Life Sciences
Mr Andrew Roland-price, Finance
Mr Giulio Romano, Imperial College Union
Dr James Rosindell, Life Sciences
Dr Enrique Sanchez, Chemistry
Dr Michelle Ryder, ESE
Mr Mohammad Saidi, Library
Ms Irina Polonsky, Surgery and Cancer
Mr Ahmadur Rahman, Medicine
Dr Nagesh Raskhi, Life Sciences
Mr Andrew Roland-price, Finance
Mr Giulio Romano, Imperial College Union
Dr James Rosindell, Life Sciences
Dr Enrique Sanchez, Chemistry
Dr Michelle Ryder, ESE
Mr Mohammad Saidi, Library
Rashford Tsalma, Public Health
Mr Trevor Threlfall, Computer Services
Mr Yury Oparin, Computing
Ms Soledad Zarate, Humanities
Mr Tomasz Zielinski, Sport and Leisure

The dates cover staff moving in from 28 November – January. For the list of staff moving on and retirements for the same period, see Reporter online. This data is supplied by HR and was correct at the time of going to press.

Building bridges with Brazil

"Brazil has a lack of engineers and technicians to supply the job market and, in order to tackle this, the Brazilian government has come up with a number of initiatives; for example, getting existing universities to increase their intake of students and, in some cases, building new universities.

The government’s most recent initiative has been to launch a scholarship programme called Science Without Borders, which aims to give undergraduate and postgraduate students the experience of studying abroad in top-ranking universities. Its target is quite ambitious: to implement 75,000 international scholarships in four years, of which 10,000 are expected to be at universities in the UK.

Imperial has less than two percent of foreigners among its members and Brazilian institutions or are interested in Brazilian issues. Everybody is welcome, regardless of nationality. The Forum aims to promote new synergies and innovation by enhancing collaboration among its members and Brazilian academic partners. The Embassy of Brazil in London, the British Embassy in Brasilia and the Brazilian Chamber of Commerce in Great Britain are partner institutions in the Forum. Brazil has one of the fastest growing economies in the world, and its efforts in science and technology, education and research present exciting opportunities for UK universities."

To join the Brazil Forum or to find out more see: www.imperial.ac.uk/brazilforum

Research postgraduate Alexandre Strapasson (Environmental Policy) worked for many years in the Brazilian federal government and shares his views with Reporter about the Brazilian educational strategy in science and technology and the creation of the Imperial College Brazil Forum, of which he is the Chairman:
8 FEBRUARY • PUBLIC LECTURE
Plastic electronics: excitons and solar cells
Many everyday electronic devices such as smart phone displays now rely on semiconductors built from organic molecules and polymers. These semiconductors, which are driving the rapidly growing field of plastic electronics, are attractive materials to manufacture as they can be printed onto any surface and have made new products such as rollable displays a possibility. Professor Sir Richard Friend, Cavendish Professor at the University of Cambridge and one of the founders of the field, explains the physics behind them in the 2012 Gabor Lecture.

3 NOVEMBER • PUBLIC LECTURE
Imperial Festival
2012 – a year of Olympics, Mayan prophecy and the launch of our very own Imperial Festival! Taking place across the South Kensington Campus on 11–12 May, Imperial Festival will celebrate the achievements of our staff, and students through a fiesta of hands-on demonstrations, music, performance and dialogue open to the public. Whether mapping the brain or dancing a jig, this unique festival will challenge staff and students alike to communicate their work and celebrate the culture and accomplishments of Imperial with the public. To find out more visit www.imperial.ac.uk/festival

24 JANUARY • PUBLIC LECTURE
Engineering the future of heart surgery
Professor Gianni Angelini (NHIL)

24 JANUARY • PUBLIC LECTURE
Shareholders or patients first?
Dr Moncef Slaoui, Research and Development Chairman, GSK

25 JANUARY • PUBLIC LECTURE
Leadership under pressure
Baroness Eliza Manningham-Buller

25 JANUARY • SEMINAR
Kyoto protocol, the Copenhagen accord, the Cancun agreements and beyond
Professor Henry Tulkens, Université Catholique de Louvain, Belgium

26 JANUARY • MUSIC
Lunchtime concert (South Kensington Campus)
Charles Owen on piano

31 JANUARY • PUBLIC LECTURE
The human genome: 21st century medicine
Professor Timothy Aitman (Molecular Sciences)

2 FEBRUARY • MUSIC
Lunchtime concert (South Kensington Campus)
Stamp Trombone Quartet

7 FEBRUARY • PUBLIC LECTURE
Paving the way to a sustainable future
Ken Shuttleworth, Founder, Make Architects

8 FEBRUARY • SEMINAR
Cardiovascular Technology Network symposium
Speakers from the Institute of Biomedical Engineering

9 FEBRUARY • PUBLIC LECTURE
Financial crises and the behaviour of government and regulators
Sadeq Sayeed, Chairman, Metage Capital

21 FEBRUARY • PUBLIC LECTURE
The science and engineering of intelligent systems
Professor Nick Jennings, University of Southampton

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

Feedback invited on catering and amenity facilities
Staff and students are invited to offer their input to a feasibility study, which will consider how the space on Level 0 at the western end of the Sherfield Building could be optimised to provide social facilities and amenities to members of the Imperial community.

To find out more and to offer feedback, please visit: http://bit.ly/cateringprojectsfeedback

MEET THE READER
Bob Cummins, Faculty Operating Officer, Faculty of Natural Sciences

What are you doing in the picture?
I am in the Maths Learning Centre in the Huxley Building. We opened the Centre last academic year, updating the old Mathematics library to incorporate a large computer suite and plenty of workspace. Now students can study there during the day or evening, and lecturers can use it for computer labs. We’re proud of the Centre – getting it open was a team effort between the Faculty, the Department and Central Library staff.

What would you do if you were editor of Reporter for a day?
I take Spanish evening classes as part of the humanities programme, so I would run a feature on the Department of Humanities, and encourage more staff to sign up for courses. It’s possible to juggle other engagements and it’s worth the effort.

Who would be your cover star?
I would do a photo of all of the brave, patient language teachers who do their best to impart some learning into us evening class people!