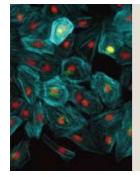
Imperial College London

reporter

ISSUE 216 ► 4 MARCH 2010

Sharing stories of Imperial's community





ART BEAT Researchers create awardwinning heart images

PAGE 3



HEALTHY AGEING Introducing Imperial's Lifelong Health **Project**

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POSITIVE LIVING Telling the stories of teachers living with HIV in Africa PAGE 9



EDITOR'S CORNER

Active campus

The beaming sun emerged from hibernation for several days this week, prompting a hive of activity on the South Kensington Campus. Students, sick of the icy snow storms and endless rain, were seen flocking towards the Queen's Lawn to sunbathe. Frisbees were hurled, reminding us of the active pursuits that bring outdoor spaces alive during the warmer months. But for many students an active lifestyle is a yearround pursuit, regardless of the weather. So in this issue Reporter dives into the world of student sport clubs and discovers the scale of extra-curricular activity going on outside the labs. Whether participating in the Commonwealth Games or kicking a ball about on Wednesday afternoons, Imperial students show determination not just to win, but also to support their team mates. For insight into the mass exodus of students from the campus on Wednesday afternoons see pages 6-7. **EMILY ROSS, EDITOR**

Reporter is published every three weeks during term time in print and online at www. imperial.ac.uk/reporter. The next publication day is 25 March, Contact Emily Ross: ⊠ reporter@imperial.ac.uk **L** +44 (0)20 7594 6715

Cover photograph: Student Andy Smith (Mechanical Engineering), playing with Imperial's sixth team at Harlington sports ground.

Exhibition Road building postponed

Plans to develop a new building for the South Kensington Campus on Exhibition Road (covered in Reporter issue 202) have been postponed, the Rector announced to staff last week. The new Exhibition Road Building, designed by top architects Foster and Partners and a key element of the programme to transform the 'South East Quadrant' (SEQ) of the campus, would have offered new facilities to the Faculty of Engineering and the Business School as well as offering an exhibition space.

Commenting on the decision, Rector Sir Keith O'Nions said: "Acknowledging the potential for Imperial to expand its activities into its new site at Wood Lane, and taking a necessarily sombre perspective on the risks the future holds for university funding sources, the executive board of the SEQ project has recommended that the next phase of the project should be postponed."

He added: "We have done much valuable work that

underpins an exciting vision for what we want teaching, research and the general environment at Imperial to look like in the future. I hope that not one good idea that has come forward will be wasted."

The current work on the Skempton (Civil and Environmental Engineering) and Mechanical



An architect's plan of the Exhibition Road Building from 2009.

Engineering buildings will be completed on budget and on schedule by November 2010. The SEQ project team will explore alternative, cheaper routes that will contribute to satisfying the space requirements of the College's core academic mission.

Microsoft chooses Business School as partner for innovation club

On 21 February, the Prime Minister announced an agreement that made Imperial's expertise in innovation management, technology transfer and engineering available to the Microsoft-hosted Innovation Outreach Programme (IOP), a cross-industry community of multinational companies. The Innovation Outreach Programme aims to develop innovative business ideas and test how these ideas might profitably be turned into new products and services.

Established in 2009, the IOP enables an elite group of companies, and their chief innovation executives, to regularly discuss the opportunities and challenges they face in developing new products and services or improving existing ones, in order to maintain their competitive edge.

"We are very pleased to be a central part of this strong network"

The Business School will provide the

business-focused research, and will also work with other depart-

ments within Imperial to draw together engineering expertise for technical proof of concept and new technology development. Members of the IOP will also be able to work with Imperial Innovations, one of the UK's leading technology commercialisation and investment companies, which is partly owned by the College, to test and launch successful ventures.

Professor David Gann, head of the Innovation and Entrepreneurship research group at the Business School, said: "We are very pleased to be a central part of this

strong network. It's an exceptional group of companies. They lead by continual – sometimes radical – product or service improvement. The IOP is a new model we hope will let corporations open their R&D departments to create new, exciting and successful ventures with other IOP partners."

-ELLIOTT WHITE, BUSINESS SCHOOL

Imperial College London

shape our vision

The Rector invites staff to give their views on the College strategy.

To contribute:

- Complete the online consultation by 12 March 2010
- Attend the open panel discussion on 24 March 2010 at 12.30 in the Read lecture theatre



For further details, visit: www.imperial.ac.uk/strategy development

Art beat

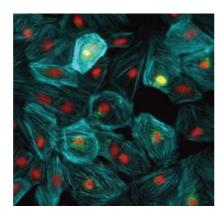
Cardiovascular researchers create award-winning movie footage and images of the heart

Researchers from Imperial's BHF Centre of Research Excellence have won the movie category of a competition called Reflections of Research, which invited scientists funded by the British Heart Foundation across the UK to submit images and videos representing their field of research. Imperial researchers were also runners up in the image category.

The winning movie, Blood Streams of the Heart, was created by Dr Michael Markl from the University of Freiburg and Imperial's Dr Philip Kilner (NHLI) and shows blood streaming through both sides of a healthy human heart. In the future, doctors may be able to use this, and other types of imaging, to help simulate the movements and flow of an individual patient's heart.

The image that scooped the runner-up prize, Growing new heart muscle cells, shows heart muscle cells grown from stem cells in the laboratory. This image was created by a number of academics working at the NHLI - Dr Gábor Földes, Professor Sian Harding, Professor Michael Schneider and Dr Nadire Ali - and was exhibited on London's South Bank over the Valentine's Day weekend last month.

The winning images and videos were chosen by a panel of experts including the scientist and broadcaster Dr Alice Roberts; Andrew Cohen, editor of BBC Horizon; Eric Hilaire, science



Growing new heart muscle cells: Judge Andrew Cohen described the image as "a striking ethereal image that combines awe, beauty and hope."

picture editor at The Guardian; and Professor Sir Christopher Edwards, Chairman of BHF Council.

Judge Dr Alice Roberts described the movie as: "Wonderful dynamic imaging showcasing interesting new diagnostic technology. Fascinating to be able to visualise flow through heart. Split-screen for left and right sides of the heart makes for an uncluttered and visually appealing image."

-LAURA GALLAGHER AND COLIN SMITH,

▶ To watch videos featuring Dr Kilner and Dr Földes talking about their art work and how it relates to research in the BHF Centre of Research Excellence, visit: www3.imperial. ac.uk/news/artbeat

Celebrating the Finnis-Sinclair potentials

>> **NEWS**update

On 10 February, an event was held at the College to mark the publication of a special issue of Philosophical Magazine which commemorated a landmark paper, published 25 years ago by Professor Mike Finnis (Materials) and Dr Jim Sinclair, who formerly worked at The Atomic Energy Research Establishment, Harwell.

The paper, A Simple Empirical N-Body Potential for Transition Metals, provided a simple mathematical model of the forces acting between the atoms in metals such as molybdenum, tungsten and iron, with which the movements and arrangements of atoms could be simulated and visualised. It helped scientists understand the processes that occur in a metal in normal use, when it is deformed, or in a nuclear reactor when it is damaged by irradiation. Until then, such models had been inadequate to represent even the simplest properties of these metals. With over 1,500 citations, it is the



Professor Finnis (right) with Dr Sinclair at the Philosophical Magazine event in February.

most highly cited paper of Philosophical Magazine.

To mark the silver anniversary of the paper's publication, the journal's editors had invited **Professors Adrian Sutton** (Physics), Graeme Ackland (University of Edinburgh) and Vasek Vitek (University of Pennsylvania) to edit a special issue containing a set of articles that have used the so-called Finnis-Sinclair potentials as the basis of their research. At the event, Paul Bristowe, the journal's Associate Editor, presented the authors with leather-bound copies of the special issue.



Getting creative for ArtsFest

Last week Imperial College Union hosted ArtsFest. an annual event designed to highlight the wealth of talent to be found on the College's campuses. Throughout the week there were free demonstrations and workshops across the

South Kensington Campus, covering activities from drama to belly dancing. Thursday's Showcase event brought together all of the arts-based societies to give a series of short performances incorporating different styles of music, drama and dance. Organiser Mohammad Aboljadayel, a Department of Computing student, said: "ArtsFest tries to bring art to the people instead of waiting for them to

Governance review

The College Council has instituted a review of the effectiveness of the governance of the College, in line with Committee of University Chairs guidance which recommends periodic review. The review group will take into account the best practice of other leading universities and will seek views from staff. The Council will receive a final report with recommendations by July 2010.

New clinical trials unit launched

On 4 February the College launched the Imperial Clinical Trials Unit (ICTU). The aim of the Unit is to build on the existing trials being carried out to support the work of the Academic Health Science Centre. It will create a centre of excellence for clinical trials of treatments for conditions including cardiovascular disease, cancer and mental health problems.

To watch a video about the ICTU visit: www3.imperial. ac.uk/news/clinicaltrials

If you're experienced in chip design you can see this has been designed by a human, whereas most of today's phone processors are designed by computers, and therefore look totally uninteresting"

PROFESSOR STEVE FURBER, PROFESSOR OF COMPUTER ENGINEERING AT THE UNIVERSITY OF MANCHESTER,
EXPLORED THE GOOD, THE BAD AND THE UGLY OF COMPUTER TECHNOLOGY IN THE 2010 DENNIS GABOR LECTURE, BUILDING BRAINS, WATCH THE LECTURE AT WWW3.IMPERIAL.AC.UK/MEDIA/ONLINELECTURES

media mentions

ABIGAIL SMITH, COMMUNICATIONS

JOIN OUR MAILING LIST for regular news, information and website alerts: www.imperial.ac.uk/media/jointsignup

THE OBSERVER ► 14.02.2010

Climate change report "robust", says researcher

A 2007 report on the effects of global warming by the Intergovernmental Panel of Climate Change, criticised for containing some inaccurate details, is "robust and rigorous", says Professor Martin Parry (Grantham Institute for Climate Change), co-chair of the working group that produced it. Commenting that he is



"perplexed" by the way the media has focused on minor points, including the claim that the Himalayan glaciers would melt by 2035, he says: "What began with a single unfor-

tunate error over Himalayan glaciers has become a clamour without substance." Professor Parry adds that the IPCC had looked into other alleged mistakes and found them "generally unfounded and also marginal to the assessment."

US METRO ► 17.02.2010

Weather unlikely to have caused Belgian rail crash

Despite snowy conditions, blame for the collision of two commuter trains in Belgium is unlikely to lie with the weather, Professor Andrew Evans (Civil and **Environmental Engineering)** tells the US Metro. Instead, he says, human error or signal faults are the most feasible reasons for the accident, which killed 18 people. "Only extremely rarely is the weather a factor in train accidents," Professor Evans comments, adding: "For the past three decades, rail safety in industrialised countries has been improving steadily. The improvements are measures to protect against human errors."

DAILY TELEGRAPH > 18.02.2010

Why cooking on gas may be bad for your health

Frying steak on a gas hob rather than an electric one could raise



your risk of developing cancer due to the fumes and tiny particles given off, according to the results

of a Norwegian study reported in the Daily Telegraph. Explaining that previous studies into a connection between gas cooking and poor health have been inconclusive, Dr Deborah Jarvis (NHLI) comments: "This new study may help us understand why these inconsistencies occur. The public health message to the general public remains the same - keep your kitchen well-ventilated when cooking, and make sure all your gas appliances are well maintained."

DAILY TELEGRAPH ► 18.02.2010

Sweet news for the environment

A sugar-based form of plastic being developed by researchers at Imperial could biodegrade in months rather than the hundreds of years taken by traditional oil-based plastics, according to the Daily Telegraph. The researchers are turning sugars found in fast growing trees and grasses into polymers, in a much less energy intensive way of producing plastic. The new discovery would not only cut down the use of oil, but also potentially enable people to compost plastic at home according to Dr Charlotte Williams (Chemistry), who says: "The development of the material is very promising and I'm optimistic that the technology could be in use within two to five years."

awards and honours

SUPPORT SERVICES

Facilities Management recognised

The Facilities Management Division has been named a runner up in the category of Client of the Year at the Low Carbon Performance Awards which were held by the Chartered Institution of Building Services Engineers on 2 February. The award relates to an initiative on the South Kensington Campus where the College's Building Management Team, together with members of the Health and Safety Department and external contractors, and consultants worked in partnership with the academic community to

reduce carbon production in the Flowers Building.

NATURAL SCIENCES

Chemistry awards



Research Associate Dr Giuseppe Mallia (Chemistry), pictured left, has received the Department of Chemistry's new,

annual Early Career Researcher Award for his exceptional contributions to the department. The award of £1,000, which recognises the vital role played by postdocs, above and beyond their direct research activities, was presented at the departmental Postdoc Symposium on 4 February. The Symposium included talks from postdocs and speakers from

the Royal Society of Chemistry, Elsevier, BBSRC and Imperial's Postdoc Development Centre. Dr Shane Bergin (Chemistry) was also awarded a prize for the best presentation.

SUPPORT SERVICES

National e-Awards

Imperial was named one of five finalists in the Sustainable, Green IT category of the National e-Awards at a ceremony held at London's Guildhall on 20 January. The awards recognise excellence across 11 categories, highlighting the UK's top public sector innovators in the use of technology. The application, by the College's ICT Division, focused on the implementation of a carbon dioxide-based efficient highperformance computing cooling

system that has been in use since 2006 and which has helped the College reduce its carbon emissions by 800 tonnes.

SUPPORT SERVICES

ICT's accreditation

ICT has become the first university IT department to be awarded the National Computing Centre's (NCC) IT Department Accreditation. To gain accreditation ICT had to demonstrate that it follows best practice in over 100 different areas of its work related to its systems, processes and practices. The results of a survey of users conducted in November 2009 were also submitted to the NCC moderator board which confirmed on 4 January that ICT has achieved the standard required for accreditation.





Analysing the ancient oceans

Scientists have developed a new technique that enables them to determine what the chemical composition of the ocean was like millions of years ago, which could provide them with a new tool for understanding early Earth. In research published in the journal Science on 5 February, researchers from the Department of Earth Science and Engineering describe a novel method for reconstructing past ocean chemistry using calcium carbonate veins, which were formed millions of years ago under the sea floor.

The researchers say understanding changes in the chemistry of oceans could help them to improve their knowledge about past climate, movements in the Earth's crust and the evolution of life in the oceans.

The scientists studied core samples of calcium carbonate veins, which were recovered by scientific deepocean drilling teams as part of the Integrated Deep Ocean Drilling Program. These calcium carbonate veins were formed when warm seawater flowed through the ocean's crust and reacted with basalt rock.

- COLIN SMITH, COMMUNICATIONS

To hear Dr Rosalind Coggon (Earth Science and Engineering) talk about the new technique visit: www3.imperial.ac.uk/news/ancientoceans

Effects of badger culling prove short-lived

Badger culling is unlikely to be a cost effective way of helping control cattle TB in Britain, according to research published in PLoS ONE on 10 February. The authors of the study, from the MRC Centre for Outbreak Analysis and Modelling at Imperial and the Zoological Society of London, say their findings suggest that the benefits of repeated widespread badger culling disap-



pear within four years after the culling has ended.

Professor Christl Donnelly (Public Health), senior author of the study, said: "The Randomised Badger Culling Trial was set up to find out if culling badgers would help control

"this is not a cost-effective contribution to preventing bTB"

the spread of the disease. Although badger culling reduced bovine tuberculosis (bTB) in cattle during the trial and immediately thereafter, our new study shows that the beneficial effects are not sustained, disappearing four years post-cull.

"Our new research also suggests that the savings that farmers and the government would make by reducing bTB infections in cattle are two or three times less than the cost of repeated badger culls as undertaken in the trial, so this is not a cost effective contribution to preventing bTB infections in cattle."

-LUCY GOODCHILD, COMMUNICATIONS

Cars of the future

"The car of the

future could be

drawing power

from its roof, its

bonnet or even

the door"

Parts of a car's bodywork could one day double up as its battery, according to the scientists behind a new €3.4 million project announced on 5 February. Imperial researchers and partners, including Volvo Car Corporation, are developing a prototype material which can store and dis-

charge electrical energy and which is also strong and lightweight enough to be used for

car parts. Ultimately, they expect that this material could be used in hybrid petrol or electric vehicles to make them lighter, more compact and more energy efficient, enabling drivers to

travel for longer distances before needing to recharge their cars.

The project co-ordinator, Dr Emile Greenhalgh (Aeronautics), said: "We are really excited about the potential of this new technol-

> ogy. We think the car of the future could be drawing power from its roof, its bonnet or even the door, thanks to our

new composite material. Even the sat nav could be powered by its own casing. The future applications for this material don't stop there - you might have a mobile phone that is as thin as



a credit card because it no longer needs a bulky battery, or a laptop that can draw energy from its casing so it can run for a longer time without recharging. We're at the first stage of this project and there is a long way to go, but we think our composite material shows real promise."

Researchers from the Departments of Chemistry, Aeronautics, and **Chemical Engineering** and Chemical Technology are involved in the three-year project funded by the European Union.

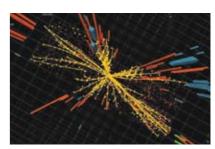
-COLIN SMITH, COMMUNICATIONS

Big bang from CERN

Physicists are celebrating the publication of the first set of data from the Compact Muon Solenoid (CMS) particle detector, just two months after the Large Hadron Collider (LHC) was switched on late last year at CERN in Geneva.

The results are published in the Journal of High Energy Physics, and provide the first information about some of the particles produced from the collisions in the LHC, which has accelerated protons to the highest energies achieved in an accelerator so far, 1.18TeV (Tera electron Volts).

"The new data show that the CMS is analysing and reconstructing particle energies in accordance with our expectations", says Imperial physicist, Professor Tejinder Virdee, who for several years led the team of international scientists that designed and built the CMS



One of the first LHC collision events observed at maximum energy, with charged particles shown in vellow.

experiment. "It is hugely reassuring, after so much work, that our equipment is now up and running, and that we're already publishing first results."

"The new collision events we're looking for are very rare, so we need a good understanding of the ordinary ones, so that we can recognise the unusual ones when they happen," says Professor Geoff Hall (Physics), who has also played a key role in the CMS experiment.

- NATASHA MARTINEAU, COMMUNICATIONS

Hear Professors Virdee and Hall discuss the CMS experiment: www3.imperial.ac.uk/news/cms





Game for it

Every Wednesday afternoon, the labs and lecture theatres empty out and Beit Quad and Ethos on the South Kensington Campus come alive with hundreds of students carrying an array of footballs, lacrosse sticks and other sporting paraphernalia as they make their way to training sessions and weekly matches. Reporter delves into the world of team sports at Imperial.

Over 4,500 students participate in sports clubs at Imperial. The clubs include, clockwise from top left: football, fencing, rowing, basketball, parkour and hockey.

With over 100 sports clubs ranging from the more traditional sports of rowing, rugby and netball to newer ones such as Gaelic football, archery and fencing, there is more activity going on at the College than ever before. Indeed Imperial's student participation rate (proportionately per student) was recognised as the highest of any university in the UK according to the National Active Student Survey in 2007-08. The College is also gaining a reputation in British Universities and Colleges Sport (BUCS), in particular for rowing, fencing, squash, volleyball, judo and rugby, and its ranking in the BUCS league has steadily improved since 2004-05 when the College ranked 47th to its most recent ranking for 2008-09 when it came 22nd.

Sport Imperial is in charge of providing sports facilities for staff and students, as well as promoting sporting excellence and actively encouraging participation in physical activity across all levels. It also has an alliance with Imperial College Union - called Sports Partnership - to oversee the development of student sport at Imperial. Sam Bell, Sports Development Officer, explains that the College's recent

Internal

scholarships have

students with funds

to aid their sporting

provided over 40

development"

success in BUCS is a direct result of the measures put in place to encourage more students to take up sport. In addition to

spending around £13 million on improving the College's sport facilities, Sports Partnership has provided development for both mass participation and elite sports, to foster talent and bring sport to all.

"Over the last five years, through our work with national governing bodies of sport, such as British Triathlon and the Amateur Rowing Association, we have been able to provide our clubs with experienced and qualified coaches," Sam explains. "Internal scholarships, such as the Developing Excellence

Scheme, TOPSport and the rowing scholarships have provided over 40 students with funds to aid their sporting development

> and careers this academic year," she adds.

At present a number of the College's sports clubs such as waterpolo and fencing are divided into two teams - Imperial College and Impe-

rial Medics. "To acquire more BUCS points, it would be excellent to see more clubs working together," says Sam.

Moving up the BUCS rankings

Imperial has traditionally been known for its excellence in rowing and rugby but in the BUCS championships for 2008-09 it was the fencing club that amassed the highest number of points and began to make a name for itself. Emily Bottle, a fourth year medical student, is the fencing club president. She explains that













the club has 66 members, who range from complete novices to international athletes. As fencing is an expensive and relatively rare sport, Emily is proud that the College's support has enabled the club to offer all students the chance to give it a try.

Hannah Bryars is a fourth year medic and one of the club's elite players. Having fenced from the age of seven in Cornwall where she grew up, she is now on the Great Britain fencing squad and is aiming for gold when she represents Scotland in the Commonwealth Championships this autumn. And when that is over, her sights are firmly set on the 2012 Olympics. On top of her medical degree, training up to three hours every day and spending her weekends competing abroad, Hannah still finds time to be the social secretary of the fencing club and enjoys implementing 'Pink Fridays', where both the men's and the women's fencing teams have to wear one item of pink to a night out at the Union.

Hannah has been financially supported by Sport Imperial via the Developing Excellence Scheme (DES) and the TOP-Sports scholarship since she started at the College. The schemes have meant she can afford to train alongside her medical degree and they have provided competition kit, such fencing masks, while also contributing to the costs of personal coaching, physiotherapy, mentoring and competitions.

Hannah's eyes light up as she talks about the nature of fencing: "It's all about toughing it out both mentally and physically. You have to assert your dominance and make sure your opponent thinks you are going to win. When you are fighting the whole room disappears and all you can see is the person's torso which is your target. It's all about controlled aggression, and the second the match is over and you take your mask off you are a normal person again!"

Emily says that having elite athletes on the team helps ignite passion in the rest of the team

and has encouraged more club members to enter competitions. Hannah says the atmosphere and the friends she has made are the best things about the club. "It's like a little family and if one person isn't on form on the day of a match everyone steps up to help. Fencing can feel incredibly cruel when you lose, as you are competing one on one, but knowing you have that level of support is fantastic."

Letting off steam

Imperial can be a high pressured environment for students and having a sport where they can let off steam can be both therapeutic and fun. Ed Lobb, in the second year of his PhD in the

Department of Aeronautics, has been involved with the football team since 2005 and is captain of the men's football club. "Monday and Tuesday always seem to drag but Wednesday afternoon is a welcome break from the intensity of research, and

a chance to get some fresh air and leave your work behind." Ed has been a football fan since he first got involved with the under-11s football team in his home town in Plymouth. "I love everything about football - it's a British institution and boys bond over their favourite teams in the playground at school, and at university it isn't any different. Particularly in a scienceorientated college like Imperial, I've found my most like-minded friends in the club, as we are all so passionate about the game!"

But while the dream of

becoming a professional footballer may be out of reach, Ed says there is always something to play for whether it's cups, avoiding relegation or triumphing over an unbeaten rival. The appeal of playing football only seems to be increasing, as the club's membership has gone up by 20 per cent since last year and it now has 120 members.

The football club has benefited from a strategic partnership between Sport Imperial and Queen's Park Rangers (QPR) football club, which sees the teams being coached by QPR coaches and using their training ground near Heathrow. The most talented UK footballers are unlikely to have a university career, as they'll be playing in

When you

are fighting the

disappears and

all you can see

is the person's

torso which is

your target"

whole room

professional leagues by the age of 18 or 19, but talented footballers at Imperial can still get spotted by semi-professional clubs – as happened to last year's first team captain, Michael Donovan, who signed for Bromley FC last summer.

While the age-old 'participation for all

versus elite sports' debate continues to bubble, Sam Bell is emphatic that the two can coexist happily and Sport Imperial ensures both are supported: "It is a myth that the two have to be mutually exclusive – they actually feed into each other," she says. "The more people who play, the bigger the pool you are drawing from for elite players. We are really proud to support the wins of our athletes but are equally proud of people who have found friends or gained confidence through the clubs".

-EMILY ROSS, COMMUNICATIONS

Sports clubs in action

The annual Varsity event held on 17 March is a showcase for sport at the College. Staff and students are invited to watch Imperial College and Imperial Medicals battle it out in 10 sports. The day culminates with the JPR Williams rugby match at Old Deer Park in Richmond. For information visit: www3.imperial.ac.uk/sports/varsity







Picture of healthy ageing

It was Abraham Lincoln who commented that it's not the years in your life that count, but the life in your years - an observation that is reflected in Imperial's recently launched Lifelong Health Project, which aims to encourage research that helps us stay healthier for longer.

From providing adequate social care to developing a better understanding of age-related conditions, the challenges posed by an expanding ageing population are rarely out of the

In order to tackle the unmet need for research to help reduce the gap between our lifespan and health span, Imperial has set up the Lifelong Health Project, which aims to create a community between Imperial researchers working on ageing-related projects. The new initiative welcomes people from all faculties and the Business School and hopes to inspire

innovative research proposals and collaborations across the College.

"Ageing has become a high profile issue in all walks of life – politically, socially and scientifically. Good solutions are

going to require input from research across the board," explains **Professor Maggie** Dallman, Principal of the Faculty of Natural Sciences, and one of the champions behind the Lifelong Health Project. "Finding new ways to create strong

links between diverse parts of the Imperial research community is going to be critical to the success of this work, which is why we have set up this new initiative."

The project has classified Imperial research on ageing into three main strands: approaches for addressing the social and economic consequences of an ageing population; ways of understanding the medical and biological mechanisms and effects of getting older; and technologies that help people lead safe and independent lives for longer.

The initiative is open to any

Imperial researcher working in the field of ageing research, as well as anyone with other skills that could be applied to solving age-related problems in a novel way. "It's exciting that over 100 people have

Some

technologies will

provide radical

new ways for us

to live our lives"

of these new

already joined the project, and I would strongly encourage others to sign up," says Maggie.

"One of Imperial's great strengths is the energy and creativity we generate from

bringing different disciplines together. We have all the right ingredients for making some real progress in this field, and I look forward to realising our potential."

Different approaches

Peter Smith, Professor of Health Policy, who has recently come to Imperial on a joint appointment with the Business School and Institute for Global Health. explains his approach: "The current priority for many of us working in this area is to find ways of helping the science and technology

co-evolve and feed into crucial social and economic areas such as health services, transport and employment."

Peter is a health economist who has worked as an advisor to the World Health Organisation. His research is on the economics and effectiveness of health systems. He is looking at ways of making sure that emerging technologies, such as remote monitoring and personalised healthcare, get properly incorporated into health services.

"Some of these new technologies will provide radical new ways for us to live our lives," says Peter. "Coming from a social sciences background, I am particularly enjoying the new perspectives that Imperial science and medicine bring to the whole spectrum of helping people lead healthier lives for longer."

Research by biomedical engineer Dr Patrick Degenaar is representative of the technological part of that spectrum. Patrick is jointly employed by the Institute of Biomedical Engineering and the Department of Medicine. He is looking into new ways for people with neurodegenerative visual problems to process and enhance images to amplify what's left of their vision. Some of these problems are caused by purely genetic factors; others, such as age-related macular degeneration (AMD), are directly linked with growing older. AMD is found in one in four people over the age of 75 and causes peripheral vision, which can quickly lead to loss of mobility. This has obvious links to quality of life, especially in older people.

Patrick's main aim is to develop retinal prostheses, more commonly known as bionic eyes, to help improve people's vision and help them lead more independent lives. "By necessity, my research is highly interdisciplinary. It's not all focused on ageing, but some of the anticipated benefits will be especially useful for older people," he says.

- NATASHA MARTINEAU, COMMUNICATIONS

For further information see www.imperial. ac.uk/ageing or contact Rebecca Nadal r.nadal@imperial.ac.uk



mini profile

Kim van der Heiden

Dr Kim van der Heiden, who was awarded the prestigious Promega UK Young Life Scientist Award for 2009, talks about her fascination with cells and tissues, leaving her home in the Netherlands and the role that broccoli has to play in her research.

How did you get into science?

I started out by training to become a lab technician in Holland. I thought I wanted to do chemistry, but in the first two weeks of my three-year course my teachers gave me a microscope to look at cells and tissues and it was love at first sight.

What did you like about your PhD?

I did a four-year PhD at the Leiden University Medical Centre, looking at how a certain type of cell in blood vessels can distinguish between different kinds of blood flow using a tiny cellular hair. It was fascinating for me, because it's not just biology, it's also bioengineering. It's a real challenge to combine these two fields - I could explain things about cells to the bioengineers, and the bioengineers could tell me how to determine and calculate blood flow-induced forces.

Why did you decide to move to the UK?

My PhD supervisor suggested I should think about working



abroad. I knew I wanted to go somewhere, and I've always liked the English language. America was too far but London is only a 40-minute plane journey from Amsterdam. I got a position at Imperial, sold my flat in Holland and moved.

What do you do at Imperial?

I investigate the role of inflammation in a disease called atherosclerosis that affects blood vessels. In this disease, plaques form on the inner curves of bent blood vessels but not on the outer curves. We have found that there is a protein called Nrf2 in the outer curve, protecting the blood vessel in that area. We have recently managed to activate this protein using a compound found in broccoli, to protect the inner curve of the blood vessel from disease.

How different is working in the UK compared to Holland?

In my lab in Holland most of my colleagues were Dutch, but here we have people from Pakistan, Germany, Syria, Vietnam and the UK. It's an interesting mix of cultures.

-LUCY GOODCHILD, COMMUNICATIONS

Challenging perceptions of living

Last year Mrs Alice Woolnough, Dr Lesley Drake and Dr Michael Beasley from the Partnership for Child **Development in the School of Public** Health made a film - Courage and Hope - which tells the remarkable stories of teachers from Kenya living with HIV. The researchers recognised that by speaking about their experiences, HIV positive teachers could help dispel the myths and tackle discrimination associated with the condition, educating others and helping to reduce the spread of infection.

Over the last 18 months the film has been screened in five countries. Francis Peel, Website and Communications Officer for the Partnership for

Child Development (Public Health), describes his experience of presenting the film at the Fourth African Conference on Sexual Health and Rights in Addis Ababa, Ethiopia, which he attended last month.

"On the first day of the conference I was sitting in the shiny conference

impatiently waiting until we screened our film Courage and Hope and feeling somewhat worried. So far the conference hadn't gone as smoothly as I'd

room of Africa's Economic Commission,



planned, my boxes of DVDs intended for all the delegates were stuck in customs and now the projector wasn't working. But I needn't have worried because sitting next to me were two of the stars of the film, teachers Martin Ptoch and Beldina Atieno, whose powerful stories of challenging discrimination by disclosing their status to their colleagues and forming a network of HIV positive teachers to offer advice and support to those in similar positions could have carried the conference on their own.

Luckily a new working projector

was found and the teachers held the conference in rapture as they related their stories and answered delegates' numerous questions. Hearing Beldina's and Martin's firsthand accounts of facing up to the realities of discovering they were HIV positive and the courage that they have shown to support other teachers in

the fight against discrimination was truly inspirational and received possibly the biggest applause of the conference.

► Watch the film at www.schoolsandhealth.org

SCIENCE FROM SCRATCH

As explained by Anne Coleman, MSc Science Communication



Chaos theory

Hearing

Beldina's and

Martin's first-

was truly

hand accounts

inspirational"

Chaos theory looks for simple models of complex behaviour in the real world. The tools for building these models are non-linear equations, which can produce erratic and surprising behavior, such as rapid shifts from stability to an oscillating state and finally to complete chaos. The origins of chaos theory lie with scientist Dr Edward Lorenz,

who stumbled across this type of model whilst trying to predict the weather using computers. What he became best known for was describing the 'butterfly effect', the idea that a small disturbance like a butterfly flapping its wings could cause a tornado in Brazil. The theory since then has been applied to everything from fluctuating financial markets to, most recently, the dynamics of alcohol abuse.

Is there a phrase or term you would like us to explain? 🖾 Email the editor: reporter@imperial.ac.uk



course review



By course attendee Laura Stannard, Hall Supervisor at Eastside (Accommodation Services)

Emergency first aid at work

• Why did you go on the course?

The course is compulsory for all hall supervisors. We supervise a building in which 453 students live, so there are a lot of people who could need our help at any given time.

2 What did you learn?

We learnt initial first aid procedures that can be administered on the scene of an accident or emergency, for example, how to treat a burn before medical help arrives, how to deal with someone who is choking, or has major cuts, how to give CPR and how to deal with heart attack and stroke victims. It's a hands-on course and we got to know 'CPR Annie' very well!

• Would you recommend the course?

If you soak it all up, there is a lot to be learnt during the day. The incidents that we were dealing with were a little scary to think of but they are things that could happen at any time, and the action that you initially take could have a hugely positive effect. Basically, if you have a chance to learn the skills that could save someone's life, then you should do it!

For more information on the course visit: www3.imperial.ac.uk/staffdevelopment/safety/ index/firstaidlifesavers

Reporter shares the stories of staff who have given many years of service to the College. Data is supplied by HR and is correct at the time of going to press.

-AMNA SIDDIO, COMMUNICATIONS

SPOTLIGHT

Maureen Gibbons, HR Pensions Manager (Pensions Office) 20 years

Maureen Gibbons began her career at Imperial in April 1990 as a Senior Superannuation Officer in the Pensions Office, In 2001 Maureen was promoted to Senior Pensions Manager, becoming Pensions Manager in 2002. Describing her role as "the best of both worlds", Maureen helps staff to get the most from their pension schemes and she also has the chance to put her financial expertise into practice. Maureen and her team of three keep staff aware of changes in their pension schemes, the value of their benefits, and tax legislation that affects them, "Imperial's great as we are often the first institution to



implement new changes such as the salary sacrifice scheme, where an employee agrees to give up part of their salary for an agreed period in exchange for a non-cash benefit such as childcare vouchers." Outside the College, Maureen is a passionate Spurs fan and goes to as many matches as she can.

LONG SERVERS PARTY



Karen Linfield, Clinical Affairs Coordinator (Medicine), attended the celebration on 16 February for staff who marked 20 years of service to the College in 2009. She says: "Dr Richard Szydlo from the Department of Medicine and I reminisced about the Royal Postgraduate Medical School and all the changes that have taken place over the years."

VOX POP

What do you think of the Hard Rain exhibition?

Over the last month Imperial has hosted Hard Rain - a photography exhibition featuring global problems from deforestation to the aftermath of conflict. Each image links to lyrics from Bob Dylan's song 'A Hard Rain's A-Gonna Fall'. Reporter finds out what the community has made of the exhibition.



"I think putting these photos up is very important for everyone. Usually you see very nice and glamorous images and maybe some of us don't really know what's happening in the world. It's good

to get people thinking about their behaviour and what we take for granted."

DALIYA KASKIRBAYEVA, MSC MATHS AND FINANCE (MATHEMATICS)



"I was just on my lunch break and spotted the photos. It's really interesting to see how they're linked to the lyrics underneath them. They're all thoughtprovoking and the whole exhibition

is a bit of a rollercoaster, with some very beautiful photos and some very sad ones."

DR IORG SCHUMACHER. RESEARCH ASSOCIATE (LIFE SCIENCES)



"I don't find these images disturbing, just honest. They're showing what's really going on. It's good for people to see the sorts of things that are happening in

places they've never been.'

STYLIANOS SOUZOU, SECOND YEAR STUDENT (ELECTRICAL AND ELECTRONIC ENGINEERING)

Hard Rain runs until 12 March on the Queen's Lawn, South Kensington Campus

blog



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

Student blogger Chris on

silence in the library:

I decided to join a friend in the silent room. This is the part of the library which requires strict, Buddhist-monklike silence. Whenever I talk to people about it, they are all quite positive and say it is a great place to concentrate, but now that I've experienced it for myself, I really can't agree. I don't think I've ever felt so awkward in the library; the sound of me turning the pages of my book became a huge roar which echoed through the room. I spent more time struggling

to minimise the sound of my eyelids blinking than actually at work. Needless to say, I shall remain in the general mumble that resides outside of that room.

www.imperial.ac.uk/ campus_life/studentblogs

Welcome new starters

Dr Ola Aberg, Surgery and Cancer Miss Dalal Alrajeh, Computing Miss Helen Alsop, Surgery and Cancer Dr Marta Archanco, Medicine Dr Orestis Argyros, NHLI Dr Pierre-Arnaud Artola, Chemical Engineering Dr Helene Autefage, Materials Miss Aimee Ayton, Medicine Mr Sivakumar Balasubramanian. Bioengineering Mr Thomas Barbanneau, Humanities Mr Alexander Barron, Civil and Environmental Engineering Mr Darren Barrow, Security Ms Olga Beniusiene, Catering Miss Agnesska Benjamin, NHLI Mr James Blake, Library Dr Julia Blanchard, Biology Dr Marianne Bolstad, Medicine Dr Mariea Brady, Bioengineering Miss Mary Brazil, Library Dr Nils Bunnefeld, Biology Dr Suzanne Carreira, Medicine Dr James Chan, Kennedy Institute Mr Anastasios Chanalaris, Kennedy Institute Mr Dustin Connor, Computing Ms Ide Cremin, Public Health Miss Anna Dart, Cell and Molecular Biology Mr Kinner Davda, Surgery and Cancer Mr Meirion Davies, NHLI Mr Qize Ding, Kennedy Institute Dr Fernando Elustondo, Medicine Miss Amany Farwana, Library Ms Luiza Fernandes De Lemos, Catering Dr Valentina Ferretti, Cell and Molecular Dr Lin Fou, Centre for Environmental Miss Laia Garcia Sanchez, Catering Mr Aulo Gelli, Public Health Dr Fatima Govani, NHLI Dr Rosemary Greaves, Civil and Environmental Engineering Miss Bianca Hartley-Mitchell, Reactor Dr Pau Herrero Vinas, Biomedical Engineering Mr Ivan Ho, EEE Mr Sehban Husain, Materials Professor Roman Inderst, Business School Dr Isaac Jamieson, Public Health Miss Monika Kapuscinska, Catering Miss Natalia Klimowska, NHLI Ms Lena Koehler, Surgery and Cancer Dr Svyatoslav Kondrat, Chemistry Mr Linas Krajasevicius, Catering Mr Ramdash Kshetrimayum, Catering Dr Elisabeth Kugelberg, Medicine Mr Adrien Le Pogam, Surgery and Miss Rui Li, Bioengineering Mr Marcelo Lima, Catering Ms Cindy Lisica, Library Dr Marta Llarena, Medicine Ms Ilaria Longo, Engineering

Miss Kathryn Luckett, Engineering

Dr Yue Ma, Clinical Sciences

Engineering and Chemical Technology

Mr Nial Mac Dowell, Chemical

Dr Patricia Macedo, NHLI Mr Kalle Magnusson, Cell and Molecular Biology Dr Toktam Mahmoodi, EEE Ms Maria Marquez Daza, Catering Mr Andrea Maurano, Chemistry Dr Rachel McMullan, Cell and Molecular Biology Dr Alex Morris, Medicine Dr Aisha Newth, Public Health Professor Peter O'Hare, Medicine Mrs Nasren Paktiawal, NHLI Mr Tapio Paljarvi, Public Health Miss Benedikte Pedersen, NHLI Ms Izabela Piasta, Catering Mr Christopher Pinder, Medicine Miss Eliana Pires Barrenho, Business School Miss Olga Prikhodka, Catering Mr Sanjay Priyadarshi, Catering Ms Katherine Rogers, Surgery and Cancer Dr Nathalie Rolhion, Medicine Miss Carolina Rolim Pillar Larios. Catering Mr Christos Rossios, NHLI Dr Anthony Rowe, Computing Dr Dominika Rudnicka, Cell and Molecular Biology Mr Gerhard Ruspi, Kennedy Institute Dr Holger Schmitz, Physics Dr Dongmin Shao, NHLI Ms Elaine Snell, Medicine Mr Guilherme Soares, Catering Miss Victoria Spain, NHLI Mr Brendon Stubbs, Medicine Dr Daniel Stuckey, NHLI Dr Elizabeth Sujkovic, Clinical Sciences Mr Mark Thomas, EEE Dr Hilda Tsang, Medicine Dr Corina Tudor, NHLI Miss Saharnaz Vakhshouri, NHLI Miss Reva Vaze, Bioengineering Mr Peter Woodward, Surgery and Cancer Dr HuiFen Wu, NHLI Ms Dong Zhang, Computing

Farewell moving on

Ms Nicole Ackermann, Library Dr Alexander Baki, EEE Dr Nigel Beckett, Medicine (7 years) Mr Andi Bejleri, Department of Computing Dr Dale Bickham, NHLI Professor Donna Blackmond, Chemistry Mr Terry Bull, Medicine (34 years) Mrs Maria Catley, Surgery and Cancer Dr Alain Chan Kwon Chion, Medicine Miss Cora Cheung, Physics Ms Pamela Clarke, Computing Dr Stuart Coleman, Aeronautics Dr Jan Domin, Medicine (11 years) Miss Samantha Duffy, Surgery and Cancer Miss Marina Economidou, Civil and Environmental Engineering Dr Philipp Eissmann, Cell and Molecular Biology Dr Bahaa Francis, Medicine Dr Torsten Frosch, Chemical Engineering and Chemical Technology

Mr Alexander Fullbrook, Cell and Molecular Biology Dr Saleem Haj Yahia, NHLI (5 years) Mr Andrew Harrington, ICT Miss Ciara Hill, Catering Dr Claire Horlock, Surgery and Cancer Miss Louise Humphreys, College Headquarters Dr Agnes Jenes, Surgery and Cancer Mrs Samira Kashefi, Medicine Dr Nick Kassouf, Medicine Mr Sriram Kasthuri, ICT Dr Jung-Sik Kim, Materials Dr Constantine Konstantoulas, Clinical Sciences Dr Anna Lagan, NHLI (8 years) Dr Susannah Leaver, NHLI Mr Dafydd Lee, NHLI Miss Joy Liao, Surgery and Cancer (6 years) Dr Christian Liebig, NHLI Mr Mathieu Lucquiaud, Mechanical Engineering (5 years) Mr Murphy Magtoto, NHLI Mr Sui Mak, EEE Dr Miles Marshall, Civil and Environmental Engineering (5 years) Dr Fiona Mead, NHLI (16 years) Miss Ece Menguturk, Human Resources Ms Chloe Morris, Public Health Dr Jonathan Myles, Public Health Ms Dilly Osbahr, Physics Mr Simon Passey, Finance (11 years) Dr Marco Porretta, Civil and Environmental Engineering Dr Mark Pursell, ESE Dr Sergey Saprykin, Chemical Engineering and Chemical Technology Dr Markus Schulte, Physics (5 years) Dr Judith Schweimer, Clinical Sciences Dr Serena Scollen, NHLI Mrs Shahnaz Sohail, Medicine Mr Thomas Thorpe, Medicine Ms Guadalupe Trigo-Rossier, Medicine Dr Tsz Tsang, Surgery and Cancer Dr Qiang Yang, EEE

retirements Mrs Agogo Okisor, Catering (12 years)

This data is supplied by HR and covers the period 31 January-20 February. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (*) indicates where an individual will continue to play an active role

Miss Zhengzi Yi, Surgery and Cancer

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

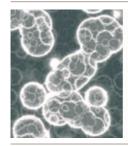
The Editor reserves the right to edit or amend these as necessary.

Water good idea



Ever noticed the unique design of the water jugs in the SCR, which pour in four different directions? It was dreamed up by Neil Barron, visiting lecturer in

the Department of Mechanical Engineering, a London based industrial designer and part-time senior tutor at the Royal College of Art. Neil's design triumphed over 115 other entries in a 2008 competition to promote London tap water under the slogan, London on Tap.



24 MARCH ► FIRST ANNUAL KOHN LECTURE

Cell cycle control

Sir Paul Nurse is a British geneticist and cell biologist whose work focuses on how cell shape and cell dimensions are determined. He shared the 2001 Nobel Prize in Physiology or Medicine for discovering key regulators of the cell cycle. Sir Paul has also received the Albert Lasker Award and the Royal Society's Royal and Copley Medals. He is President of Rockefeller University, New York, and previously served as Chief Executive of Cancer Research UK. In the first annual Kohn Lecture, Sir Paul will explain how the growth and reproduction of all living organisms are dependent on the cell cycle, the process which leads to cell division. Uncontrolled division of cells is important for disease, particularly cancer.



20 APRIL ► THEMED DAY

Education Day

Education Day aims to provide a forum for sharing good practice across departments and faculties. The day will focus on the role of teaching in the College, in particular e-learning and engagement, and will conclude with the Rector's presentation

of College Awards for Excellence in Teaching, Pastoral Care and Research Supervision. Staff are invited to drop into sessions on podcasting, plagiarism detection, peer assessment tools and how to involve industry in undergraduate teaching, amongst other topics. Speakers include Professor Diana Laurillard, Chair of Learning with Digital Technologies, Institute of Education, and Mr Anthony McClaran, Chief Executive of the QAA.

10 MARCH ► INAUGURAL LECTURE

Veins and arteries in the 21st century

Professor Alun Davies, Professor of Vascular Surgery and Honorary Consultant Surgeon



17-26 MARCH ► EXHIBITION

LeoSoc exhibition

An exhibition of work by members of Imperial's fine art society – the Leonardo Society

17 MARCH ► ANNUAL MARGARET TURNER-WARWICK RESPIRATORY LECTURE

The role of vascular remodelling and fibrocytes in pulmonary fibrosis

Dr Robert Strieter, Professor of Medicine, University of Virginia School of Medicine

18 MARCH ► SHOW

Ig Nobel tour

Featuring
'improbable'
research that makes
people laugh and
then think



18 MARCH ► INAUGURAL LECTURE

Implausible opportunities: how entrepreneurs design firms that achieve the unexpected

Professor Gerard George, Chair in Innovation and Entrepreneurship and Director, Rajiv Gandhi Centre

18 MARCH ► LUNCHTIME CONCERT

Krzysztof Chorzelski (viola), Andrew Zolinsky (piano)

Read Lecture Theatre



23 MARCH ► LUNCHTIME CONCERT

Majestic brass

Lecture Theatre 1, Wolfson Education Centre

24 MARCH ► INAUGURAL LECTURE

Creativity, innovation and design

Professor Peter Childs, Chair and Leader in Engineering Design

24 MARCH ► FIRST ANNUAL KOHN LECTURE

Cell cycle control

Sir Paul Nurse, British geneticist and cell biologist

25 MARCH ► FRIENDS OF IMPERIAL LECTURE

The genii in our cells: how cells change and remember what they are

Professor Richard Festenstein, Clinical Professor of Molecular Medicine

31 MARCH ► INAUGURAL LECTURE

Understanding the origin of biodiversity to help preserve its

Professor Vincent Savolainen, Professor of Organismic Biology

20 APRIL ► THEMED DAY

Education Day

Workshops and talks focusing on e-learning and engagement

21 APRIL ► LECTURE

Making molecules

- from new method
developments
to applications
cancer and asthma



Professor Alan Spivey, Professor of Synthetic Chemistry

take **note**

Launch of online payslips

All monthly paid staff are now able to view their payslips online via the 'Employee Self Service' application of the College's HR and Finance system, ICIS. Paper payslips will continue to be distributed in March, with the rollout of online payslips due to be complete by April. By eliminating paper payslips, the new process will contribute to the College's commitment to reduce its carbon footprint. For staff, benefits will include easy access to a full record of their pay.

Further details are available at: www.imperial.ac.uk/finance/sections/ payroll/onlinepayslips

VOLUNTEERING

Volunteer Police Cadets

Project ID: 2298

Organisation: Kensington and Chelsea

Volunteer Police Cadets

Dates: Ongoing

Times: Thursday evenings 17.30–21.00 Location: SW7 (nearest tube Kensington High Street)

Volunteer Police Cadets (VPC) is a project

that aims to enhance

relationships between police and local communities. Kensington and Chelsea VPC is looking for volunteers to deliver a range of activities with a policing theme for 14–19 year olds. Volunteers will be expected to attend weekly meetings and help deliver sports and other activities. They will also be invited to accompany other staff on weekends or weeks away which can involve staying in different types of accommodation, including tents.

For more information

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

020 7594 8141

oxdots volunteering@imperial.ac.uk

For full details of over 250 volunteering opportunities please visit:

www.imperial.ac.uk/volunteering

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



☑ 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

