



## Moving on up

Imperial trebles the  
number of female  
professors since 1998

◆◆◆ CENTRE PAGES



**MBA SUCCESS**  
Business  
School rates  
highly in *FT*  
MBA rankings  
**PAGE 2**



**CLIMATE CHANGE**  
First-hand  
experience of  
Copenhagen  
summit  
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**RESEARCH SKILLS**  
Learning from  
the Hong  
Kong Summer  
School  
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EDITOR'S CORNER

## Body MOT

I've always associated an MOT with the annual treat I give to my Mini, where the mechanic tells me how to make my car better, but earlier this month the tests were on my own **body's performance**. As I left the office at 11.30 and made my way across the South Kensington Campus, I wasn't off to secure my **habitual caffeine high** from the SCR, but to claim my free 'body MOT' provided by Sport Imperial as part of **Healthy Living Week**. As I rolled up my sleeve to have my blood pressure and pulse taken I wondered if my vague attempts at after-work exercise had helped me **hit the 'healthy' mark**. Five minutes later the Sport Imperial staff member consulted his notes and gave me the verdict – I had slightly low blood pressure but I wasn't in as bad a state as I feared! For more on the activities offered during Healthy Living Week see page 13.

EMILY ROSS, EDITOR

Reporter is published every three weeks during term time in print and online at [www.imperial.ac.uk/reporter](http://www.imperial.ac.uk/reporter). The next publication day is 4 March. Contact Emily Ross: [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk) +44 (0)20 7594 6715

**Cover photograph:** Professor Molly Stevens from the Department of Materials and the Institute of Biomedical Engineering, with Dr Eileen Gentleman, postdoctoral researcher, discussing new strategies for tissue engineering.

## Business School rises to 32 in MBA rankings

Imperial College Business School has climbed seven places to 32 in the world in the latest *Financial Times* Global MBA Rankings, published in the first week of February.

The ranking, compiled using measures such as graduate employment, salaries and alumni recommendations, also rates the School third in the world for entrepreneurship, sixth for economics and seventh for marketing, making it one of only two institutions in Europe to hold three top-ten places for specialisations. This achievement crowns a continual rise up the rankings for the Business School since it entered the top 90 in 2002.

Welcoming the news, Professor David Begg, Principal of the Business School, said: "We believe we offer a

"We believe we offer a top rate business education and it's gratifying to have that confirmed"

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Professor David Begg, Principal of the Business School

top rate business education and it's gratifying to have that confirmed by this latest ranking. Our position at the heart of a world class centre of science-based research and learning gives our students a unique advantage."

Congratulating the School, Rector Sir Keith O'Nions, said: "A first-rate business school is vital to a university like Imperial, which places such emphasis on working in partnership with industry to apply new developments in research."

—ABIGAIL SMITH, COMMUNICATIONS

## 100 Women – 100 Visions

One hundred portraits of women from Imperial in science, engineering and medicine will be displayed in a free exhibition opening at City Hall on 15 February.

The month-long photo exhibition *100 Women – 100 Visions* is organised by Imperial's Women in Science, Engineering and Technology (WSET) student society, which provides career development and networking events for women academics at the College and aims to encourage more young women to consider a career in science.

The portraits, taken by award-winning photographer Jackie King, show women scientists, engineers and doctors from Imperial highlighting different aspects of their work. The event also features a brief explanation from each woman about the science behind the image, plus resources for children to guide them round the exhibition and encourage them to engage with it.



One of the 100 women; an undergraduate from the Department of Mechanical Engineering.

Electrical engineering PhD student Ellin Saunders, one of the leaders of the exhibition, says: "This is a really eye opening exhibition that shows the range of opportunities a career in science can open up, and the women involved have found very imaginative ways to illustrate their research. Whether you're passing City Hall and fancy seeing some interesting photography, or you have children who want to know what scientists really do, I think this is something that everybody can enjoy."

—JOHN-PAUL JONES, COMMUNICATIONS

The exhibition runs from 15 February to 19 March. City Hall is open to the public each weekday, from 8.30 to 18.00 on Mondays to Thursdays and from 8.30 to 17.30 on Fridays. You can see the portraits in full online at: [www.union.ic.ac.uk/scc/100women100visions](http://www.union.ic.ac.uk/scc/100women100visions)

Imperial College  
London

## Can you inspire a future generation?



Applications are invited for nine-month PGCE studentships sponsored by The Foyle Foundation as part of Imperial's INSPIRE Scheme. If you're a postdoc in physical sciences or engineering, or you have an MSc or MSci in Physics, and want to encourage school children to study science, this could kick-start your teaching career.

Download an application form and find out more: [www.imperial.ac.uk/inspire](http://www.imperial.ac.uk/inspire)

Closing date: Friday 19 February 2010.

## Imperial launches international joint PhDs

The College is launching a new set of joint PhD programmes which are to be supervised, assessed and awarded by Imperial jointly with institutions in Singapore and Hong Kong.

The joint qualifications are offered in partnership with the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore, and the University of Hong Kong (HKU).

“They will gain a qualification recognised as of the highest international quality”

a qualification recognised as of the highest international quality, since they will have met the demands of not just one top university but two.”

The joint programmes with NUS and HKU are offered across all subjects within the College and the programmes with NTU are currently focused within bio-engineering and chemical engineering, although it is hoped that other research areas will follow.

More information on the new joint PhD programmes, as well as details of up and coming information sessions about these programmes, can be found at: [www.imperial.ac.uk/international/students/internationalopportunities](http://www.imperial.ac.uk/international/students/internationalopportunities)

Professor Mary Ritter, Pro Rector for International Affairs, said: “These joint programmes give students the chance to divide their time equally between London and Singapore or Hong Kong, working with leading research groups in two world centres of scientific excellence. They will gain

### Overview

#### The University of Hong Kong

- 1st in China
- 2nd in Asia
- 24th in the world

#### National University of Singapore

- 4th in Asia
- 30th in the world

#### Imperial's placing

- 3rd in UK
- 3rd in Europe
- 5th in the world

*Times Higher Education-QS World University Rankings, 2009*

## Professor John Harries to advise the Welsh Assembly Government



Professor John Harries, Chair in Earth Observation in the Department of Physics has been appointed to the post of Chief Scientific

Advisor to the Welsh Assembly Government. The news makes Professor Harries the second current Chief Scientific Advisor at the College, joining Professor John Beddington, who became advisor to the UK government in October 2007.

Professor Harries will continue to focus around 20 per cent of his time on his academic role at Imperial. A renowned atmospheric physicist, he is particularly known for leading the team that produced the first direct observational evidence of an increase in the

Earth's greenhouse effect between 1970 and 1997. Published in 2001 in the journal *Nature*, this research provided fundamental evidence that significant rises in the emission of greenhouse gases were responsible for warming the Earth by trapping more of the sun's heat in the atmosphere.

Welcoming the appointment, Rector Sir Keith O'Nions, said:

“The role of Chief Scientific Advisor demands a broad level of knowledge and also a great deal of

common sense, and I'm glad to say that in choosing John, the Welsh Assembly Government has gained an advisor with ample amounts of both. I know he will do an excellent job of providing the kind of sound, evidence-based advice that is key to good policy making.”

—ABIGAIL SMITH, COMMUNICATIONS

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## Memorandum Of Understanding with India

Imperial has signed a Memorandum Of Understanding (MOU) with the Indian Institute of Technology Ropar, in which the two institutions agree to explore opportunities for further research and research training collaborations. The MOU was signed during a visit to the College last month by Mr Kapil Sibal, India's Minister for Human Resources Development.



Rector Sir Keith O'Nions with Professor M.K. Surappa, Director of the Indian Institute of Technology, Ropar.

### in brief



#### Director of the Graduate School of Life Sciences and Medicine

On 13 February 2010, Professor Andrew George, Professor of Molecular Immunology in the Department of Medicine, will

become Director of the Graduate School of Life Sciences and Medicine and the School of Professional Development. He will succeed Professor Bernard Morley who is leaving Imperial to take up the position of Pro-Vice-Chancellor (Learning and Teaching) at the University of Bath. Professor George is currently head of science BSc courses for the Faculty of Medicine, and has received two Awards for Excellence in Teaching for his contributions to education at Imperial.

#### John Wood appointed ACU Secretary General

Professor John Wood, Senior International Relations Advisor at Imperial, has been appointed Secretary General of the Association of Commonwealth Universities (ACU). Professor Wood will take up the position on 1 July 2010. Professor Wood said: “It is a great honour to be asked to take on this post. With increasing globalisation, the work and functions of the ACU and its members are going to become even more important than in the past”.

#### Institutional audit process

A panel of five independent auditors, including a student, visited the College in February as part of the Institutional Audit process conducted by the Quality Assurance Agency (QAA). Higher education institutions in England are audited every six years to check they offer the highest quality of education. The report of the audit team's findings will be published later in the year on the QAA website.

#### New Imperial site open days

Local residents near White City have been invited to attend Open Days at the end of February to learn more about the Wood Lane site purchased by Imperial in September 2009. The College will present on generic principles for the use of the site and listen to local stakeholders' suggestions for its future development. The Open Days will be held in the entrance lobby of the former BBC Worldwide Building, 80 Wood Lane, on:

- Thursday 25 February 16.00–20.00
- Friday 26 February 12.00–17.00
- Saturday 27 February 10.00–13.00

Staff and students are welcome to attend.

## Imperial College Healthcare NHS Trust

### Arrival of Sourcelite

Staff at Imperial College London can now access key internal information about the Trust on their College computers through a



new web-based resource called Sourcelite. Developed to support the collaborative nature of the Academic Health Science Centre, Sourcelite provides access to several elements of the Trust's intranet, the Source. Highlights include a selection of news stories, the full set of clinical guidelines and Trust-branded templates.

Sourcelite has been designed to provide information that is appropriate for a wide audience of College and Trust staff and that meets clinical governance requirements. Staff in the Faculty of Medicine who need access to certain clinical applications should still do so via the full version of the Source on a Trust computer.

Jon Little, Senior Web Manager at the Trust, comments on the development of the new site: "The issues faced by staff based in multiple locations and on different networks between the College and Trust are familiar to many. The extranet is a step in the right direction and a valuable communication channel. This is phase one and we hope to work with colleagues at the College to increase the information available in the future."

*A desktop shortcut will be rolled out to Faculty of Medicine staff during February. Until then, to access Sourcelite, please visit: <http://extra.imperial.nhs.uk>*

*If you have any comments about Sourcelite please email: [web@imperial.nhs.uk](mailto:web@imperial.nhs.uk)*

### New health centre launched at Charing Cross Hospital

A new 24-hour centre for health has opened at Charing Cross Hospital. Fulham Centre for Health offers services 24 hours a day, seven days a week, for people who live or work locally and need treatment for all injuries or illnesses. Located next to the hospital's emergency department, the Centre offers a normal GP service, providing appointments to residents and staff who live in the borough, as well as a walk-in service for treatment by a GP or emergency care nurse practitioner.

—IMPERIAL COLLEGE HEALTHCARE NHS TRUST PRESS OFFICE

## New era for high performance computing

On 6 January, Imperial staff and researchers celebrated a new addition to ICT's high performance computing (HPC) service, which supports research across the College.

Researchers at the College have been using the HPC service since 2006 to solve advanced computational problems. A cx2 system has recently been procured by ICT to meet researchers' demands to run larger parallel jobs than previously possible on the cx1 high performance computer.

At the cx2 launch held in the Huxley Building, researchers from the Departments of Earth Science and Engineering, Materials, Chemistry and the Business School spoke about their use of HPC in their work.

Professor Sir Peter Knight, Deputy Rector (Research), who opened the HPC event, said: "High performance computing has been at the heart of research at Imperial for several

years. The recent upgrade will enable Imperial's researchers to remain at the forefront of simulation, numerical modelling and computational science. It will provide an excellent platform for our researchers to develop parallel codes. The launch of the cx2 system showcases the range of exciting computational projects supported by the College's substantial commitment to computation."

*For more information on high performance computing visit: [www.hpc.imperial.ac.uk](http://www.hpc.imperial.ac.uk)*



## COPD research is top

Research into serious lung diseases at Imperial has been rated the most highly cited in the world by the information provider Thomson Reuters.

The organisation looked at published academic research into chronic obstructive pulmonary disease (COPD), a group of pro-

gressive inflammatory conditions that includes emphysema and chronic obstructive bronchitis.

In the UK, COPD affects around one in 10 adults over the age of 40 and it kills more women than breast cancer. It causes the airways to become narrowed, leading to shortness of breath, and the condi-

tion is hard to treat so it usually becomes progressively worse. In the developed world, most people contract COPD through smoking.

Thomson Reuters analysed papers on COPD published over a 10-year period by nearly 10,000 institutions across 113 countries. The results, published on the ScienceWatch website, show that Imperial achieved more citations for COPD than any other institution. In addition, Professor Peter Barnes, Professor of Thoracic Medicine and Head of Airway Disease (NHLI), achieved more citations for his work on COPD than any other researcher in the world.

—LAURA GALLAGHER, COMMUNICATIONS

*Listen to Professor Peter Barnes explaining more about COPD and how researchers at Imperial are tackling the disease: [www3.imperial.ac.uk/news/lungdiseases](http://www3.imperial.ac.uk/news/lungdiseases)*



COPD affects around one in 10 adults over the age of 40 in the UK.

## media mentions

—AMNA SIDDIQ, COMMUNICATIONS



✉ **JOIN OUR MAILING LIST** for regular news, information and website alerts:  
[www.imperial.ac.uk/media/jointsignup](http://www.imperial.ac.uk/media/jointsignup)

ARABIANBUSINESS.COM ▶ 27.1.2010

### Robotic hands arrive in the Middle East

Imperial's Lord Darzi (Surgery and Cancer), an expert on robotic surgery, demonstrated the technology behind 'robotic' hands and fingers at the Arab Health Exhibition and Congress last month in the presence of the Emir of Dubai, Sheikh Mohammed bin Rashid Al Maktoum.



The exhibition showcases the latest in health-care technology, reported *Arabian Business*. Lord Darzi, a key-note speaker at the event, said: "I was able to show Sheikh Mohammed that the hands function not just on a cosmetic basis but you can, for example, grip a cup of hot tea." Imperial is also joining the Qatar Science and Technology Park in forming the Qatar Robotic Surgery Centre.

THE INDEPENDENT ▶ 31.01.2010

### Changing the world, one invention at a time

Getting excited about technology while studying for a national diploma course was the first step on a career as a leading entrepreneur, Professor Christofer Toumazou (Biomedical Engineering) tells *The Independent*. His research, which involves applying engineering techniques to medical problems and has led to the development of a digital plaster to monitor vital life signs, has also been inspired by his personal experience. When his son suffered kidney failure and needed regular dialysis, Professor Toumazou says: "His blood pressure, temperature and heart rate had to be monitored regularly. I wanted to replace those bulky ECG [electrocardiogram] machines and trolleys and find something that gave 24/7 monitoring and that could transmit your body's signals by wireless to a base station."

TRADINGMARKETS.COM ▶ 01.02.2010

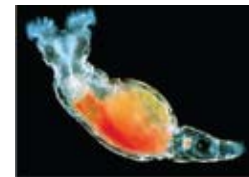
### Innovations' new deal

Imperial Innovations has signed an agreement with Novartis Vaccines and Diagnostics which allows Novartis to have exclusive licence to the intellectual property for a vaccine candidate against meningitis B, reports *Trading Markets*. The new vaccine candidate is based on the work of Professor Christoph Tang (Medicine) and Professor Susan Lea at Oxford. Susan Searle, Chief Executive Officer (Imperial Innovations), said: "[The deal] underlines our strategy of partnering research with industry leaders to develop assets that address important markets."

NATIONALGEOGRAPHIC.COM ▶ 02.02.2010

### Sexless creatures dry up

According to *National Geographic*, a study by researchers at Cornell University has discovered that drying up is the secret to a microscopic asexual freshwater invertebrate called the bdelloid rotifer's survival.



Bdelloid rotifers – microscopic freshwater invertebrates – have existed for 50 million years.

In the new study, researchers infected rotifers with deadly fungi and found they all died within a few weeks. The team dried out other infected populations before rehydrating them. The longer the infected populations remained dried out, the more likely they were to survive. Following this, the scientists placed the desiccated, fungus-exposed rotifers in a wind chamber. As a result, the rotifers blew away, leaving the fungi behind. Tim Barraclough (Biology) said: "While the new study suggests the bdelloids' ability to take to the wind in the face of danger is one key aspect of their survival...other factors – such as the ability to take up and use DNA from their environment – may also play a role."

## awards and honours

ENGINEERING

### Elektra award for IBE

DNA Electronics, the Institute of Biomedical Engineering's first spin-out company, won the 2009 Elektra Award for most innovative electronics R&D company in Europe on 1 December 2009. The award ceremony was held at the Royal Lancaster Hotel in London and the award was received by Professor Chris Toumazou (Biomedical Engineering), pictured above.



ENGINEERING

### Awards for Imperial's outspoken students

Yaroslav Tenzer, a PhD student in the Department of Mechanical Engineering, and James Barclay, a 2005 graduate of Mechanical Engineering, won awards for their presentations at the annual Speak Out for Engineering competition organised by the Institution of Mechanical Engineers (IMechE), which took place on 3 December 2009. Yaroslav's presentation was on a novel programmable brake, which is an outcome of his PhD work and was recently patented by Imperial



Innovations. James presented results from his undergraduate project on the engineering analysis of crispy foods.

NATURAL SCIENCES

### Philbin awarded for best paper

Dr Simon Philbin (Physics) received the Merritt A. Williamson Best Conference Paper Award for his paper on systems engineering and risk management at the 2009 Annual Conference of the American Society for Engineering Management (ASEM), held in Springfield, Missouri. Dr Philbin is the Programme Director for the Institute of Shock Physics and is also a Visiting Fellow at the Business School.

ENGINEERING

### IET success for Imperial

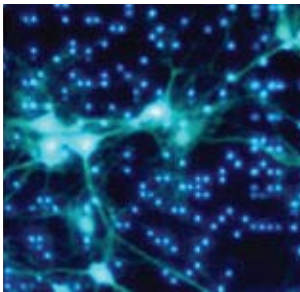
A wearable device for real-time monitoring of breathing and heart rate, invented by Dr Esther Rodriguez-Villegas (Electrical and Electronic Engineering) and her research group, enabled Imperial to win the prestigious Institution of Engineering and Technology (IET) Information Technology Innovation Award 2009. The IET awards are extremely competitive and generally won by industry, since, apart from being innovative, the invention has to demonstrate clear benefits for society and high potential for commercialisation.



## Lighting up nerves to treat eye disorders

Scientists are developing a new genetic engineering technique called optogenetics that they hope could ultimately lead to a new treatment for the eye condition retinitis pigmentosa, in a £2 million funded project announced on 27 January.

Retinitis pigmentosa (RP) is a degenerative eye disease that leads to poor night vision, followed by tunnel vision, which gradually nar-



The square dots of light are stimulating thousands of nerve cells in mouse models

rows until sight is lost.

Optogenetics could enable scientists to re-engineer nerve cells in the eye, so that they can be switched on with light rather than electrical impulses. This would make it possible to send visual information to the brain, even when all the original light-sensitive cells are dysfunctional.

The optogenetic technique will enable researchers to target individual cells, making different types of cells sensitive to different colours of light. To treat RP, the researchers would inject a virus containing a protein called channelrhodopsin into the patient's eyes. The virus would target and convert specific nerve cells in the eye to become light sensitive.

The researchers will also create special glasses that can emit light to switch the nerve cells on and off. The glasses will incorporate a miniature video camera that

records information about the environment that the wearer is passing through. This information is encoded as light patterns, and pulsed into the retina. The wearer's re-engineered nerve cells will receive the encoded information, activating the cells to send the messages to the visual cortex in the brain for processing, returning vision to the wearer.

The European Commission-funded project is coordinated by Dr Patrick Degenaar, (Institute of Biomedical Engineering).

—COLIN SMITH, COMMUNICATIONS



**Optogenetics**  
A field of science combining genetic engineering with light to control nerve cells.

## Video shows faster virus spread

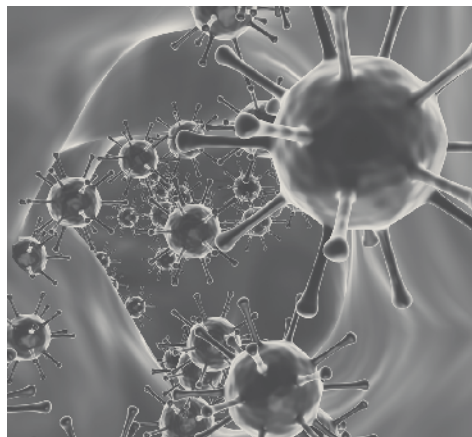
New video footage of a virus infecting cells is challenging what researchers have long believed about how viruses spread, suggesting that scientists may be able to create new drugs to tackle some viruses.

Previously, viruses were thought to spread by entering a cell, replicating there, and then being released to infect new cells, so that the rate of spread of a virus would be limited by how quickly it could replicate in each cell.

However, a virus called vaccinia spreads in a different and much faster way, according to a new study in the journal *Science* by researchers from Imperial, funded by the Medical Research Council.

Vaccinia is a poxvirus and is the vaccine that was used to eradicate smallpox. Using live video microscopy, the scientists discovered that it was spreading four times more quickly than thought possible, based on the rate at which it replicates.

Videos of virus-infected cells revealed that the virus spreads by surfing from cell to cell, using a mechanism that allows it to bounce past cells that are already infected and reach uninfected cells as quickly as possible.



To watch the viruses in action visit: [www3.imperial.ac.uk/news/virusvideo](http://www3.imperial.ac.uk/news/virusvideo)

Lead study author Professor Geoffrey L. Smith (Medicine), a Wellcome Trust Principal Research Fellow, said: "The ability of viruses to spread rapidly is often critical for their ability to cause disease. Therefore, understanding how viruses spread is fundamental to designing strategies to block spread and thereby prevent disease."

—LAURA GALLAGHER, COMMUNICATIONS



## Toad kill

Mountain toad populations under threat from fungus

Midwife toads that live in the mountains are highly likely to die from a serious fungal infection, called chytridiomycosis, whereas their infected relatives in the lowlands are not, according to new research published on 25 January in *Ecology Letters*.

The authors of the study, from Imperial, the Zoological Society of London and the BiodivERsA project RACE, say that conservationists could minimise the impact of the disease in the mountains by ensuring that tourists do not transfer it between lakes.

The fungus *Batrachochytrium dendrobatidis* (Bd), also known as chytrid fungus, grows in the skin of amphibians, causing a disease called chytridiomycosis. Bd has caused the extinction of

"We need to act fast to stop it from spreading to otherwise healthy populations"

many species of frog and toad, and is particularly prevalent in Australia and the Americas. However, little was known about Bd in Europe before now.

In the five-year study, the researchers found no dead toads at low altitudes, while in mountain regions up to 100 per cent of infected toads died. The study's authors say this means conservationists must ensure that the fungus does not spread to new mountain ranges.

Author of the study, Dr Matthew Fisher (Public Health), said: "At the moment, we have no prevention or cure for Bd infection in the wild, so we need to act fast to stop it from spreading to otherwise healthy populations. Simple measures, such as disinfecting tourists' boots when they cross infected areas, and providing them with uninfected sources of water so they don't spread fungal spores between lakes, may be effective ways of tackling this problem."

—LUCY GOODCHILD, COMMUNICATIONS

## High vitamin D levels linked to lower risk of colon cancer

People with high levels of vitamin D in their blood have a lower risk of colon cancer than those with low levels, according to a large European study published in the *British Medical Journal* on 22 January.

It is estimated that around three in every 100 people in Europe will develop colorectal cancer during their lifetime.

The new research which was led by teams from Imperial and the International Agency for Research on Cancer found that people with the highest levels of vitamin D in their blood had a



Being exposed to sunlight, without damaging your skin, can replenish vitamin D levels.

40 per cent lower risk of colon cancer than those with the lowest. No such association was observed for rectal cancer in the study.

The new findings are based on the European Prospective Investigation into Cancer study (EPIC) of over half a mil-

lion people from 10 Western European countries, which is led by Professor Elio Riboli, Head of the School of Public Health.

Professor Riboli said: "Based on this study and previous research, we know that if you want to reduce your risk of developing colorectal and other cancers you should stop smoking, increase your physical activity, reduce obesity and abdominal fatness, and limit your intakes of alcohol and red and processed meats. We also know that making sure you get some exposure to sunlight, without harming your skin, is important for keeping your levels of vitamin D up."

To hear Professor Riboli discussing the study in more detail see: [www3.imperial.ac.uk/news/coloncancer](http://www3.imperial.ac.uk/news/coloncancer)

## New findings about mixed-handed children



Children who are mixed-handed, or ambidextrous, are more likely to have mental health, language and scholastic problems in childhood than right or left-handed children, according to a new study published in the journal *Pediatrics* on 25 January.

The researchers behind the study, from Imperial and other European institutions, suggest that their findings may help teachers and health professionals to identify children who are particularly at risk of developing certain problems.

"We think that there are differences in the brain that might explain these difficulties"

Around one in every 100 people is mixed-handed. The study looked at nearly 8,000 children, 87 of whom were mixed-handed, and found that mixed-handed seven and eight-year old children were twice as likely as their right-handed peers to have difficulties with language and to perform poorly in school.

When they reached 15 or 16, mixed-handed adolescents were also at twice the risk of having symptoms of attention deficit/hyperactivity disorder (ADHD). They were also likely to have more severe symptoms of ADHD than their right-handed counterparts.

The adolescents also reported having greater difficulties with language than those who were left or right-handed. This is in line with earlier studies

that have linked mixed-handedness with dyslexia.

Dr Alina Rodriguez (Public Health), lead researcher on the study, said: "Our study is interesting because it suggests that some children who are mixed-handed

experience greater difficulties in school, than their left and right-handed friends. We think that there are differences in the brain that might explain these difficulties, but there needs to be more research."

—LAURA GALLAGHER, COMMUNICATIONS

## HIV researchers solve key puzzle

Researchers have made a breakthrough in HIV research that had eluded scientists for over 20 years, potentially leading to better treatments for HIV, in a study published in the journal *Nature* on 1 February.

The researchers, from Imperial and Harvard University, have grown a crystal that reveals the structure of an enzyme called integrase, which is found in retroviruses like HIV. When HIV infects someone, it uses integrase to paste a copy of its genetic information into their DNA.

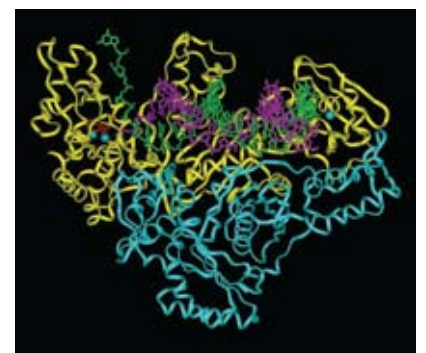
Prior to the new study, which was funded by the Medical Research Council and the US National Institutes of Health, many researchers had tried and failed to work out the three-dimensional structure of integrase bound to viral DNA. New antiretroviral drugs for HIV work by blocking integrase, but scientists did not

understand exactly how these drugs were working or how to improve them.

For the new study, researchers grew a crystal using a version of integrase borrowed from a little-known retrovirus called prototype foamy virus (PFV).

Dr Peter Cherepanov (Medicine), lead author of the study, said: "When we started out, we knew that the project was very difficult, and that many tricks had already been tried and given up by others long ago. Therefore, we went back to square one and started by looking for a better model of HIV integrase, which could be more amenable for crystallisation. Despite painstakingly slow progress and very many failed attempts, we did not give up and our effort was finally rewarded."

—LAURA GALLAGHER, COMMUNICATIONS



The new study shows that retroviral integrase has quite a different structure to that which had been predicted based on earlier research.



In 1998 there were **17**  
female professors  
**66** are in post today

## Moving on up

Last October on Commemoration Day, when Professor Dame Julia Higgins was awarded a Fellowship of Imperial College London in the Royal Albert Hall, she cast her eye across the academic staff sitting the stage and was delighted to see 11 women staring back at her. “What a different picture from 40 years ago,” she mused. “It is amazing to think that we helped change the face of the College.”

Twelve years on from setting up the Academic Opportunities Committee (AOC) *Reporter* investigates the Committee’s fight for better representation of women in science, finds out what more can be done, and celebrates the success of initiatives that have now become part of the normal everyday life of the College and have supported academic women as they climb the ranks at Imperial.

When Julia Higgins was promoted from Reader to Professor of Polymer Science in 1989, she doubled the number of female professors at Imperial. Although at the time, physics was culturally seen as a predominantly male subject, Julia never saw her choice to pursue the subject as odd, as her first introduction to the field was through her charismatic female physics teacher at school.

Julia says she didn’t experience any discrimination herself but, as she moved up through the ranks to become Dean of City and Guilds College and was honoured with a Fellowship of the Royal Society in 1995, she became more aware of the lack of women at her level in the College and decided to use her influence to try and

“Imperial strives for excellence in everything else, so why should this area of College life be an exception?”

change things. “I’d already achieved a great deal in the field, so I felt confident that no one could point a finger at me and ask why I was complaining. I was keen to make it easier for women to move up in the system,” she says.

In 1997, with the then Head of HR, Dr Marion Kimberley, and Dr Irene Weinreb, who was Director of the Health Centre, Julia approached the Rector, Sir Ron

Oxburgh, to explain that academic women weren’t doing as well as they should at Imperial and that many were very unhappy. He agreed that they should address senior staff at a forthcoming Rector’s Away Day about the issue. “The heads of departments

were openly surprised by what was said, but they were glad we had brought it to their attention, and it was unanimously agreed that something should be done,” says Julia.

As a result, in 1998 the Rector set up the AOC, to be chaired by Julia. Its aim was ‘to create a level playing field for women academics at Imperial by removing barriers that may exist in appointment or career advancement, and to ensure that the numbers of such



Clockwise from left: Professor Molly Stevens and Dr Eileen Gentleman; Dr Lorian Hartgroves and Professor Wendy Barclay; Professor Myra McClure and Silva Youshya; Deena Blumenkrantz.



qualified women in the College were as high as possible'. One of the first things the AOC did was to commission a survey of women academics. This helped to shape the group's agenda and its work: achieving a work-life balance, concern about promotions and lack of support were all identified as priorities.

### Work-life balance

Many of the women interviewed in the survey mentioned child-care and returning to work after maternity leave as a problem for them, as there was nothing in place to support this transition.

The AOC pushed through a number of measures to demonstrate to women that academic careers could be compatible with having a family. These initiatives included extending the opening hours of the on-campus nursery to enable academic women to drop their children off early in the morning and still do a full day's work.

Another measure was the creation of the Elsie Widdowson Fellowships in 2002. These enable academic women who have just returned from maternity leave to have a period of time free from teaching and administration, so that they can concentrate on their research. Julia notes that there are a number of strong role models in the College in senior positions today, who have achieved a good work-life balance including the Head of the Department of Physics, Professor Joanna Haigh, who has a family and worked part-time when her children were young.

### Academic promotions

To help remove any barriers to women in their career advancement, the AOC did a lot of work to demystify the promotions process. The Deputy Principal of Imperial College Business School, Professor Dot Griffiths, was an early member of the AOC and took over

as its chair in 2007, when Julia stood down. She explains how the Committee set up promotions workshops: "We received feedback in 2003 that the promotions process was not well understood. So the AOC decided that we would hold workshops to explain the process and give people a chance to ask all the questions they need". These workshops are now run together with the Deans and are regular events in the College calendar.

### Support

To further address the problem of lack of support for women in 2007 the AOC introduced the Faculty Academic Ambassadors for Women. The ambassadors are well known to the female academics in their faculty, and offer help and support with their professional development.

With all these initiatives, the culture for female academics at Imperial is much more positive than it was when the AOC started out. And, with 66 female professors in post, compared to 17 in 1998, the Committee has a lot to be proud of. However Dot says the College still has some way to go and the number of female professors is still noticeably lower than their 465 male counterparts.

A number of reasons have been observed by the AOC to explain why women continue to drop out after completing their postdocs.

These range from the highest achieving women underestimating their chances of getting an academic post to many women feeling their partner's career should be prioritised over their own (even though this is changing).

To tackle these issues, Julia points to the work of the Postdoc Development Centre, which runs an array of development courses for postdocs and says that everyone should back its work: "We need to focus

on the postdocs even more as this group of academics are the future of the College."

### Athena

A year after the AOC was set up, Imperial got involved with the national Athena Project, established by the UK higher education funding councils, Universities UK and the government to promote the careers of women in science, engineering and technology in higher education and research.

Today the College is focused on the Athena SWAN Awards which are given to recognise good employment practice for women in science engineering and technology. Dot explains: "The awards encourage departments to reflect on their employment practices and to identify an action plan for improvements. These lead to activities which benefit not only female academics but the whole department work environment."

As a result of all the groundwork done by the AOC over the last 12 years, Imperial has scored well in the SWAN awards. So far the Departments of Chemistry, Chemical Engineering and Chemical Technology, Physics and NHLI have achieved Silver SWAN status.

The AOC's new target is to get every College department to Silver SWAN status. Once a significant number of departments have achieved Silver awards, the College can become a 'Silver SWAN Institution'. As for going for Athena SWAN Gold, Dot says: "Imperial strives for excellence in everything else that it does so why should this area of College life be an exception?"

—EMILY ROSS, COMMUNICATIONS

## Athena Silver SWAN – what it means for Imperial

**"The Athena SWAN appeals to the competitive spirit of Imperial's academics.** To win a SWAN and compete against other universities, departments need to go back to basics and think about the barriers women encounter within their departments and consider what changes can be made."  
—Professor Dame Julia Higgins, Senior Research Investigator (Chemical Engineering and Chemical Technology)



**"Anything we do to improve the employment situation for women will also improve the employment situation for men,** so we have embraced the Athena award as a way to improve being at Imperial for all our academic staff."  
—Professor Dot Griffiths, Deputy Principal and Head of Programmes (Business School)



### How has the Athena SWAN scheme benefited your department?



**"The whole Athena exercise was good for staff morale** – it made people feel they had a voice and they felt valued at the end of it. Having the award is also something we can use to recruit staff – it lets them know there is a level of commitment towards not only trying to retain the best scientists, but also making it an enjoyable place to work."  
—Professor Clare Lloyd, Professor of Respiratory Immunology (NHLI)



**"We discovered all sorts of things we didn't know about staff satisfaction.** A good thing is to get staff involved at every stage and as soon as possible. Once staff start being consulted about different aspects of your department's processes and you start reacting to their opinions, then the whole department is a nicer place."  
—Professor Joanna Haigh, Head of the Department of Physics



**"We now have a lot more clarity with our procedures** – things are written down and they are accessible. It's not as if they have necessarily changed, it's just that staff know about them. A tip for those trying to gain an award is to start getting all the numerical data together – such as turnover by grade and gender, and ratio of course applications to offers and acceptances by gender. It takes a lot longer than you might think!"  
—Professor Tom Welton, Head of the Department of Chemistry

For more information on the Athena SWAN awards and how your department can get involved visit: [www.athenaswan.org.uk/html/athena-swan](http://www.athenaswan.org.uk/html/athena-swan)

# Learning from the Copenhagen Summit

Erica Thompson, who is studying for a PhD at the Grantham Institute for Climate Change, joined thousands of people from across the world in Copenhagen to take part in the UN Climate Change Conference (COP15) last December. *Reporter* speaks to Erica about fasting for 56 hours, her feelings about the failed summit and why she looked to Twitter to communicate her experiences beyond Copenhagen.



## What is your PhD about?

My PhD is on extreme weather events and catastrophe insurance. The frequency and severity of extreme events such as droughts, floods, hurricanes and heatwaves is likely to change as the climate system changes, so it's important for business and society to be able to make predictions about how this may happen in order to reduce the impact.

## How did you get a ticket to the summit?

As my PhD is partly funded by the UK Met Office, I asked them if they needed any helpers with their stand inside the conference centre and they added me to the official list. As I don't fly, I got the coach there with Climate Camp, a group of climate activists based in London. We had a fantastic time on the bus with lots of discussion about how to respond academically, socially and personally to the challenges of climate change.

## What happened when you arrived?

Due to the UN registering 45,000 people for an event

whose venue could only hold 15,000, I was unable to get into the Bella Centre for the official summit. There were hundreds of fringe events in the city and I spent the week at the KlimaForum – the alternative 'People's Climate Summit'. Copenhagen City Council allowed us to sleep on the floor of a local school at night and there was a real sense of community as everyone was gathered for the same purpose.

## Why did you decide to use the social networking site Twitter to communicate your experiences at Copenhagen?

I'd never used Twitter before, but I signed up because I wanted to communicate the importance of what was happening in Copenhagen. I hoped that some of my colleagues would be interested to read about the way that their research is translated into policy advice and then into actual agreements and action, and, maybe just as importantly, the way that civil society engages with these issues.

## What led you to take part in the Climate Justice Fast?

I wanted to emphasise that the difficulty at the heart of the climate and energy problems we face is our individual failure to

take responsibility and make proactive choices about what and how we consume, and also to emphasise how easy it is to make these lifestyle choices.

## What lasting impressions did the summit leave you with?

Something I would pick out personally is the unwillingness of academics to be involved with the social, political and policy issues raised by scientific research. With the exception of my Met Office colleagues, I didn't meet any scientists in Copenhagen – I was surprised not to meet any who were simply there as 'interested parties' at the KlimaForum. Scientists, particularly those involved in physical science research, should be the first to understand the nature and seriousness of the environmental and energy crises that society faces. I'm often surprised about the high carbon, high energy lifestyle choices of scientists. I try to examine my lifestyle choices with the same rational approach that I apply in my research, and encourage my fellow scientists to do the same.

One of my friends was beaten up by Danish police at the official protest, despite having no

"Our choices determine the type of future we and our descendants will have to live in"

## What was the most shocking thing you heard at the event?

One of my friends was beaten up by Danish police at the official protest, despite having no

weapon and making no threats. I was also very surprised that the police prevented (with batons and dogs) registered delegates inside the centre from coming out to join the protestors.

## How did you feel about the failure of the talks?

Although it was frustrating to hear the talks going around in circles, perhaps the most important thing that can come from this is a realisation that the climate and energy crises together are just too big a problem for politicians or businessmen or academics to solve. Whether we like it or not, our choices, however small they may seem, determine the type of future we and our descendants will have to live in.

## How have you been thinking differently since the conference?

I've stopped using Twitter, as it takes a lot of effort to update regularly, but I am thinking more about how I communicate. I have found a new sense of urgency since I returned and hope I can convince more scientists to engage in these important debates.

If you are interested in communicating about climate change contact Erica: e.thompson07@imperial.ac.uk

# inside story

## mini profile

### Heidi Larson

Dr Heidi Larson, anthropologist and Principal Research Fellow at Imperial's Institute for Global Health, talks about her research, which looks at public trust in vaccines around the world.



#### What interests you about the public's opinion of vaccines?

I started training as a doctor at Harvard but have always been fascinated by what drives people to take decisions and risks. There is often an assumption by health professionals that because a vaccine is effective, people will want it. In reality, people's acceptance or refusal of a vaccine depends on a complex mix of sociocultural and economic factors; who they talked to yesterday, their experience of hospitals, how expensive the treatment is.

#### What are the implications of your work?

I want my work to improve vaccine programmes through demonstrating the importance of responding to the public's concerns.

#### How did public trust issues affect people's uptake of the swine flu vaccine in the UK?

My recent publication on swine flu in the *Journal of the American Medical Association* shows the UK is not new to issues on public trust and vaccines. The questioning of the swine flu vaccine relates to concerns over past public health

and government policy experiences. For example, the government's handling of BSE, the misreporting of MMR jabs and the lack of materialisation of the bird flu pandemic have all influenced public trust in the swine flu vaccine.

#### What role does the media play in this?

When I moved to London last year, the papers were full of sensational swine flu headlines. Journalists should be more sensitive to the implications of sensationalising health issues.

#### What happens when the public mistrusts vaccine programmes?

In 2003 the government of northern Nigeria declared a boycott on the polio vaccine, due to suspicions that the vaccine was not safe. This led to a recurrence of polio in countries that had been declared polio free. The consequence was a huge financial and human resource cost that these countries are still recovering from.

—AGNES BECKER, SCHOOL OF PUBLIC HEALTH

## Religion and Science Question Time



Earlier this month Imperial College Union held One World Week, which featured a number of activities aimed at unravelling issues of gender equality, sexual orientation, religion,

disability and race. Rory Fenton, an undergraduate in the Department of Physics, reports on one of the events he took part in: Religion and Science Question Time.

“Featuring a diverse and high profile panel, the Religion and Science Question Time event brought forward several opinions on the relationship between religion and science to a buzzing room of over 150 students and lecturers. Interestingly, all panel members, including atheist humanist philosopher Professor Peter Cave, agreed that science can only give a limited understanding of our world. Indeed Professor Cave pointed out that knowing the hydrogen and oxygen composition of water tells us nothing of what it's like to quench one's thirst or, as he eloquently

put it, “frolic in the water with one's lovers”. The panellists did, however, disagree on the ability of religion to satisfy scientific questions. To esoteric Hindu and physicist Jay Lakhani, the idea of a personal god was simply a convenient metaphor which failed in the face of natural disaster and evil doers. The interpretation of religious texts inevitably came up, with Christian physicist,

John Polkinghorne, keen to stress that Genesis was to him a myth containing essential theological truths. For Jay, the prophets' only mistake was that they ‘opened their mouths’; that in trying to put their experiences into words, they distorted them for

others, and he stressed the importance of a text feeling right. For Muslim electrical engineer Mahbub Gani, the Koran was the word of God, albeit distorted by human reading. Baha'i neurology expert Graham Walker even shed some light on the development of morality in the human brain, contrasting the humanist belief in innate morality with his own concept of a stage of development during which we have no concept of morality.”

“Knowing the composition of water tells us nothing of what it's like to quench one's thirst ”

### ▶ SCIENCE FROM SCRATCH

As explained by Sarah Barker, Msc Science Communication



## Zodiac

The zodiac is the name given to the circle of constellations that lie on, or within a few degrees of, the ecliptic, the Sun's annual apparent path in the sky. The orbital paths of the Moon and planets also lie within the zodiac. Originating from the Greek *zōdiakos kuklos*, or “circle of animals”, the zodiac is so named as many of the constellations that lie within it are represented by animals. Twelve of these may be familiar from their association with astrology, such as Aries the ram and Taurus the bull; however in astronomy, the zodiac contains between 13 and 24 constellations. The zodiac is used today as a celestial coordinate system, allowing for convenient charting of the positions of the Sun, Moon and planets along the ecliptic.

Is there a phrase or term you would like us to explain? ✉ Email the editor: [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk)

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

## Student blogger Jonny on balancing study and social life:

“Last night I went out to a club in Central London – an event less frequent now than in my hedonistic first year days – though the freezing cold wait for a bus still remained. Despite returning home fairly early and sober, my alarm still wasn’t loud enough to wake me in time for my first lecture. There are few feelings more frustrating than awaking to see the clock pointing to half way through a lecture you aimed to go to... I’m not totally clear about the moral of this blog, and I’m not sure if there has to be one. It might be that the Library Café serves a mean main course for lunch.”

[www.imperial.ac.uk/campus\\_life/studentblogs](http://www.imperial.ac.uk/campus_life/studentblogs)



blog SPOT

## The dizzy heights of Hong Kong

Israel Osofero, a Research Assistant in the Department of Civil Engineering, visited the University of Hong Kong as part of the 2009 Asia Summer Schools programme, which is open to all first year PhD students. He reports on his experience:

“The Hong Kong Summer School combined a four-day Research Skills Development Course with a three-week research programme overseas.

I was attracted to the Asia Summer Schools scheme because it gave me a week out of my normal research routine and I was really looking forward to making new friends. I wasn’t disappointed – the people I met were fantastic and Hong Kong is a very beautiful city, with many natural attractions like mountains, forests and beaches.

During the course we were taught to collaborate in a fun way. We played football, ate meals together and all the time we were learning. There was also a series of lectures and seminars on collaboration and people management.

Everyone was partnered up with a student from Hong Kong. My partner had a PhD in music which is very different from engineering. We had to do a project that cut across our



Israel Osofero (Civil Engineering) enjoying the views of the city during his time at the Hong Kong Summer School.

disciplines – creating a structural design for a music concert. It was a really interesting experience as we had to compromise and understand each other’s disciplines.

The course helped me to develop my people management skills, which are important for collaboration with my supervisor and people in my research group back at Imperial. It also taught me how to get along with anyone, as we worked with international students from different backgrounds and with different interests.

I really enjoyed seeing how PhD students worked in other universities. The University of Hong Kong was different from Imperial, but when it came down to it, the challenges are the same everywhere.

The best thing is that I am still in touch with friends I met there and if ever I go back to Hong Kong I know I have a place to stay.”

Summer school applications close on 19 February. To find out more go to [www.imperial.ac.uk/international/students/internationalopportunities/summerschools2](http://www.imperial.ac.uk/international/students/internationalopportunities/summerschools2)

## Dual lives: Gareth Mitchell

An Imperial lecturer juggles teaching with working for Radio 4

Universities are sometimes accused of being ivory towers, where academics lose touch with the real world. At Imperial, however, the emphasis has always been on applying academic work to real-world challenges. Gareth Mitchell (Humanities) is certainly a lecturer who practises what he preaches – as well as being a full-time lecturer in Science Communication at Imperial, he also leaves the College every Monday afternoon to step into the hallowed halls of the BBC and record the *Digital Planet* programme for Radio 4.

“My teaching commitments make me a better presenter, as the teaching ethic forces me to learn my theory before the show, and my real-world experience

of creating the show 52 weeks a year makes my lectures more relevant too, so everyone is a winner,” he says.

Gareth first came to Imperial in 1993 to take the MSc course on which he now teaches. He then worked for the BBC for four years before taking up his current post at Imperial whilst still presenting *Science in Action*. Four years ago he moved from science to technology and took up the reins at *Digital Planet* and, in the last month, he has been called upon to present the chemis-

try show *Material World*. His career has also led to many interesting encounters. “During a discussion on piracy with my absolute god Feargal Sharkey of the Undertones, I had to sheepishly admit

“My real-world experience of creating the show 52 weeks a year makes my lectures more relevant”



Gareth on tour with *Digital Planet* in summer 2009.

that as a teenager I copied the band’s music onto cassette, which is ironic now that Feargal is head of the industry body UK Music,” he says. Gareth recently interviewed Kevin Spacey about his involvement in a short film competition, and has also met the co-founder of Apple, Steve

Wozniak, *Generation X* author, Douglas Coupland, and Jimmy Wales, founder of Wikipedia. “My only regret is being too nervous to ask Vint Cerf from Google for an interview when I met him,” he admits.

—TOBY WOOD, BIOMEDICAL ENGINEERING



## INVENTOR'S CORNER

# Biomechanics at work

Professor Andrew Amis (Mechanical Engineering) on improving treatments for people with sports injuries and how his devices help people sleep at night.

### What is your role at Imperial?

I am Professor of Orthopaedic Biomechanics; I run two research groups, with one based in the Department of Mechanical Engineering and the other in the Department of Surgery and Cancer on the Charing Cross Campus. My work is related to arthritis and artificial joint replacement.

### Can you describe your research area?

I focus on two main areas, one is improving the design and performance of artificial hip and knee joints, and the other is developing improved treatments for people with sports injuries, like ligament injuries in the knee.

### What are you inventing at the moment?

The current procedure for patients with arthritis is to wait until it is severe before operating to fit an artificial knee joint. I'm working with Professor Justin Cobb from the Department of Surgery and Cancer to develop a system where very small partial joint replacements are intended to treat the patient with a smaller operation at a much earlier stage. We designed them to replace the parts of the joints which are most commonly damaged first.



A partial knee replacement helps to treat patients with a smaller operation at an earlier stage.

### Why does the world need these?

An increasing proportion of the population is living longer and has an expectation of remaining physically active for longer, putting further stress on the joints. Therefore there is a huge need for this sort of treatment.

### How does it feel to create such useful devices?

It's really good to meet patients afterwards because the artificial joints are extremely good at

curing the pain that they have from arthritis and so, as well as helping them to walk normally, on a more basic level it actually helps them to sleep at night.

— ANOUSHKA WARDEN, IMPERIAL INNOVATIONS

*If you have an idea with commercial potential Imperial Innovations could help. For more information please visit [www.imperialinnovations.co.uk](http://www.imperialinnovations.co.uk)*

“As well as helping them to walk normally, it actually helps them to sleep at night.”

## course review



By course attendee Adriana Cornea, Postdoctoral Fellow, Finance and Accounting Group, Business School

## Writing up your research for publication

### 1 Why did you go on the course?

Good research results and great ideas can remain unnoticed and be rejected if you don't know how to communicate them to the scientific community, even from your own research field. I needed a model to follow, as writing the first few articles can be quite painful and time consuming at the beginning of an academic career.

### 2 What did you learn?

I learnt that there is a model you can follow in order to write scientific articles. I was amazed to discover that this model can be used by researchers in many areas. I also learnt the appropriate vocabulary to link ideas, to describe results and to avoid gaps between ideas. For a non-native English speaker this was really helpful.

### 3 Would you recommend the course?

Definitely! I liked the course because it was very interactive and personal. Everybody received individual feedback based on our performance in the exercises we were given. When the course was over, I was left feeling that writing articles is not as difficult as I'd imagined!

*Please visit the Postdoc Development Centre website for information on all the support and development opportunities available for postdocs: [www3.imperial.ac.uk/staffdevelopment/postdocs1](http://www3.imperial.ac.uk/staffdevelopment/postdocs1)*

# Healthy living week – 2010



By the end of January, New Year's resolutions tend to be broken or forgotten. With that in mind,

this year's Healthy Living Week ran throughout the last week of January with the aim of showing the Imperial community how easy it can be to take a healthier approach to everyday life. Sports Development Officer Samantha Bell (Sport Imperial) reports.

“The week's big message was that there are numerous enjoyable ways to start developing a healthier lifestyle, with lots of different things to do. We wanted to show people that being healthy need not be a boring or repetitive experience, and can actually be fun!

Throughout the week, a number of free services, opportunities and activity sessions were offered to both staff and students. The Catering Department offered a healthy food option when serving meals at

most catering outlets across the South Kensington Campus, and new healthy food snacks were available to buy in both the Sir Alexander Fleming Building and the SCR. These options will continue to be provided so, if you haven't checked them out already, it's not too late to do so.

Tuesday was a bike orientated day, which kicked off with a bike auction run by Imperial College Union. Over 50 bikes were sold to staff and students, raising over

£600 for the Haiti earthquake fund. That then ensured that the bike doctor was kept busy throughout the day, servicing over 35 bikes free of charge.

During the first part of the week, the Energia team delivered 'body MOTs' to over 50 people, who happened to pass through the Queen's Tower Rooms at lunchtime. And on Thursday, 92 people took part in free studio classes.”

*To get a taste of Healthy Living Week see: [www3.imperial.ac.uk/news/healthyliving](http://www3.imperial.ac.uk/news/healthyliving)*

## Greener vending

David Hughes, Facilities Support Manager, explains how introducing 62 new vending machines to the College's campuses, not only supports staff and student preferences for ethically sourced products, but also helps to reduce the College's carbon footprint.



“Our vending machines are an important part of Imperial's catering and, with 13,000 full-time students, the expectation is high. When it came to looking for new suppliers for our vending machines we

had a number of priorities, for example, we wanted to provide more healthy options, fewer snacks that are high in fat and more ethical products, as these are all high priorities for our students. We also wanted to match our offerings with Imperial's catering sites offering ethically sourced hot drinks and healthy meals. Initially we were thinking of bringing in Fairtrade coffee to all the vending machines across the South Kensington Campus but, in the end, we made the decision not to force this on everyone and so the new vending machines offer a choice of coffees: Klix which costs 50p or the Gran Milano Bean-to-Cup Fairtrade coffee which costs 70p. In addition to this, the vending machines which offer food now include healthy snack options. And to top it off, changing from nine different suppliers to two means there are seven fewer vans on the road, which supports the College's efforts to become more eco friendly too!”

long  
service

Reporter shares the stories of staff who have given many years of service to the College. Staff featured celebrate anniversaries on 1 February–26 March. Data is supplied by HR and is correct at the time of going to press.

—AMNA SIDDIQ AND ECE MENGUTURK, COMMUNICATIONS

### 20 years

- Mr Anthony Coleman, Electrical Supervisor (Estates)
- Mrs Priscilla Davis, Laboratory Assistant, (Surgery and Cancer)
- Mr Vitor Galhano, Technician (Cell and Molecular Biology)
- Mrs Mano Jacob, Liaison Librarian (Library)
- Miss Jennifer Mitchell, Editorial Assistant (NHLI)
- Dr Joaquim Peiro, Senior Lecturer (Aeronautics)
- Mr Neil Turtell, Village Manager (Accommodation)

### 30 years

- Mr Keith Cooper, Assistant Groundsman (Sport and Leisure)
- Ms Teresa Dunne, Finance Manager (NHLI)
- Professor Berc Rustem, Professor (Computing)

### 40 years

- Mr Paul Nicholas, Chief Technician (Life Sciences)

## SPOTLIGHT

**Professor John Burland, Senior Research Investigator (Civil and Environmental Engineering) 30 years**

Professor John Burland began working at Imperial following his appointment as Chair of Soil Mechanics in 1980. He is now Emeritus Professor and Senior Research Investigator in the Department of Civil and Environmental Engineering. Best known for his work on stabilising the Leaning Tower of Pisa, John's other projects have included advising on the geotechnical implications of the Jubilee Line extension and contributing to the stabilisation of another famous building, the Metropolitan Cathedral of Mexico City. He is currently consulting on the proposed underground railway in Dublin. John particularly enjoys the interactive aspects of the profession and the opportunities for creativity. He says: “Engineering is about communication, not just equations.” John also loves teaching, and has “never cut a lecture,” even during his involvement in Pisa. The holder of many accolades from around the world, John was also awarded a CBE for contributions to geotechnical engineering. During his spare time, John enjoys golf, travelling and spending time with his family.



**Tina Moloney, Early Years Education Manager (Support Services) 25 years**

Tina Moloney began her career at Imperial in 1985, as a Day Nursery Educator. At that time, there were only 30 children attending the Imperial College Day Nursery and nine members of staff working there. “Despite coming from a completely different role working in social services, I felt at home straight away,” she says. In 1990, Tina was promoted to Deputy, and in 1992 she became Supervisor, which involved more office work. Tina says: “In the early days of the nursery we used to see more fathers come and drop off their children. But this really changed over the years as women began to pursue careers in science. I think we've had a part to play in this, allowing couples to achieve a good work-life balance.” In 1995 Tina pushed for the Day Nursery to become the Early Years Education Centre (EYEC). The name change raised the Centre's profile and today 130 children are registered there and 39 members of staff care for them and run a range of activities. Tina has two sons, Alex and Jack, who both attended the EYEC.



## VOX POP

## What are the benefits of the coaching scheme?

Imperial's Coaching Academy was launched in 2009, with staff taking on coaching assignments in addition to their main jobs. Coaches can help 'coachees' to find solutions to work-based challenges through confidential meetings over a period of three to six months.

For further details on the Coaching Academy, visit: [www3.imperial.ac.uk/staffdevelopment/talentdevelopment/coaching](http://www3.imperial.ac.uk/staffdevelopment/talentdevelopment/coaching)



“For me coaching is about offering people the space to reflect, challenge themselves to ‘think outside the box’, and take action. But it is not for the faint-hearted – it can be very challenging

for both the coachee and coach! I've really enjoyed meeting people who have a wide variety of roles and it's given me food for thought about my approach to my own work”.

PHILIPPA FLAMAND-GLOYNE, SENIOR HR MANAGER (NATURAL SCIENCES) IS A COACH WITH THE COACHING ACADEMY



“Coaching has given me a chance to step back from my day-to-day work and take time to think about the way I approach my work, my colleagues and how I'm perceived. It has been a great way of getting fresh ideas from someone who is

interested in my development. My coach has been a really good sounding board.”

ADRIAN WONG, FACULTY SUPPORT SITE MANAGER (ICT) HAS BEEN RECEIVING COACHING FOR THE LAST YEAR AS PART OF THE HORIZONS LEADERS PROGRAMME



“A few years ago, I had a few coaching sessions about career progression which were very helpful. I wanted to become a coach as a way to give something back. What surprises me is what you personally get from coaching people – when you're working

with someone and exploring different ways to solve their problems, you can gain a perspective on what is occurring around the College and in life in general.”

MARY MORRELL, READER IN RESPIRATORY PHYSIOLOGY (NHLI), IS A COACH WITH THE COACHING ACADEMY

# Research at hand

You can use the photos from Imperial's image library to illustrate the finer details of our research:



1. Developing sustainable future energy supplies using fuel cell technology.
2. Classifying deep sea corals to track the effects of climate change.
3. Testing a quartz resonator to develop implantable blood pressure sensors.
4. Shaking hands with i-Cub, the experimental robotic platform for developing brain-inspired technologies.

## Picture this

The College's online image library contains a wealth of photos of student life and Imperial personalities, as well as research and campus shots. Images are available to all College staff and students to download for use on Imperial websites, presentations and in print.

Contributions of images of all aspects of College life are welcomed. To upload images please contact your faculty web manager. To search the digital image library visit: [www.imperial.ac.uk/imagelibrary](http://www.imperial.ac.uk/imagelibrary)



## Welcome new starters

- Ms Sofia Abrahamsson, Medicine
- Mr Christopher Allan, Occupational Health
- Ms Geraldine Anderton, Surgery and Cancer
- Dr Samir Ayoub, NHLI
- Ms Eteri Bakhsholiani, NHLI
- Dr Maryke Carstens, NHLI
- Dr Giuliano Casale, Computing
- Dr John Crawshaw, Chemical Engineering and Chemical Technology
- Dr Christian Eberhardt, NHLI
- Mr Mohamed El Sharkawy, Biomedical Engineering
- Dr Amalio Fernandez-Pacheco, Physics
- Miss Hannah Foster, Medicine
- Mr Niels Hald, Surgery and Cancer
- Dr Fiona Hamilton, Public Health
- Ms Laura Harries, Kennedy Institute
- Dr Maud Henry, Molecular Biosciences
- Dr Tudor Ionescu, EEE
- Dr Navaneethakrishnan Krishnamoorthy, NHLI
- Dr Ching-Hsin Ku, NHLI
- Dr James Leung, Chemical Engineering and Chemical Technology
- Dr Tom Lissauer, Public Health
- Dr Seth McCullen, Materials
- Dr Ines Mollet, NHLI
- Miss Kristie Neeser, Public Health
- Miss Mitali Patel, Medicine
- Dr Zuzana Price, Biology
- Dr Graham Reed, Chemical Engineering
- Mr Peter Stilwell, Medicine
- Dr Anna Thompson, NHLI
- Dr Gianpaolo Tomasi, Surgery and Cancer
- Miss Konstantina Vogiatzaki, Mechanical Engineering
- Dr Richard Winkle, Surgery and Cancer
- Dr Hilary Wong, Medicine
- Mr George Yeorghaki, Graduate Schools

## Farewell moving on

- Mr Asif Akram, Computing
- Dr Alexandros Bouganis, Computing
- Dr Jeffrey Bourne, Mathematical Sciences

- Mr Bozo Boyunsuz, Catering
- Mr Luke Brieger, Registry (7 years)
- Dr Emma Child, Cell and Molecular Biology (7 years)
- Mr Benn Cizauskas, Computing
- Miss Lara Cumming, Public Health
- Dr Lucy Elphick, Cell and Molecular Biology (4 years)
- Ms Julie Fuller, Medicine (8 years)
- Mr Samuel Furse, Chemistry
- Mr Martin Gear, Security
- Professor Myrtle Gordon, Medicine (15 years)
- Dr Rong Guo, Humanities
- Dr Rick Hamilton, Chemistry
- Ms Audrey Lacchini, Surgery and Cancer
- Dr Tchern Lenn, Biology
- Dr Jian Ma, Mechanical Engineering (6 years)
- Professor John Mansfield, Biology
- Dr James Moore, Physics
- Dr Cliona O'Dwyer, Medicine (7 years)
- Miss Danielle Reeves, Communications
- Ms Jennifer Siegel, Medicine
- Dr Katarzyna Smolarczyk, NHLI
- Dr Giuseppe Sposito, Mechanical Engineering (5 years)
- Dr Neil Tsang, Civil and Environmental Engineering (9 years)
- Miss Linda Tyrrell, Finance (6 years)
- Mr Junsheng Wang, Materials
- Miss Sarah Watson, Business School

## retirements

- Professor Michael Leschziner, Aeronautics (8 years)

This data is supplied by HR and covers the period 10–30 January. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (\*) indicates where an individual will continue to play an active role in College life.

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

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

moving in. moving on.



25 FEBRUARY ▶ GRANTHAM INSTITUTE FOR CLIMATE CHANGE SPECIAL LECTURE

## Discovery and gas from the east

Britain is facing unprecedented challenges with the credit crisis, tough environment targets and increasing dependence on gas imports. Ofgem's

Project Discovery questions whether current energy arrangements can deliver secure supplies and affordably meet Britain's climate change targets. A crucial factor is the timing of new sources of gas from Russia and Turkmenistan. The lecture, given by Alistair Buchanan CBE, Chief Executive of Ofgem, looks at the challenges of getting this gas to Europe and the influence of global politics on Britain's gas supplies.



3 MARCH ▶ LECTURE

## Hard Rain

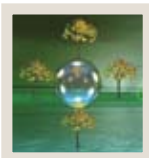
To coincide with the Hard Rain photography exhibition on display on the South Kensington Campus from 15 February–12 March, Mark Edwards, Director of the Hard Rain project, will present on the global issues captured in powerful

images from around the world, illustrating every line of Bob Dylan's prophetic song 'A Hard Rain's A-Gonna Fall'. He will take the audience on a journey to explore the state of our planet, looking at how problems such as the wasteful use of resources, poverty, climate change and habitat loss are connected by cause and effect. The Hard Rain photographs have already been displayed around the world to 15 million people.

11 FEBRUARY ▶ LECTURE

## Energy policy post Copenhagen

Iain Conn, Executive Director, Refining and Marketing, BP



13 FEBRUARY ▶ CONFERENCE

## Technology in medicine and surgery day

Lectures from inspirational innovators including Professor Lord Darzi (Surgery and Cancer)

15 FEBRUARY–19 MARCH ▶ EXHIBITION

## 100 Women – 100 Visions

Photography exhibition of Imperial's female scientists at City Hall

17 FEBRUARY ▶ DENNIS GABOR LECTURE

## Building Brains

Professor Steve Furber FRS, ICL Professor of Computer Engineering, University of Manchester



17 FEBRUARY ▶ MEETING

## Holland Club Annual General Meeting

All staff members welcome

18 FEBRUARY ▶ LUNCHTIME CONCERT

## Charles Owen (piano)

Read Theatre, Sherfield Building

23 FEBRUARY ▶ LUNCHTIME CONCERT

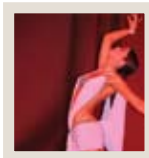
## Andrew Zolinsky (piano)

Wolfson Education Centre, Hammersmith

23–26 FEBRUARY ▶ EXHIBITION

## ArtsFest

Celebrating arts on campus



24 FEBRUARY ▶ FRIENDS OF IMPERIAL SPECIAL LECTURE

## Life in the solar system: Saturn's moons reveal their secrets

Professor Michele Dougherty, Chair of Space Physics

25 FEBRUARY ▶ LECTURE

## Economic policy after the crash

Professor David Miles, Bank of England Monetary Policy Committee Member and Visiting Professor, Business School

25 FEBRUARY ▶ GRANTHAM INSTITUTE FOR CLIMATE CHANGE SPECIAL LECTURE

## Discovery and gas from the east

Alistair Buchanan CBE, Chief Executive, Ofgem

2 MARCH ▶ LUNCHTIME CONCERT

## Coull Quartet

Wolfson Education Centre, Hammersmith

2 MARCH ▶ LECTURE

## Telecare workability: a sociotechnical perspective

Dr Maggie Mort, Lancaster University

3 MARCH ▶ LECTURE

## Hard Rain

Mark Edwards, Director of the Hard Rain project

3 MARCH ▶ PETER LINDSAY MEMORIAL LECTURE

## Financial, ecological and disease-transmitting networks and their dynamics

Professor Lord May of Oxford

3–12 MARCH ▶ EXHIBITION

## Photographic Society

Blyth Gallery

4 MARCH ▶ LUNCHTIME CONCERT

## Alvin Moisey (piano)

Read Theatre, Sherfield Building



## take note

### Research



The College's research support website has been updated, and now includes information and guidance on preparing proposals, costing and pricing, contracts, intellectual property and managing projects. It also includes a comprehensive list of contact details for the Research Office.

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

To give feedback on the new website, contact: [linda.watson@imperial.ac.uk](mailto:linda.watson@imperial.ac.uk)

## VOLUNTEERING

# Teachers and classroom assistants

Project ID: 2126  
 Organisation: Westway Development Trust  
 Dates and times: flexible  
 Location: Ladbroke Grove

Volunteers are needed to work as teachers or classroom assistants supporting children and young people in supplementary schools. A number of supplementary schools in Kensington and Chelsea offer out-of-school-hours educational opportunities for children and young people, many of whom come from minority ethnic communities. The schools teach a range of community languages and national curriculum subjects, as well as giving general homework support. Community languages spoken include Arabic, Tigrinya, French, Somali, Georgian, Albanian and Amharic. You can volunteer on a weekly, fortnightly or monthly basis.



### For more information

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

☎ 020 7594 8141  
 ✉ [volunteering@imperial.ac.uk](mailto:volunteering@imperial.ac.uk)

For full details of over 250 volunteering opportunities please visit:  
[www.imperial.ac.uk/volunteering](http://www.imperial.ac.uk/volunteering)

✉ Subscribe to the weekly newsletter by emailing [volunteering@imperial.ac.uk](mailto:volunteering@imperial.ac.uk)

## Stay in the loop

✉ Visit [www.imperial.ac.uk/events](http://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](mailto:events@imperial.ac.uk)

