Imperial College London

reporter

Issue 232 ▸ 14 April 2011

Sharing stories of Imperial's community

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EDITOR'S CORNER

Wedding fever

When William and Kate's wedding date was announced last November I was ecstatic. While I'm a big fan of romanticism I have to confess that I was more excited that **the royal do** didn't land on the same date as my own nuptials, which are exactly a month later. This year the world has gone mad with royal wedding fever, with mugs, dolls and t-shirts covered with the **happy couple's faces**. At Imperial a number of staff members are planning to head to Hyde Park to watch the procession and wedding service at Westminster Abbey broadcast live on giant screens. But I discovered that **not everyone is enamoured** by the wedding. "I don't believe in having a royal family and I think the money could be spent better elsewhere," said postgraduate researcher Andreas Doepner (Surgery and Cancer) speaking to *The Gadsden Times*, a newspaper in Alabama. Whatever your views about the big event in London on 29 April, I hope that you – like me – are looking forward to the **extra public holiday**. Wishing you relaxing break.

EMILY ROSS, EDITOR

Reporter *is published every three weeks during term time in print and online. The next publication day is 17 May. Contact Emily Ross:* ✉ reporter@imperial.ac.uk

Tributes to student Anthony Soh

Imperial learnt with great sadness of the death of Anthony Soh, also known as Yen, a Mechanical Engineering undergraduate student in his first year at the College. Anthony was last seen on the evening of 22 March in the Union bar in Beit Quad, where he had been socialising with friends. Following a search assisted by Imperial staff and students, Anthony's body was recovered from the Serpentine in Hyde Park on 6 April. Police are not treating Anthony's death as suspicious.

Dr Michael Bluck, lecturer in the Department of Mechanical Engineering and Warden at Wilson House, Anthony's hall of residence, said: "Anthony was a popular resident, and his many friends will miss him dearly. He was a bright student in the Department of Mechanical Engineering and had already shown great promise."

Tributes have been paid on both *Reporter* online and on the Facebook page set up by family and friends. Anthony's older brother Jeff wrote: "Anthony always tried to live by his favourite film, *Yes Man*, saying yes to life, and trying all sports and activities, from riding his motorbike to ballroom dancing, from playing the violin and piano to doing martial arts and rock climbing – he lived life to the fullest."

A memorial service is being planned for next term, and details will be made available in due course.

To share your memories of Anthony visit: **http://bit.ly/eVVV9f**

Imperial medics score top marks

Medical students at Imperial have achieved the highest scores in the country in the application scheme for the Foundation Programme, the two-year generic training programme which bridges medical school and specialty training.

Imperial students have consistently been ranked in the top five since the Foundation Programme application system was first introduced five years ago. This year their average score of 81.3 topped the table for all medical schools in the UK.

Professor Jenny Higham, Deputy Principal of the Faculty of Medicine, said, "This is a fantastic result for our students, which reflects the talent, hard work and dedication that they apply to their studies. They are a credit to the College and I am certain that they will go on to have incredibly successful and rewarding careers following completion of the Foundation Programme."

The scores in the application process are the primary determining factor in allocating students to Foundation Schools, which teach the two-year programme. The first year builds upon the knowledge, skills and competences acquired in undergraduate training. The second year focuses on training in the assessment and management of the acutely ill patient, as well as generic professional skills including team work, time management and communication skills.

The Foundation School most closely associated with Imperial is the North West Thames Foundation School. This is a partnership between the College and the London Deanery, which is responsible for postgraduate medical and dental training in London.

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

For the full story see: **http://bit.ly/gkJUIX**

Imperial College London

The results are in

The Rector will be presenting the feedback from the 2011 **Staff Survey** at the South Kensington, St Mary's and Hammersmith Campuses during the summer term. The first presentation will be held on 24 May 2011 on the South Kensington Campus in the Pippard Lecture Theatre from 15.00–16.00.

Further details will follow in Staff Briefing.

One of the most inspirational women in the world

A leading Imperial scientist has been named by the *Guardian* newspaper as one of the top 100 women in the world for 2011.

Professor Molly Stevens (Materials and Bioengineering) was listed in the science and medicine category for her work in biomedical materials and regenerative medicine. The list was compiled by the newspaper to celebrate International Women's Day on 8 March 2011.

Professor Stevens was acknowledged for her research into the development of a range of materials which could one day help the body to repair itself. These include bone-like materials, which could be used to mend the bones of patients after they have been in an accident or have had surgery.

She and her team are also developing new materials that could be used to repair tissue, such as heart muscle, which could help patients recover after major heart attacks.

Professor Stevens has also made considerable advances in the development of materials that can detect disease-related proteins. Her work could provide doctors in developing countries with a quick and cost effective way of diagnosing patients for a range of diseases, including cancer and HIV.

> "It is nice when the work that you do is recognised."

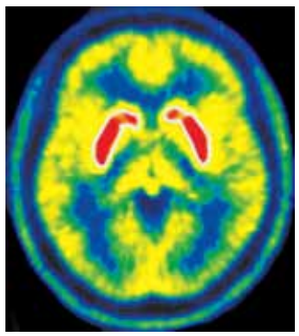
The materials scientist is Chief Scientific Officer of the biotechnology company RepRegen, an Imperial start-up company that aims to regenerate damaged bone and muscle in patients.

In 2007 Professor Stevens was the first woman to win a Royal Pharmaceutical Society Conference Science Medal in its 40-year history.

Professor Stevens said: "It is nice when the work that you do is recognised. I feel extremely honoured that I have been nominated alongside other women around the world who have been such trailblazers in their field. However, I don't work alone and I feel my team should share in the credit too."

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Greater access to top clinical imaging facilities



Researchers at Imperial will soon have greater access to world class clinical imaging facilities on the College's Hammersmith Campus, following the signing of a new agreement.

Imperial has become an equal investor in a newly created joint venture that assumes responsibility for the facilities and operations at GlaxoSmithKline's (GSK) Clinical Imaging Centre (CIC), alongside the MRC, King's College London and UCL.

The £47 million Centre houses an advanced radiochemistry development facility, two MRI machines and two PET scanners, with the ability to conduct highly sophisticated molecular and functional imaging studies on both healthy volunteers and patients.

Since the Centre opened in 2007, Imperial academics have been working collaboratively with GSK on a large number of research projects. The new agreement means that researchers across the College will have the opportunity to make use of the Centre's facilities for an even broader range of projects and will be able to access the resources independently of any specific industrial interactions. Operations and staff are expected to transfer to the joint venture in the third quarter of this year.

Professor Paul Matthews (Medicine) has been Head of the CIC since it was founded. He said: "This marks a milestone in industry-academic collaboration and in the way major academic centres work together. The continued engagement of GSK will ensure that the great science has high impact."

Professor Stephen Smith, Pro Rector (Health) and Chief Executive of Imperial College Healthcare NHS Trust, added: "The agreement will allow us to continue to make strides in areas such as neuroscience, cancer, and cardiovascular disease, which should ultimately lead to better treatments for patients."

—LAURA GALLAGHER, COMMUNICATIONS AND DEVELOPMENT

Staff interested in using the facilities should contact Kevin Cox, Chief Operating Officer: **kevin.p.cox@btinternet.com**

in brief

Head of Civil and Environmental Engineering

Professor Nick Buenfeld, Professor of Concrete Structures, has accepted appointment as Head of the Department of Civil and Environmental Engineering with effect from 1 September 2011 for a period of five years. Professor Buenfeld will succeed Professor David Nethercot on his retirement. Professor Buenfeld joined the College in 1981 as a Research Assistant in the Department and, during this period, also gained his PhD. Following his SERC Postdoctoral Fellowship, he was appointed as lecturer in 1987, promoted to Reader in Concrete Structures in 1998 and then to professor in 2000.

Physics workshop

Teachers found themselves on the other side of the desk on 12 April, when they took part in a workshop organised by the Department of Physics. Targeting state school science teachers without physics degrees, who are teaching elements of physics as part of GCSE courses, the workshop aimed to enthuse them and give them a greater understanding of the subject, to help liven up lessons.

Imperial joins scientific powerhouse

Imperial and King's College London signed a Memorandum of Understanding this month, expressing their intent to join the world-leading medical research institute: the UK Centre for Medical Research and Innovation (UKCMRI). The UKCMRI will bring together biologists, chemists, physicists, engineers, computer scientists, mathematicians and clinicians to advance knowledge of the underlying causes of health and disease. The institute is being built in King's Cross, London, between the British Library and St Pancras International.

Engineering world rankings

The College was ranked fifth in the world for civil and structural engineering by the 2011 *QS World University Rankings for Engineering and Technology*. Imperial was also ranked seventh in the world for mechanical, aeronautical and manufacturing engineering; eighth for chemical engineering; ninth for electrical and electronic engineering and 15th for computer science and information systems. The QS rankings listed the top 50 highest scoring institutions in the world in each discipline.

media mentions

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

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FINANCIAL TIMES ▸ 23.3.2011

Little and large

Collaborations between large companies and small enterprises are often fraught with difficulty, but the benefits can make them worthwhile, the *Financial Times* reported. Benefits include the access to specialised expertise which a large corporation can gain when working with a more focused smaller enterprise, and opportunities for a smaller company to use the resources of its larger partner, such as its marketing capabilities. However a desire to work with organisations of similar scale can be a hurdle to such collaborations. Professor Ammon Salter (Business School) said: "Large corporations are often more comfortable working with other big companies." Small enterprises say that in the time it takes for a large company – which they are considering partnering with – to make a decision, they can run out of funds and become bankrupt.

GUARDIAN ▸ 29.3.2011

Sweet dreams

While power naps have benefits, the best way to sleep soundly is to establish a sleeping routine, Professor Mary Morrell (NHLI) told the *Guardian*. Not getting enough sleep can lead to a range of problems, and even crisps cravings can be linked to metabolic changes resulting from a lack of sleep. Professor Morrell says: "It's especially useful to take a nap or short siesta before a high-pressure situation, such as a major meeting." But she adds: "Regular sleep times are actually much more beneficial than siestas. When it comes to sleep, routine is good for us. We should all aim to get to bed at the same time each night, and get up at the same time each morning."

THE TELEGRAPH ▸ 30.3.2011

Contamination fears

Contamination fears linked to Japan's damaged Fukushima Daiichi power plant have led hospitals and refuges to demand that evacuees present certificates confirming they have not been exposed to radiation before they are admitted *The Telegraph* reported. These precautions, however, have been criticised as an overreaction: "This is a knee-jerk reaction based on the fear that these people are going to harm you. If someone has been contaminated externally, such as on their shoes or clothes, then precautions can be taken, such as by removing those garments to stop the contamination from getting into a hospital," said Visiting Professor, Dr Robert Gale (Medicine).

REUTERS HEALTH ▸ 31.3.2011

Amputation rates down

A new patient study has revealed a possible decrease in amputation rates among people with diabetes, according to *Reuters Health*. The study, led by the US Department of Veteran Affairs, compared similar population groups in 2000 and 2004. They found that amputation rates in 2000 stood at seven in 1000 cases but in 2004 only between 4 and 5 for every 1,000. The developments could be for a range of reasons, including better screening practices and levels of care. Dr Eszter Vamos (Public Health) told *Reuters Health*: "People with diabetes receive more aggressive treatment for their condition and its risk factors than previously, due to increased awareness of diabetes and targeted interventions." She said that continued efforts to reduce amputation risks were still needed.

awards and honours

MEDICINE

Chayen announced Innovator of the Year

Professor Naomi Chayen (Surgery and Cancer) has won the Innovator of the Year Prize in the inaugural Connecting Women in Technology Awards organised in conjunction with networking website *Everywoman*. At the award ceremony on 22 March, Professor Chayen was presented with a certificate by HRH the Princess Royal. She received the Award for her original scientific research leading to patented, commercialised technologies for crystallisation of biological macromolecules that are adopted by crystal growth laboratories worldwide.

HUMANITIES

Japanese speech winners

L–R: Ming Wang, Edwin and Kamil.

Three Imperial students who have taken the Department of Humanities' Japanese daytime languages course, participated in the annual Japanese Speech Contest 2011 on 16 February. Edwin Goh (Chemical Engineering and Chemical Technology) won the first prize in the Individual Speech Category for his speech on 'Light novel fan translation' and Ming Wang Tan (Bioengineering) and Kamil Zainal (Bioengineering) were finalists in the Group Presentation category, for their presentation on 'Experiencing the Pimlico Connection'.

MEDICINE

Professor to chair liver group

Professor Mark Thursz (Medicine) has been appointed Secretary-General of the European Association for the Study of the Liver (EASL). Professor Thursz will serve in this post for a term of two years.

MEDICINE

Sokol's brilliant article

Dr Daniel Sokol, Honorary Senior Lecturer in Medical Ethics (Public Health), was a finalist in the Medical Journalists' Association Winter Awards judged earlier this year. His article about the neglected sense of wonder in the practice of medicine for his regular *British Medical Journal* column 'Ethics Man' was entered in the Best Health or Medical Column category. The results for the awards were announced at a ceremony hosted by Simon Singh on 9 February.

Scientists find candidate for new TB vaccine

Scientists have discovered a protein secreted by tuberculosis (TB) bacteria that could be a promising new vaccine candidate, they reported on 18 March in *Proceedings of the National Academy of Sciences*. The protein could also be used to improve diagnosis of TB.

TB is caused by the bacterium *Mycobacterium tuberculosis* (MTB), which infects the lungs and spreads through the air as a result of coughing. There are nine million new cases of TB each year, killing 4,700 people a day worldwide.

BCG is the only available vaccine but it is of limited effectiveness in protecting against TB. BCG derives from the *Mycobacterium bovis* bacterium, which infects cattle and is closely related to MTB.

Vaccines work by stimulating the immune system to retain a memory of particular molecules from a microbe that will trigger a rapid immune response if the microbe is encountered later. The best candidates for vaccines are those that trigger the strongest response from the immune system.

> "This makes it an extremely promising candidate for a new TB vaccine"

In the new study, scientists identified a protein, called EspC, that triggers a stronger immune response in people infected with the TB bacterium than any other known molecule. This protein is secreted by the TB bacterium but not by the BCG vaccine.

Senior author Professor Ajit Lalvani (NHLI) said: "This makes it an extremely promising candidate for a new TB vaccine that could stimulate broader and stronger immunity than BCG. Surprisingly, our results also show that this molecule could underpin next-generation diagnostic blood tests that can rapidly detect latent TB infection."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

From **candy floss** to **hard rock**

The earliest rocks in our solar system were more like candy floss than the hard rock that we know today, according to research published in the journal *Nature Geoscience* on 27 March.

The work, by Imperial researchers in the Department of Earth Science and Engineering and other international institutions, provides the first geological evidence about how the earliest rocks were formed, supporting previous theories based on computer models and lab experiments. The study adds weight to the idea that the first solid material in the solar system was fragile and extremely porous – much like candy floss – and that it was compacted into harder rock during periods of extreme turbulence, to form the building blocks that paved the way for planets like Earth.

> "The early carbonaceous chondrite rocks were shaped by the turbulent nebula through which they travelled billions of years ago"

Lead author of the study, Dr Phil Bland (Earth Science and Engineering), said: "Our study makes us even more convinced than before that the early carbonaceous chondrite rocks were shaped by the turbulent nebula through which they travelled billions of years ago, in much the same way that pebbles in a river are altered when subjected to high turbulence in the water. Our research suggests that the turbulence caused these early particles to compact and harden over time to form the first tiny rocks."

The candy floss-like rocks were formed billions of years ago in the massive disc of gas and dust called the Solar Nebula, before the birth of our solar system.

The researchers reached their conclusions after carrying out an extremely detailed analysis of an asteroid fragment known as a carbonaceous chondrite meteorite, which came from the asteroid belt between Jupiter and Mars. It was originally formed in the early solar system when microscopic dust particles collided with one another and stuck together.

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

More measures needed to protect endangered species

Conservationists may need to change their approach to protecting animals and plants from extinction if they are to successfully shield key species and habitats from the effects of global climate change, say Imperial scientists in a review published in the journal *Science* on 31 March.

Scientists and conservation organisations currently work out a species' extinction risk by determining how likely it is that climate change will make its habitat unsuitable. They then focus their efforts on protecting species whose location is threatened by changing temperature or rainfall.

However, these are not always the animal or plant species that need the most protection, say the authors of the new study, from Imperial, the Universities of Dundee and Bristol in the UK, Wyoming in the USA and Macquarie in Australia. This is because some species are more sensitive to changes in climate than others; some are able to adapt to change and some find it easy to relocate to new areas.

The researchers are proposing that scientists use a comprehensive 'vulnerability assessment', using a wider selection of data, to provide a more accurate picture of which species and habitats in which places are likely to be most at risk.

Commenting on the vulnerability assessment, lead author of the review Professor Georgina Mace (Grantham Institute), said: "You could think of it like the UK government's practice of handing out heating bill subsidies to elderly and vulnerable people during the winter. This is more effective and efficient than giving subsidies to everybody living in a cold part of the country regardless of their ability to financially support themselves or by going on holiday to Spain for the winter."

Foxes have shown the ability to adapt, relocating to urban areas and adjusting to a new way of life.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

Thinking of Japan

From living through the earthquake to providing academic insight into the nuclear meltdown, *Reporter* seeks perspectives on the Japanese crisis through the eyes of the Imperial community.

Fourth year medic Kelly Ameneshoa was at her lab bench on the 17th floor of Tokyo Medical and Dental University when the whole building began to sway. "I remember looking out of the window and seeing the hospital next door swinging from left to right – it was completely mental! Everyone was holding onto each other repeating 'it's going to be ok'. There was nothing to do but wait until it passed."

> "When we came to Japan, we knew that there was a risk of earthquakes"

Despite the turmoil around her on 11 March, Kelly says she doesn't remember feeling scared as the situation was so surreal. "There was no crying, just a lot of nervous giggling," she says. "Even though earthquakes are part of everyday life for the Japanese students, we were all in the same boat as no-one had ever experienced anything this big before."

Along with three other Imperial medics Kelly has been based in central Tokyo since February 2011 working on a 10-week lab project as part of her medical degree. "When we came to Japan, we knew that there was a risk of earthquakes," she says. "In fact we'd had one earlier in March and I hadn't even noticed it."

Kelly and two of the other Imperial students spent the night after the earthquake in the lounge of the university's main building sleeping under coats, as the transport system had ground to a halt and they were unable to get back to their dorms. "Every so often someone would run in and tell us that aftershocks were coming but luckily they weren't very strong. It didn't feel as dramatic as it sounds, as we were so well looked after. The College was in touch with us to see if we were ok and our hosts and new friends were amazing – we woke to trays of food and tea." By the next day the trains were running again and the students could travel back to their beds to catch up on some sleep.

Nuclear crisis

The earthquake hit Japan at 05.45 GMT and by the time staff in Imperial's Communications and Development Division had reached their desks, the phone lines were buzzing. Media outlets around the world wanted expert analysis and opinion on the earthquake, tsunami and the potential nuclear meltdown. Professor Robin Grimes, Director of the Imperial Centre for Nuclear Engineering (Materials), specialises in nuclear fuel behaviour in normal and accident conditions. Over the last month, he has taken questions in over 60 interviews, providing the public with scientific insight into events in Japan.

He says that the experience has really highlighted the importance of academics sharing knowledge at a time of crisis and helping to question some of the more alarmist reactions to the disaster. "Academics should be there to say, 'Hey, hang on a minute. Let's think about this a bit more calmly or sensibly and see what we really know, and what we really need to be worried about'. You have to try to give the public the opportunity to amass enough knowledge, so they don't become alarmed about what is happening and can react in an informed way."

Kelly says that although the media has been good at capturing the devastation in northern Japan, she feels the coverage has given the impression that life in Japan has completely stopped. "Life has pretty much gone back to normal in Tokyo. The shops were a bit crazy the day after, as everyone panic-bought but it quickly calmed down and we were back in the labs a day later." Kelly notes that the biggest visible difference is that the government is trying to save energy, as a lot of the city's supply comes from nuclear power. "As a result there are fewer trains but they are normally so regular you barely notice the change. The skyline also looks pretty different at night as the neon lights and signs have been toned down almost halfway," she says.

Supporting the relief efforts

At Imperial, sympathy has been felt across campus for the many thousands of people who were killed in the earthquake and tsunami, or whose livelihoods have been ruined. Second year undergraduate Yosuke Hamada (Biochemistry) is the president of Imperial's Japanese Society, which has organised a number of cake sales and collections around the College in recent weeks to raise funds for Japan.

> "Organising fundraising activities felt like the best way to support the victims and their recovery"

"Watching this tragedy happen in the news, when we are so far away from Japan, has been really hard and we wanted to find a way to express our grief for the victims," Yosuke explains. "As representatives of Japan within the Imperial community, organising fundraising activities felt like the best way to support the victims and their recovery, at the same time as raising awareness of what was going on." With the support of the Imperial College Union, the Japanese Society has raised around £6,000 for the Japanese Red Cross.

Even before the earthquake, Kelly and the three other Imperial students in Japan had been struck by the generosity of the Japanese people. "From picking us up from the airport and taking us for our first grocery shop, everyone has been incredible to us", she says. Since the earthquake, many have been checking on Kelly and the other Imperial students: "Some were offering us support when they didn't even know if their own family members had been affected".

Although the students were advised to return to the UK by the College in the days following the earthquake, they were determined to stay and finish their projects. Kelly explains: "This is a once in a lifetime opportunity and we are keen to spend as long as we can here. The people here are absolutely amazing."

—EMILY ROSS, COMMUNICATIONS AND DEVELOPMENT

Crisis communications

Quotes from Imperial academics who provided expert opinions as the crisis unfolded.

Sky News
11 March 2011

Fukushima fallout: next few days critical

Professor Gerry Thomas (Surgery and Cancer), Drector of the Chernobyl Tissue Bank at Imperial College London, explained why authorities were preparing to distribute iodine to protect people from radioactive exposure. "The thyroid actually takes up iodine to make the thyroid hormones. It remains in the gland and the tissues in the thyroid," she said. Explaining why people in the affected area of Japan were being encouraged to take iodine, she added: "It is important to get stable iodine into the thyroid gland to prevent the uptake of radioactive iodine" but noted, "It is extremely unlikely there will be a significant release (of radioactive iodine from the Fukushima plant)."

The Engineer
11 March 2011

Japan earthquake shuts nuclear facilities

Julian Bommer, Professor of Earthquake Risk Assessment (Civil and Environmental Engineering), explained that nuclear power stations are built with earthquakes in mind. "Geohazards are a key criteria when siting a nuclear power station – plants are very unlikely to be built on soft or unstable soil. Then there will be a very detailed assessment of the potential seismic hazard – in other words, the probability of different levels of ground shaking at the site."

ABC Australia
17 March 2011

Fukushima is an outdated design

Professor Robin Grimes, Director of the Imperial Centre for Nuclear Engineering (Materials), explained to presenter Tony Jones what worried him about the design of the Fukushima Daiichi nuclear plant that made it particularly vulnerable to this kind of accident.

"There are a number of things that would not be able to pass a safety inspection for a new reactor at the moment and one is the idea that they have this large condensing ring, this doughnut-shaped thing that we've been hearing about, which is actually outside the containment vessel.

In a modern design, anything to do with a reactor in which the primary circuits are concerned would have to be within a very strong containment vessel. The containment vessels have actually done very well, despite the fact this is a 40 year-old reactor. It's this doughnut-shaped exterior structure that seems to have failed in a couple of cases to some extent."

inside* story

mini profile

Mimi Hii

Dr Mimi Hii, Reader in Catalysis (Chemistry), explains her work as a mentor assisting with Imperial's Junior Research Fellowship Scheme, which aims to give early career researchers the freedom to concentrate on their research.

What is your role at Imperial?

I work on the development of catalysts and catalytic processes which are particularly useful for fine chemical or pharmaceutical industries. I've been here for eight years and came here as a senior lecturer from King's College London.

> "If Silvia can look back to this period of her career with fondness, I will know I have done a good job!"

How did you get into mentoring and how does it feel being a JRF mentor?

I first met Dr Silvia Diez-Gonzalez (Chemistry) at an American Chemical Society meeting in San Francisco. Sometime after, she got in contact to see if I would be interested in supporting her application for an Imperial Junior Research Fellowship (JRF). I agreed and became a mentor for Silvia. It was the first time I had mentored anybody in an official capacity, so it was quite a novel experience, if not a little scary!

Has being a mentor reminded you of being an early-career scientist?

When I first started at the College in 1997, there weren't any official schemes like the JRF scheme, but I will always remember the people who were there to support me at the time. In years to come, if Silvia can look back to this period of her career with fondness, I will know I have done a good job!

How important is the JRF scheme in your view?

It's brilliant that Imperial has started to do this. The scheme gives young researchers an opportunity to become independent and helps the College identify excellent people to work here. This is more important these days, as there are fewer opportunities and academic positions compared to when I started, even though there are a lot of excellent people around.

—EMILY GOVAN, INTERNATIONAL OFFICE

Where science meets art

On 21 February, postdoctoral research associate Dr Dan Emmerson (Chemistry) attended a 'speed dating' event organised by Artifact, a collaboration between Imperial and the Royal College of Art (RCA). The event in the Union Concert Hall was attended by postgraduate students and staff from Imperial and the RCA, all hoping to work on collaborative projects that would be showcased at an art exhibition at Imperial's Blyth Gallery this summer. Dan reports on his experiences:

"The event began with some interesting talks from scientists and artists involved in successful collaborations, such as Dr David Dexter (Medicine), a neuroscientist studying Parkinson's disease. He is involved in a project to encourage people to donate their brains to scientific research and had invited a photographer to watch a brain dissection. The real excitement of the day for me was the 'speed dating' which aimed to establish partnerships between artists and scientists. I met artists whose specialities range from painting and animation to interactive design. It was interesting to think about different approaches taken by scientists and artists to their work. For instance, artists are trained to be very self-critical, while scientists often rely on their peers for critiques of their work. At the end of the evening we scored our 'dates' out of 10 and eagerly awaited the name of our chosen partners. I was partnered with Colin Henderson, who is studying screenprinting at RCA. We have submitted a proposal for a project with a general theme of visualising the invisible , and will explore the way in which the language of chemistry helps us to visualise and understand the microscopic world of atoms and molecules. We plan to start working on the project in the next month."

SCIENCE FROM SCRATCH

As explained by Thea Cunningham, MSc Science Communication

Homeostasis

Even though the environment around us is continually changing, our bodies need to maintain a constant internal environment if they're to work properly. This process of regulation is called homeostasis. The term homeostasis is derived from the Greek words *homeo*, meaning 'unchanging', and *stasis*, meaning 'standing'. Many physiological conditions, such as pH, body temperature, salt concentration and blood sugar levels, need to remain as constant as possible. To keep these conditions within certain limits, the body uses a mechanism called negative feedback. In this feedback system, any deviation from the normal range of function is detected by receptors. These receptors feed information to the brain, which then sends signals along nerves to correct the deviation and restore the normal equilibrium. If the body doesn't control its conditions properly the consequences can be dangerous. This can be seen in diabetes, which is caused when the pancreas does not sufficiently control the concentration of glucose in the blood.

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

blog SPOT

Student blogger Charlotte on

the scent of home:

It's not unusual to hear people saying, "You don't know what you'll miss until you actually leave", and this was something that became clear to me last term. I knew I would miss stuff from Sweden but it was hard to tell what. I never expected it to be *lingonsylt* (raw stirred lingonberries, usually served with things like meatballs), crisp bread and *lussebullar* [a soft, saffron-scented bun stuffed with raisins]. I had a surprise when I returned home – the thing that has reminded me of my absence more than anything else – was the rediscovery of familiar smells, like my mom's food. This is how I know I'm home.

www.imperial.ac.uk/campus_life/studentblogs

Bringing together the postdoc community

The first Business and Engineering Postdoctoral Research Associate Symposium was held on 18 March in the Skempton Building on the South Kensington Campus. Karl Smith (pictured left), who organised the event, explains how it aimed to foster greater cohesion within Imperial's postdoc community.

"Postdoctoral researchers (postdocs) are a disparate yet oddly homogenous bunch. As insular individuals, with a highly attuned sense of self-preservation, they shun engagement with people and research beyond their immediate sphere. Or so the perception goes. As a postdoc myself, I both identify with and disapprove of this description. Hopefully the symposium went some way towards combating this caustic impression.

In his rallying introductory address, Dr Warren Macdonald from the Postdoc Development Centre (PDC) described postdocs as the 'powerhouse of academic research'. Whilst I dare say many academics would dispute this declaration, it is irrefutable that postdocs play a vital role in the College.

> "it is irrefutable that postdocs play a vital role in the College"

In the first hour, postdocs from four departments gave talks on a wide range of subjects, including damage limitation approaches for the design of aircraft structures, using giant pressures and micro-waves to recycle waste tyres, and analysis of the complexity of healthcare systems. However, as each talk progressed, their similarities – such as their focus on resolving real world issues and the multidisciplinary nature of their research – came to the fore, whilst their diversity highlighted the breadth of Imperial's research output. Ultimately, this was the event's intention.

After the talks had ended, a lunch, kindly paid for by the PDC, was offered up to the assembled researchers. As groups of postdocs formed around the buffet, the sound of eager conversation filled the room. All in all I felt it was a respectable success – 50 people had attended the symposium, debate had been piqued, minds quickened, tongues loosened and stomachs sated. More events will surely follow."

Attenborough on campus

On 23 March, Britain's best known natural history film maker, Sir David Attenborough, held a Q&A session at the Grantham Institute for Climate Change. The event was attended by staff and PhD students from the Grantham Institute and the Division of Biology, as well as philanthropists Jeremy and Hannelore Grantham. Julia Halder (pictured second from right), a PhD student from the School of Public Health, reports on her experience of meeting one of her heroes:

Sir David Attenborough poses with Imperial staff and students outside the Grantham Institute.

"Like many people I've grown up watching David Attenborough documentaries and have explored the world through his eyes. I have always felt that the way he quietly expresses excitement about nature is wonderful and, as someone who loves both studying and talking about biology, I have been inspired by the way he conveys his interest to the public. On the day of the event at the Grantham Institute, the room filled with nervous giggles as David arrived and as we posed for the group photo some of us were too much in awe to stand next to him! That said we soon settled down to ask questions, starting with his first-hand experiences of climate change. David recounted a dramatic event on a recent arctic trip, where a small crack in the ice sheets expanded to 60 metres in just a few hours, cutting off their encampment from its air base.

Further answers revealed David's concerns that the expanding human population and rate of energy consumption will cause even greater environmental problems in the future. He also expressed frustration that efforts to educate the public and conserve the environment are constantly thwarted by people's reluctance to change their comfortable lifestyles.

> "David's love for the natural world was evident in everything he said"

While David could not tell us how to solve these major global challenges, he stressed the importance of multidisciplinary collaborations and said that it was vital for scientists in all fields to collaborate in order to create the most effective solutions and policies.

David's love for the natural world was evident in everything he said. Asked if he would do it all again, he said he was lucky to have the chances he has had and would love to repeat them. David completely lived up to my expectations and I left feeling inspired to make the most of any opportunities which come my way."

obituaries

MICHAEL WAY

Emeritus Professor Michael Way, former Director of Silwood Park Campus, died on 18 January 2011. Emeritus Professor Graham Matthews pays tribute:

"Michael Way graduated with a first class degree in zoology from Jesus College, Oxford in 1941. While there he studied the insecticide DDT and went on to become internationally recognised for his work on insect pest management. His pioneering work on a coreid pest of coconuts found in Zanzibar was recognised when it was named *Pseudotheraptus Wayi*. Michael joined the Department of Zoology and Applied Entomology at Imperial as a reader in 1961. He soon transformed the Diploma of Applied Entomology course into an internationally recognised Master's course, now the only such course still running in the UK. Michael was appointed Professor of Applied Zoology in 1969 and his research on aphids with the then Research Officer Mike Cammell led to the first forecasting programme for bean aphid, *A. fabae,* in the United Kingdom in 1977. He was Director of Silwood Park Campus from 1979–84 and was closely involved in its redevelopment. The library at Silwood is named the Michael Way Library. After his retirement in 1995, Michael's research continued to make significant contributions in the UK and overseas, including to rice pest management in Asia. Between 1949–2009 he published over 150 scientific papers. He was a tremendous role model and his keen intellect and charismatic enthusiasm will be fondly remembered. He is survived by his wife, Isobel, and his children Katherine and Robert."

long service

Reporter features staff who have given many years of service to the College. Staff listed below celebrate anniversaries in the period 22 April–28 May. Data is supplied by HR and is correct at the time of going to press.

—KATHERINE BAYLISS, COMMUNICATIONS AND DEVELOPMENT

20 years

- Mr David Lee, Supervisor of Receipt and Despatch (Medicine)
- Mr Paul Lockwood, Schools Liaison Officer/Finance Officer (Registry)
- Dr Sunday Popo-Ola, Research and Teaching Fellow (Civil and Environmental Engineering)

SPOTLIGHT

Dr Lynda White, Senior Tutor in the Department of Mathematics 40 years

In 1971 Lynda joined the Department of Mathematics as a lecturer while completing a PhD in statistics at Imperial. From 1980–87 she was departmental Admissions Tutor, becoming Senior Tutor in 1995. Her research interests lie in the field of statistics, and she focuses on helping colleagues across Imperial to design their experiments and analyse data. Lynda particularly enjoys her teaching work and contact with students, and she and Dr Emma McCoy, Head of the Department of Mathematics, have pioneered a course for third year mathematics students called Communicating Mathematics, in which students teach mathematics in schools as part of their degrees. As Senior Tutor, she has helped many students with their academic and personal problems. "It's been really satisfying to see students, who have struggled in the past, go on to complete their degrees," she says. In her spare time, Lynda enjoys doing cryptic crosswords and sudoku, cooking and spending time with her grandson.

An exhibition of fine *Taste*

Q) What do a pot of marshmallow fluff, a kissing couple on a park bench and a snail have in common?
A) They are all arguably a matter of taste.

Taste is the latest photography exhibition at the Blyth Gallery on the South Kensington Campus created by Nick Kay (Health and Safety), Bachir Taouti (Commercial Services) and Peter Wren (School of Professional Development). Over the last year they have been taking photos exploring the subject of taste, both through their choice of subject and in juxtaposition to each other's work. The group has used a range of media to combine technology from the past and present with photography as the common ground. The exhibition features framed photographs, slideshows on PCs and stop-motion animations. "We wanted to show that you don't have to be constrained by the rules of one medium to produce something that is interesting and entertaining," Nick explains. One of the key aims for the exhibition was to encourage others to give art a go. "You don't have to wait until you are as good as David Bailey or spend lots of money, time and resources before you can produce something that people can respond to," says Nick.

> "You don't have to be constrained by the rules of one medium to produce something that is interesting and entertaining"

Bachir Taouti discussing the exhibition with Nick Kay.

Taste *will be on display in the Blyth Gallery until 6 May.*

Fun and fancy dress in the Union Dining Hall

Purim is a Jewish festival that commemorates the time when the Jewish people living in the Persian Empire were saved from extermination by the courage of a young Jewish woman called Esther. Purim was celebrated on 20 March this year and a local Jewish organisation, Chabad of South Kensington, held a party in Imperial's Union Dining Hall attended by 40 people. Undergraduate Sam Gonshaw (Mathematics) reports: "The festival of Purim is all about fun and fancy dress and it is customary to perform plays and parodies. The event began with Professor Lester Kershenbaum (Chemical Engineering and Chemical Technology) reading from the Book of Esther the bible verses which describe the events in Persia, during which he modelled a set of wigs for each character of the story. This was followed by a Chinese-themed meal, live music and dancing."

Welcome
new starters

Miss Jannine Arbour, Chemical Engineering and Chemical Technology

Mrs Deslyn Archibald, Faculty of Engineering

Mr Pedro Augusto Bonela Araujo, Catering

Dr Cheryl Battersby, Medicine

Ms Agnes Becker, Medicine

Miss Manuela Bernardi, Life Sciences

Dr Laure Biniek, Chemistry

Mr Andrea Boccia, EEE

Dr John Brazier, Chemistry

Dr Shu Chen, Materials

Mr Jason Curran, Medicine

Dr Stoichko Dimitrov, Chemistry

Ms Zoreh Farzad, Medicine

Dr Beatriz Fidalgo Fernandez, Chemical Engineering and Chemical Technology

Miss Tanya Gubbay, Communications and Development

Miss Michelle Hallesy, Catering

Dr Pia Hardelid, Public Health

Miss Abigail Hayward, NHLI

Ms Zena Hira, Clinical Sciences

Mr Amir Horowitz, Life Sciences

Dr Michael Hurley, Medicine

Mr Przemyslaw Korzeniowski, Surgery and Cancer

Miss Anna Kubik, Business School

Miss Suzanne Law, Medicine

Dr Meng-Lay Lin, Surgery and Cancer

Dr Shairoz Merchant, Surgery and Cancer

Mr Szymon Mikolajewski, Catering

Miss Isla-Kate Morris, Natural Sciences

Dr Miguel Navarro-Cia, Physics

Dr Licia Ray, Physics

Dr Erika Rosivatz, Chemistry

Mrs Veronica Russell, Business School

Ms Alessandra Saint-Just, Catering

Dr Subreena Simrick, NHLI

Dr Ailsa Sita-Lumsden, Surgery and Cancer

Mr Khaja Syed, Kennedy Institute

Mr Johannes Totz, Computing

Ms Dana Winogron, Faculty of Medicine

Farewell
moving on

Dr Ashiq Anjum, Computing

Mr Francesco Atanasio, ICU

Mr Daniel Beck, Library Services (5 years)

Miss Jennifer Butler, NHLI

Miss Anna Codrea-Rado, Communications and Development

Ms Amy Fox, Kennedy Institute

Ms Yael Friedman Benziony, Humanities (6 years)

Dr Gianfranco Gilardi, Life Sciences (17 years)

Dr Fabian Gonzalez Jara, NHLI

Ms Amanda Green, NHLI (11 years)

Miss Alexa Hawkins-Bell, Surgery and Cancer

Professor Mehmet Imregun, Mechanical Engineering (27 years)

Miss Emma Marfleet, Human Resources

Miss Delia McKenzie, EYEC

Ms Bingli Mo, Chemistry

Mr Peter Mountney, Computing

Dr Michael Patterson, Medicine (9 years)

Miss Bernadette Pedersen, Medicine

Mr Antonio Scalfari, Medicine

Dr Matthew Seymour, Kennedy Institute

Dr Donal Taylor, Aeronautics

Mr Nicholas Vaughan, Mechanical Engineering

Miss Claire Wenden, NHLI

Mrs Chen Zhang, Catering (6 years)

This data is supplied by HR and covers the period 7–27 March. This data was correct at the time of going to press.

moving in. moving on.

St Mary's over the years

Professor Howard Thomas looks back at 24 years at the College.

What was your role when you were first appointed at St Mary's in 1987?

I was appointed by the University of London to a Chair in general medicine at St Mary's. My brief was to appoint specialist academic physicians to increase the academic base. My own interests in liver disease were well supported and in 1992, Professor David Taube (Medicine), Dr Mick Thick (NHLI) and I did a successful series of 30 liver transplants, supported by charitable money.

What did St Mary's gain from joining Imperial in 1989?

In 1987, the Dean of St Mary's, Peter Richards, realised that the hospital-based medical schools didn't have the science infrastructure to be competitive in the modern world. We had very distinguished people in biochemistry, immunology and pharmacology but we didn't have maths and physics and chemistry to really build on, and that's what we gained from joining Imperial. I think it's been a godsend to us, particularly in the last decade as more of us have got involved with multidisciplinary work. Living through that period I have seen us change from a very focused independent medical school based in a hospital to a multidisciplinary university-based medical school.

> "The nurses, the junior doctors, the patient support groups and the academic and clinical staff all work really well together."

What will you do in your retirement?

My wife and I have moved to Dorset. She's a musician and is organising an arts festival which I'm going to help out with. I'll also continue to be involved in a number of research programmes in the department, edit the fourth edition of *Viral Hepatitis* and the *Journal of Viral Hepatitis*, and help with an Imperial spinout company that is developing treatment for flaviviruses such as dengue fever and yellow fever.

What will you miss?

I'll miss the camaraderie that we have in the Department of Medicine. The nurses, the junior doctors, the patient support groups and the academic and clinical staff all work really well together on this site. I hope the team can continue to flourish here.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

events highlights

FOR COMPLETE DETAILS:
www.imperial.ac.uk/events

14 April 2011

12 MAY ▸ INAUGURAL LECTURE

Better, stronger, faster

Whether we like it or not, our musculoskeletal system has not been built to last. Over 80 per cent of us will suffer with lower back pain at some point in our lives. Despite these high figures our ability to manage this epidemic is limited, with many treatments appearing ineffective due, in part, to our limited understanding of how the spine works and why it goes wrong. As she will discuss in her lecture, Professor Alison McGregor (Surgery and Cancer) and her team have been working with elite rowers and back pain patients to explore the impacts of environment, lifestyle, injury and disease on the spine.

19 MAY ▸ TALK

From cellular mechano-transduction to biologically inspired engineering

The newly emerging field of biologically inspired engineering focuses on understanding the fundamental principles nature uses to build and control living systems, such as how cells convert mechanical force into biochemical signals, and on applying this knowledge to engineer biologically inspired materials and devices for medicine, industry and the environment. Professor Donald Ingber, Director of the Wyss Institute for Biologically Inspired Engineering at Harvard, will discuss such challenges in presenting the inaugural Bagrit lecture.

15 APRIL ▸ COURSE

Collaborative ICT research for sustainability

Information course by the European Commission

19 APRIL ▸ SEMINAR

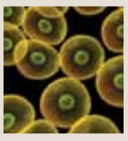
Fetal programming of brain, hormones and behaviour across generations

Professor Stephen Matthews, University of Toronto

3 MAY ▸ SEMINAR

Development and modulation of IL-17 responses

Dr Gitta Stockinger, National Institute for Medical Research, London



10 MAY ▸ SEMINAR

Defects in DNA strand break repair and links to human disease

Dr Stephen West, London Research Institute

11 MAY ▸ SEMINAR

Studying changes to redox status in the mammalian endoplasmic reticulum

Professor Neil Bulleid, University of Glasgow

17 MAY ▸ SEMINAR

Interplay between adaptive and innate immune responses to optimise vaccination strategies

Professor Vincenzo Cerundolo, Weatherall Institute of Molecular Medicine, University of Oxford

18 MAY ▸ INAUGURAL LECTURE

A zigzag journey into the inner workings of cellular nano-machines

Inaugural lecture by Professor Xiaodong Zhang (Molecular Biosciences)

19 MAY ▸ TALK

Computational service economies: design and application

Professor Nick Jennings, University of Southampton

24 MAY ▸ TALK

Innovation and economic growth

Dr Keith Smith, Department for Business, Innovation and Skills, and other panellists

24–26 MAY ▸ COURSE

Teaching with a difference

Residential course by the Graduate Schools

25 MAY ▸ TALK

The pursuit of pulsars

Professor Dame Jocelyn Bell Burnell, University of Oxford

16 JUNE ▸ SEMINAR

Integrating infection prevention into healthcare delivery

Annual scientific meeting

Stay in the loop

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take note

Removal of default retirement age

The government began phasing out the default retirement age (DRA) of 65 years on 6 April. Under transitional arrangements the College's normal retirement procedure will be followed for the final time in 2011. Following the transitional period, the removal of the DRA means that members of staff will be able to choose when they enter retirement.

For information, visit: **http://bit.ly/gOKshj**

MEET THE READER

Jon Ryan, Fire Officer (Security Services)

What are you doing in the picture?
I'm testing a fire extinguisher. Fires can happen easily when people throw lit cigarettes into dustbins. Part of our job involves checking the fire extinguishers each morning, so that we can respond quickly to any situation. The fire team can get to anywhere on campus within three minutes.

What would you do if you were the editor of *Reporter* for a day?
I'd make sure the magazine included more features on fire safety, such as case studies of fires that have happened at Imperial in the past. It is an important area to draw people's attention to.

Who would be your cover star?
It would be nice to see Toni Monte-Colombi, Administration Officer (Security Operations Unit), on the cover. Toni does a great job organising our paperwork. A lot of the hard work she does goes on behind closed doors, so she doesn't get the credit she deserves.

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

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