

Bright beginnings

Getting a kick out of science at
Imperial's summer schools

→ CENTRE PAGES



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physicists lead
world's biggest
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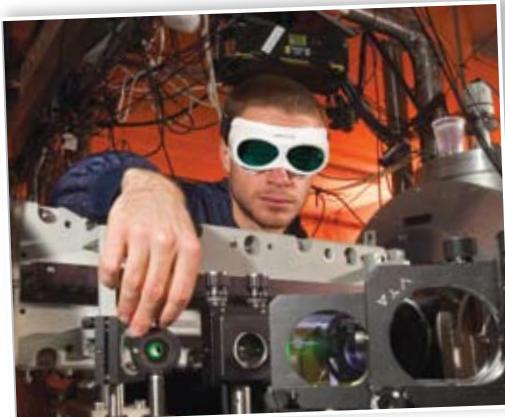
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Editor
Emily Ross
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"WE SURVIVED!" shouted headlines last week, dispelling fears that the largest and highest-energy particle accelerator ever built would swallow up the earth when it was switched on. Far from plotting to destroy the universe, Imperial physicists working on the **Large Hadron Collider** at CERN, had been gearing up to this moment for 20 years, with the aim of probing the mysteries of the Big Bang and investigating the secrets of dark matter. Watching the nervous and excited faces of the scientists as the experiment kicked off, we got a small taste of how it feels to be on the brink of **making scientific history**. As the data pours in over the coming months and years, *Reporter* will be keeping a watchful eye on the developments. We'd like to congratulate Professor Jim Virdee, Professor Andrei Golutvin and their teams on achieving last week's milestone, and wish them the best of luck with their scientific journey.

Junior Research Fellowships launched



The new Fellowships will help to further the careers of Imperial researchers of all disciplines

Imperial's Junior Research Fellowships, launched this July, will give the world's top early-career researchers three years free from teaching and administration, plus a competitive salary and laboratory support costs.

The aim of the Fellowships is to enable researchers to establish and develop their own scientific path and to help them make the difficult leap from postdoctoral researcher to lecturer.

Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, who

is spearheading the scheme, explains: "This scheme will enable fellows to apply for external funding and develop their research career in an independent manner."

Imperial is committing £3.6 million to establish 60 Fellowships over the first three years of the scheme. They will be open to researchers of all nationalities working in, or between the disciplines offered by the College. Each Fellow will be supported and mentored by a senior researcher at the College.

Addressing academic staff, Sir Roy Anderson, Rector, said: "We want to reach out and recruit the best early-career researchers to the Fellowships, so I would like to ask for your help in spreading word of these opportunities far and wide."

Fellowship stipends range from £29,690 to £34,920, with up to £10,000 per year expenses.

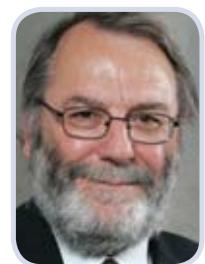
The closing date for applications is 30 November 2008.

 To find out more about the scheme, and to watch videos of Imperial researchers talking about how early-career fellowships have helped them, visit: www.imperial.ac.uk/juniorresearchfellowships

Senior staff changes

Senior staff changes have been announced in advance of the new academic year.

Professor Sir Peter Knight (pictured right) has become Senior Principal of Imperial. Professor Knight will deputise for the Rector and is also responsible for the College's overall research strategy.



Professor Maggie Dallman will succeed Professor Knight as Faculty Principal for Natural Sciences.

Professor John Wood has been appointed as International Relations Adviser, with a special remit for liaison with the European



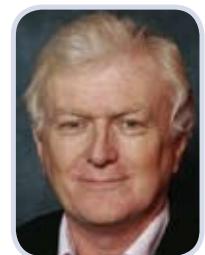
Institute of Technology. Professor Stephen Richardson (pictured left), formerly head of the Department of Chemical Engineering, will succeed Professor Wood as Faculty Principal for Engineering

Professor Donal Bradley has been appointed Deputy Principal of the Faculty of Natural Sciences, from 1 January 2009.

Professor Ari Laptev succeeded Professor John Elgin as Head of the Department of Mathematics on 1 September 2008.

Heather Allan, Director of ICT, will be leaving the College on 3 October to take up the post of Chief Operating Officer with the Global Fund in Geneva. She will be succeeded by Arthur Spirling, currently Deputy Director of IT and Head of IT Services.

Professor Denis J. Wright (Life Sciences) (pictured right) will serve as Dean for the Faculty of Natural Sciences from 1 September 2008.



Professor Christopher J. Isham (Physics), Dean for the Faculty of Natural Sciences, will succeed Professor Robert Sinden (Life Sciences) as the Senior Dean.

Robert Westaway will be joining the College on 17 November as the new Academic Registrar in succession to Vernon McClure, who will be retiring from the College at the end of September after 23 years of service.

 For more information on the senior staff changes, visit: www.imperial.ac.uk/staff

Biggest experiment on Earth goes live

Physics researchers from Imperial are taking part in the biggest experiment on Earth – recreating local conditions similar to those that existed in the earliest instants of the universe, a split-second after the Big Bang.

On 10 September the Large Hadron Collider (LHC) particle accelerator, a 17-mile long circular tube 100 metres below the French-Swiss countryside at CERN, was switched on, following more than 20 years of design, development and construction.



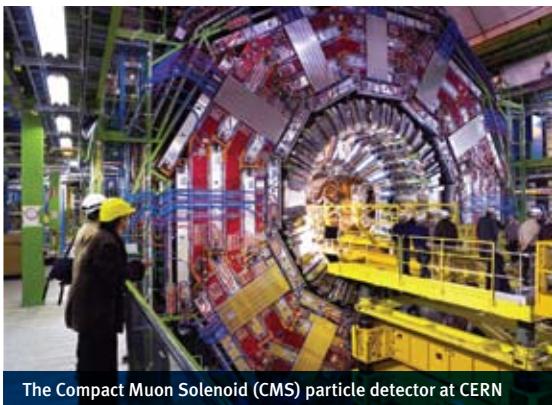
is based at CERN, working with colleagues from around the world to record results of the high energy collisions. Overall project leader for the LHC is Visiting Professor Lyn Evans, while Professor Tejinder Virdee (pictured) is lead scientist on the Compact Muon Solenoid (CMS) particle detector experiment.

Professor Jordan Nash, head of the College's high energy physics research group, said: "An opportunity to take such a big step in scientific understanding comes along only rarely. It's brilliant that so many Imperial scientists, from PhD students to professors, have had the opportunity to play key roles in the development of one of the most important and ambitious scientific experiments ever carried

out. We are all extremely excited about beginning to see data collected with the particle detectors, and look forward to producing some extremely important results in the coming months and years."

— DANIELLE REEVES, COMMUNICATIONS

► For more information, see:
www3.imperial.ac.uk/news/cern



The Compact Muon Solenoid (CMS) particle detector at CERN

Beams of protons are being sent round the LHC's entire length and smashed together at very high energies to create new particles. Some of these particles have been theorised but never seen, possibly including the elusive Higgs-Boson, the particle which scientists believe gives mass to other particles.

A large cohort of Imperial physicists

in brief

► Education Day 2008

The Strategic Education Committee and the Centre for Educational Development will be hosting a symposium *Education Day 2008: From Strategy to Action* on 26 November (12.45–18.00). The event will include an address from the Rector, a lecture from Professor Lord Robert Winston and presentations by teachers at the College who have been recognised for their skills and commitment. Lunch and drinks will be provided. For information, visit: www.imperial.ac.uk/edudev

► In memory of Laurent and Gabriel

On 12 October 2008, Imperial life scientists will be running the inaugural Royal Parks Half Marathon in London in memory of Laurent Bonomo and Gabriel Ferez, students from France who tragically died while on summer placements in the Department of Life Sciences. The group is raising money for Victim Support, a charity that helps people affected by crime. To make a donation, visit: www.justgiving.com/laurent_and_gabriel

► National Student Survey 2008

This year's National Student Survey revealed that Imperial students have an overall satisfaction rate of 85 per cent, 3 per cent higher than the national average. The College's response rate has also increased by 3 per cent this year to 56 per cent. Professor Julia Buckingham, Pro Rector for Education, said: "Our students are among the best in the world and we aim to provide them with an all-round student experience."

► Julia Higgins' research celebrated

Professor Dame Julia Higgins, leading polymer scientist and former principal of the Faculty of Engineering, was honoured by colleagues and members of the science community for her research at a conference on 14–15 September. Event organiser, Dr Joao Cabral, (Engineering) said: "Dame Julia was one of the first to realise the potential of neutron scattering in explaining the molecular structure, function and properties of polymers."

Diamond lab opens

A laboratory set up to solve the structures of membrane proteins was officially opened by the Rector, Sir Roy Anderson, on 1 September at the Diamond Light Source national synchrotron facility in Oxfordshire (pictured).

The Membrane Protein Laboratory (MPL) is a joint venture between Imperial and Diamond Light Source, with funding from the Wellcome Trust. The MPL will help researchers, led by Imperial's Professor So Iwata (Life Sciences), to solve the structure of important membrane proteins, which are embedded in the oily



membranes coating the thousands of cells in our bodies.

The MPL lab will provide cutting edge equipment to successfully grow membrane protein

crystals, which can then be analysed in the Diamond experimental stations to understand more about their atomic structure and how they work.

— DANIELLE REEVES, COMMUNICATIONS

New name for Business School

The Business School at Imperial has changed its name from Tanaka Business School to Imperial College Business School.

The renaming comes after research suggested that the previous name was not strongly associated with Imperial. Explaining the reasons for the change Sir Roy Anderson, Rector, said: "Imperial College is known globally for carrying out research that improves quality of life worldwide. The Business School's activities play a central role in this mission. By putting the College's name into the Business School's title we are making clear its position as an integral part of the College."

awards and honours

Imperial student named science writer of the year

Imperial biochemistry graduate Erika Cule, who is about to begin a PhD at Imperial's Centre for Bioinformatics, has won first prize in *Daily Telegraph's* Science Writer Awards 2008. Her essay

It's all in the genes, a piece of fiction about a girl who receives her complete genome sequence for her birthday, also won Imperial's Science Challenge 2008. The essay stood out due to the quality of the writing and because it was "very original and refreshing", according to judge Dr Richard Fortey of the Natural History Museum.

PhD student wins Max Perutz writing award

The Max Perutz science writing prize, awarded by the Medical Research Council, this year recognises Imperial PhD student Rebecca Robey, who was highly commended for her essay *Up close and personal with a herpesvirus*. Rebecca, studying in the Division of Investigative Science, is recognised for showing flair and promise for science writing. The competition is aimed at MRC PhD students with an interest in communicating science to a wider audience.

Chemist elected to Royal Danish Academy

Professor Alexei Kornyshev (Chemistry) has been elected a Foreign Member of the Royal Danish Academy of Science and Letters. Professor Kornyshev is recognised for his outstanding contributions to chemical physics and electrochemistry.

First prize for medic in software awards

Dr Linda Beale (Epidemiology, Public Health and Primary Care) has won first place in the 2008 User Software Applications Fair Awards in the Embedded-GIS category. Dr Beale is recognised for the Rapid Inquiry Facility, an application for disease mapping and risk analysis which enables the spatial relationships between disease and environmental hazards to be evaluated.

Oration honour for Mathias

Professor Christopher Mathias (Neurosciences and Mental Health) has been invited to deliver the first Professor G. Mascarenhas Memorial Oration in Florida by the Rhodes Foundation. He will also be presented with a distinguished award for his international contributions to the field of autonomic and neurovascular medicine.

Racing Green success

Imperial students came third overall in the 2008 Formula Zero Championship—the world's first ever zero-emissions motor race held in the Netherlands last month.

Imperial joined six other university teams from around the world to compete in the championship, using the fuel cell cars they had designed and developed.

Unlike conventional engines, fuel cells produce electricity by reacting hydrogen fuel stored in a pressurised tank with oxygen taken from the air, so water is the only exhaust product.



The race was the culmination of two years' hard work by Imperial students on the Racing Green initiative. Undertaken by the College's Faculty of Engineering, Racing Green gives undergraduates hands-on experience in the design, development and construction of fuel cell vehicles.

Third year mechanical engineering student, Clemens Lorf, the team leader, said: "I am very happy with the results of this race as they underline that our efforts were recognised and awarded at an international level. They also demonstrated that we can build a sustainable future without compromising on the fun factor."

Toby Schulz, driver of the Imperial Racing Green car, who is also a third year student in Mechanical Engineering, said: "We were very unlucky not to finish higher as we were the only go-kart to complete all three rounds in the main event without major problems. Nevertheless, it was a huge success for the team to have the most reliable go-kart at the championship and we are very happy with the outcome."

Imperial Racing Green is also part of the Faculty of Engineering's *EnVision* programme, preparing undergraduates for their future careers.

The College received support for the initiative from EEMS, the Energy Efficient Motorsport programme, which promotes sustainable technologies and fuels in motorsport.

—COLIN SMITH, COMMUNICATIONS

◀ Toby Schulz competing in the Formula Zero Championship in Rotterdam

New Chair announced for NHS London

Sir Richard Sykes has been appointed as the new Chair of NHS London, the Strategic Health Authority accountable for the performance of the National Health Service in the capital.

The former Rector of Imperial and Chair of GlaxoSmithKline will take up his new post on 1 December 2008.

Sir Richard said: "I am delighted to be joining

NHS London as its new Chair. This is a challenging opportunity to support NHS London in delivering high quality healthcare for all Londoners. This means not only developing better front-line services but also maintaining and developing London's reputation as a world class centre for medical excellence and innovation."

Ruth Carnall, Chief Executive of NHS

London, said: "I welcome the appointment of Sir Richard as NHS London's new Chair and am looking forward to working with him on our ambitious programme to improve the quality of London's health services. Sir Richard has an impressive international reputation in business, research and innovation. This will be a huge asset to the NHS in London."

media mentions

—DANIELLE REEVES, COMMUNICATIONS

FINANCIAL TIMES ▶ 31 JULY

Could we put life on Mars?

Sending a human crew to Mars is a slim prospect despite NASA's desire to send one to the Red Planet within the next few decades, according to Professor Steven Schwartz (Physics) in the *Financial Times*. He told the paper that even with political and financial commitment and technical ability, the ambition is one that is likely to remain unfulfilled. "I do not see any way for a human being to make even a one-way trip to Mars, let alone come back again, because radiation levels on the flight would be too high," he said. "It is hard to see how you could protect against it."



DAILY TELEGRAPH ▶ 13 AUGUST

Spooky science in Switzerland

A 'spooky' effect that could in theory connect particles at the opposite ends of the universe may exert its influence more than 10,000 times faster than the speed of light, say researchers in Switzerland, reports the *Daily Telegraph*. Described by Albert Einstein as "spooky action at a distance", the effect underpins quantum teleportation and the next generation of encryption methods and superfast quantum computers too. Dr Terence Rudolph (Physics) told the paper: "Any theory that tries to explain quantum entanglement... will need to be very spooky—spookier, perhaps, than quantum mechanics itself."



DAILY TELEGRAPH ▶ 15 AUGUST

Hydrogen fuel cells could be the future of racing

Imperial students are developing a hydrogen fuel cell racing car for next year's Formula Student contest, reports the *Daily Telegraph*. Formula Student tasks students with designing and building a competitive racing car in just one year for less than £16,000. A hydrogen fuel cell car has yet to appear in the competition; however, PhD student Ralph Clague (Mechanical Engineering) thinks fuel cells could be the future for racing cars. "In the drive for efficiency I have always seen fuel cells and electric motors as good for flexibility and torque, and I think they are appropriate for motorsport," he told the paper.



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BLOOMBERG ▶ 18 AUGUST

Chewing gum can help recover from colon surgery

Patients recovering from colon surgery could be helped by chewing sticks of sugarless gum according to new research, reports *Bloomberg*. Chewing gum stimulates nerves in the digestive system. Researchers found that patients who chewed gum three times a day might be able to leave hospital an estimated one day earlier than those who did not. "The potential cost savings from the reduction of even one postoperative day compared with the cost of several sticks of chewing gum are huge," wrote author Paris Tekkis (SORA).



Imperial College Healthcare **NHS**
NHS Trust

NEWS

Infection-beating technologies

Imperial College Healthcare is one of only seven trusts in the country to test a range of new healthcare associated infection technologies including a vapour decontaminating robot. The Trust will test the effectiveness, practicality and patient experience of six new technologies which have been designed to reduce levels of infection, especially MRSA bloodstream infections and *C. difficile*.

Project manager Anthony Sewell said: "What this means is that we are speeding up the time it takes for proven infection prevention technologies to be introduced into a healthcare setting.

"While our patients will be the first to benefit, the work we are doing will enable hospitals across the country to fight infections like MRSA and *C. diff* more effectively."

Patient safety

The Imperial Centre for Patient Safety and Service Quality (CPSSQ) is celebrating its first 12 months as a centre for research into providing safer healthcare. One of only two such centres in the UK, the CPSSQ brings together a range of disciplines to carry out translational research into how to achieve safer and better quality healthcare. Highlights from the first year of research include an evaluation of an automated, ward-based dispensing system to improve the management of controlled drugs and the development and piloting of a surgical checklist designed to ensure that routine safety practices are reliably completed. Other streams of work are looking at how to reduce hospital associated infections and how NHS organisations can better use information to improve quality.

New European space mission to Mars

Scientists searching for life on Mars are preparing for the most in-depth probe of the red planet ever undertaken.

The European Space Agency's unmanned ExoMars mission will search for evidence that life may exist, investigate the Martian upper atmosphere, and analyse the physical characteristics and properties of the planet's surface and interior.

With a scheduled launch date of 2013, scientists – including three from Imperial – are already developing and testing the instruments and technologies that will be vital to the mission's success.

Professor Mark Sephton (Earth Science and Engineering) is part of the team that will be remotely operating the Pasteur Rover vehicle, a six-wheeled mobile laboratory that will be used to search for organic molecules which may indicate life.

Professor Steve Schwartz (Physics) will be involved in the mission to help determine whether any Martian magnetic field exists or if one was switched off billions of years ago by some geological process. He will also carry out experiments to detect magnetic disturbances driven by the solar wind in Mars's upper atmosphere.

Dr Tom Pike (Electrical and Electronic Engineering) is part of the ExoMars geophysics team that will investigate the interior of Mars. He is constructing a miniature seismometer to track any Marsquakes – Martian earthquakes.

ExoMars is scheduled to launch in November 2013, touching down on Mars in September 2014. Following the landing, the Pasteur Rover will be deployed to search for traces of life and will have a nominal lifetime of 180 sols – Martian days equalling six Earth months.

—COLIN SMITH, COMMUNICATIONS

It takes nerves to fly straight



The nerve connections that keep a fly's gaze stable during complex aerial manoeuvres are revealed in research published in the journal *PLoS Biology*, in July. Imperial scientists have described the connections between two key sets of nerve cells in a fly's brain that help it process what it sees and fast-track that information to its muscles. This helps it stay agile and respond quickly to its environment while on the move.

Lead researcher Dr Holger Krapp (Bioengineering) says: "Keeping the head level and gaze steady is a fundamental

task for all animals that rely on vision to help control their movements. Understanding the underlying principles in simple model systems like flies could give us useful leads on how more complex creatures achieve similar tasks."

The new research shows that the way in which two populations of nerve cells, or neurons, communicate with each other is key. The lobula plate tangential cells receive input from the eyes, generating small electrical signals that inform the

fly about how it is turning and moving during its aerial stunts. The signals pass onto a second set of neurons that connect to the neck muscles and stabilise the fly's head and thus its line of sight.

The study is an important step towards understanding how nervous systems operate. It could also be used to improve technical control systems in autonomous air vehicles – robots that stay stable in the air without crashing and with no need for remote control.

—COLIN SMITH, COMMUNICATIONS

"Understanding the underlying principles in simple model systems like flies could give us useful leads on how more complex creatures achieve similar tasks."

Unlocking the secrets of cosmic dust

The origin of microscopic meteorites that make up cosmic dust found on Earth, has been revealed for the first time.

The research, published in the journal *Geology* on 1 September, shows that some of the cosmic dust falling to Earth comes from an ancient asteroid belt between Jupiter and Mars.

The study's author, Dr Mathew Genge (Earth Science and Engineering) has trekked across the globe collecting cosmic dust. He says: "There are hundreds of billions of extraterrestrial dust particles falling through our skies. This abundant resource is important since these tiny pieces of rock allow us to study distant objects in our solar system without the multi-billion dollar price tag of expensive missions."

Cosmic dust particles, originally from asteroids and comets, are minute pieces of pulverised rock measuring up to a tenth of a millimetre in size. Their mineral content records the conditions under which asteroids and comets were formed over four and a half billion years ago, and provides an insight into the earliest history of our solar system.

To pinpoint the cosmic dust's origin, Dr Genge analysed more than 600 particles, painstakingly cataloguing their chemical and

mineral content, and reassembled them like a complex jigsaw.

He says: "The answer to so many important questions, such as why we are here and are we alone in the universe, may well lie inside a cosmic dust

particle. Since they are everywhere, even inside our homes, we don't necessarily have to blast off the Earth to find those answers."

—COLIN SMITH, COMMUNICATIONS





New treatment for hepatitis C

The drug warfarin may help prevent liver failure in thousands of people with hepatitis C, according to new research.

In a study published in the *Journal of Thrombosis and Haemostasis*, Imperial researchers showed that warfarin reduces the scarring on the liver caused by hepatitis C. This scarring, or fibrosis, replaces normal liver cells and can lead to cirrhosis of the liver and ultimately liver failure.

Following the new findings in mouse models, the research team is embarking on a clinical trial of warfarin as a treatment for people with hepatitis C, funded by the Medical Research Council. The two-year trial, involving 90 patients who have undergone a liver transplant as a result of liver failure caused by hepatitis C, will take place across five centres including Imperial College Healthcare NHS Trust.

"At the moment, there are a great many people with hepatitis C who have no treatment options left and it would transform their lives if we could prevent them from developing liver failure."

An estimated 300,000 people in the UK have chronic hepatitis C and around one in five of these will develop cirrhosis. Treatment to clear the infection is currently effective in only around 50 per cent of patients and can have very unpleasant side effects.

Professor Mark Thursz (Medicine), one of the study's authors, comments: "At the moment, there are a great many people with hepatitis C who have no treatment options left, and it would transform their lives if we could prevent them from developing liver failure. We are looking forward to seeing the results of our upcoming trials in humans now that we've had such promising results in the trial in mice."

—LAURA GALLAGHER, COMMUNICATIONS

Maths model reveals nutrients and biodiversity links

The level of nutrients in soil determines how many different kinds of plants and trees can thrive in an ecosystem, according to new research published in *Nature* on 10 September.

For the first time, mathematicians have modelled all the different possible relationships between nutrients and biodiversity in lab-based experimental ecosystems. They found that although nutrient availability definitely has an impact on biodiversity, their relationship depends on which species are present in the ecosystem.

The study involved biologists from the University of California Santa Cruz running a lab experiment to find out how different levels of nutrients affected how many species evolved in an ecosystem. Mathematicians from Imperial and the University of Bath then devised a model to show how far the results could be applied to real world scenarios.

Dr Rob Beardmore (Mathematics) commented: "Our mathematical model showed that in some ecosystems you will find that higher levels of nutrients lead to more biodiversity, which is opposite to what our biologist colleagues found in the lab. It turns out that the precise nature of this nutrient–diversity relationship varies from one ecosystem to another, and it depends on the complex interactions between species evolving alongside each other."

The study's aim was to shed new light on why some ecosystems, such as tropical rainforests, are teeming with thousands of different plant species, in contrast to others like the pine forests of northern Europe. The results are very important for scientists using small-scale lab experiments to investigate phenomena in the real world.

—DANIELLE REEVES, COMMUNICATIONS



Salmonella in salad leaves—it's not rocket science

How *Salmonella* bacteria can cause food poisoning by attaching to salad leaves was revealed in research presented at the Food Micro 2008 conference in Aberdeen on 3 September.

The research, led by Professor Gadi Frankel (Life Sciences) in conjunction with the University of Birmingham, has uncovered the mechanism used by one particular form of *Salmonella* called *Salmonella enterica* serovar Senftenberg, to infect salad leaves.

The study shows how some *Salmonella* bacteria use the long stringy appendages (or flagella) they normally use to 'swim' and move about to attach themselves to salad leaves and other vegetables, causing contamination and a health risk.

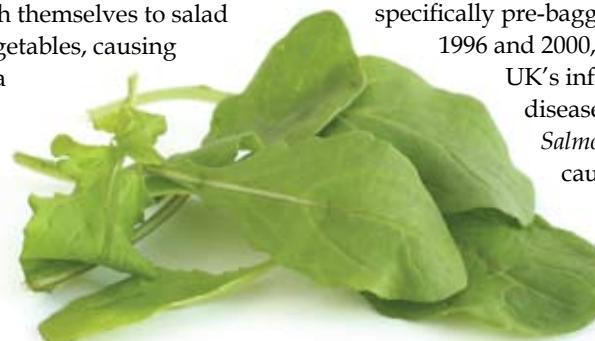
Professor Frankel says: "Discovering that the flagella play a key role in *Salmonella*'s ability to contaminate

salad leaves gives us a better understanding than ever before of how this contamination process occurs. Once we understand it, we can begin to work on ways of fighting it."

Food poisoning from *Salmonella* and *E. coli* is commonly associated with eating contaminated bovine or chicken products, as the pathogens live in the guts of cows and the guts and egg-ducts of chickens, and contamination of meat can occur during the slaughtering process.

However, some recent outbreaks of food poisoning have been associated with contaminated salad or vegetable products, specifically pre-bagged salads. Between 1996 and 2000, 23 per cent of the UK's infectious intestinal disease outbreaks like *Salmonella* and *E. coli* were caused by contaminated food, and of these 4 per cent were linked to prepared salad.

—DANIELLE REEVES, COMMUNICATIONS



Summer school stars

Towers of jelly babies, robots speeding around and sparks flying from colourful fireworks—it's just a typical week at Imperial's summer schools!

This summer, while many of us were taking our annual leave, the Outreach Office was busy hosting 30 summer schools at Imperial for 3,500 young people. The office works in partnership with Exscitec, an organisation founded in 2000 to provide and promote outreach activities involving science, technology, engineering and mathematics.

On offer to pupils were a range of schools, from maths, robotics and space science camps to courses specifically geared towards female scientists. The main aim of the schools was to get pupils excited about science, to give them a taster of university life and encourage them to consider higher education.

Activities run during the schools included lectures, lab work, competitions and presentations and many academic staff gave up their time to come and teach. Dr Jodie Kirk, Scientific Projects Manager in the Outreach Office, completed her PhD in the Department of Chemistry and has been working in Outreach since 2005. She says: "We couldn't provide as many opportunities as we do without the support of departments—the academics bring a level of professionalism to the programme. It is also nice to give students an insight into exciting and cutting edge research."

**"Miss! I'm loving this!
I'm dancing and I'm
doing engineering at
the same time!"**

Challenges

Many of the schools involved in Imperial's summer schools are located in disadvantaged areas so there is always a real mix of pupils, from aspiring scientists to those with little previous interest in science. Some also struggle with English and need lots of guidance. Jodie taught many of the chemistry sessions throughout the summer. She says: "Personally I find the challenging characters really interesting. What's great is that we see a very different side to them as they have been taken out of their normal environment."

Jodie explains that many of the school children have never been in a university or conducted any practical experiments. She says: "They get really excited about being in a lab environment as everything is so different from school. But at the same time they tend to be a bit nervous about handling equipment. It's great as over the week you can see them gain confidence in their abilities both academically and socially. All these new experiences can really help break down barriers."

- ★ **3,500 young people**
- ★ **30 summer schools**
- ★ **60 mentors**
- ★ **63 academics**

Mentors

In addition to the involvement of academics, there were also 60 undergraduate mentors who stayed in the halls of residence with the school pupils and were there to provide them with an insight into university life. Jodie says: "The mentors are great role models for the students—it is demanding—but they really do a fantastic job."

The mentors were also responsible for organising activities to keep the school children entertained in the evenings. One popular activity is to split the students into groups and give them lots of tape and sheets of green plastic. The aim was to build a structure that was inflated by an industrial air blower and fit everyone in the group inside for a minimum of 10 seconds. These activities were accompanied by lots of



"I HAVE HAD SUCH A WONDERFUL TIME AND GAINED SO MUCH FROM THE EXPERIENCE" EMMA FINDLAY, WISE SUMMER SCHOOL





"THE MENTORS HAVE BEEN REALLY HELPFUL AND HAVE GIVEN US LOADS OF USEFUL TIPS. I WOULD DEFINITELY COME BACK NEXT YEAR."

music to keep the students motivated. Jodie remembers how one of the students came dancing up to her saying: "Miss! I'm loving this! I'm dancing and I'm doing engineering at the same time!"

The end

On the final day of the course, all the groups did presentations about their work and family members were invited to come and find out what their children had been up to. Jodie says: "Watching the presentations really is brilliant. You'll see an 11-year-old who wouldn't say boo to a goose at the beginning of the week speaking about scientific concepts, such as chemiluminescence, in their second language!"

The piles of thank you cards Outreach have received are just a small indication of the impact summer schools have already made. Jodie comments: "We've had an incredible response to our courses. The most remarkable transformation was one girl who started the week off saying she hates chemistry and ending it by announcing she wants to do a chemistry degree—that's what makes the experience so important and worthwhile."

—EMILY ROSS AND NAOMI WESTON, COMMUNICATIONS



Korean Science Academy students come to Imperial

In July, four Korean Science Academy students left their home town of Busan, Korea, to come to Imperial for four weeks to learn from academics, researchers and PhD students. The aim was to give the 18-year-olds an insight into university life in the UK and help them to gain scientific knowledge and improve their research skills.

The Korean Science Academy is one of Korea's top science specialist schools, fully funded by the Korean government, which takes students who have "outstanding abilities and potential in maths and the sciences". Normally only the top 4-5 per cent of students who apply attend this school, and it is one of the few Korean high schools to teach their courses in English.

This is Imperial's fourth year hosting students from the academy, and on this occasion two students were placed within the Department of Bioengineering with Patrick Degenaar (pictured) and his team, while the other two students were placed within the Department of Chemistry with Tom Welton and Alan Spivey's team.

The students loved their stay at Imperial and not only acquired valuable scientific knowledge, but also learnt the importance of working within a lab team and understanding how higher education works within the UK.

—JEN MARTIN, INTERNATIONAL OFFICE

If you are interested in hosting a student from the Korean Science Academy or from other top institutions next July, the International Office would love to hear from you – email: j.martin@imperial.ac.uk

Focus on: MedEx

On 14 July, 20 students entering their final year at school arrived at Imperial to get a week-long taster of life as a medical student. The non-residential course, called MedEx, was a collaboration between academics from the Faculty of Medicine, the Outreach Office, clinicians, students, the Brightside Trust and pharmaceutical company AstraZeneca. It was designed to give potential medical students who had no contacts within the medical profession some hands-on experience which they could put on their UCAS form to aid their applications to medical school.

The timetable for the course, designed by the School of Medicine, featured lectures from academics including Robert Winston, who spoke about what it is like to be a doctor and study medicine. The 16-17-year-olds got to work in groups on different case studies and present their findings to a panel of experts. Four medical students acted as mentors throughout the week guiding the young people around the College and the hospitals and telling them more about life at Imperial.

Each student was also given the opportunity to spend a day shadowing the work of Dr Beryl De Souza, a plastic surgery registrar in the Plastics Department at Chelsea and Westminster Hospital. Dr De Souza coordinated all the visits, which took place throughout August, and introduced the students to her colleagues within the Department, giving them a full experience of a day in the life of a medical professional.

Amisha Patel, one of the students who attended the course, said: "The whole experience gave me a better understanding of medicine as a career as well as at university. It motivated me and encouraged my interest in medicine and I learnt a lot from the lectures, the activities and the mentors."

—DR ANNALISA ALEXANDER, OUTREACH, AND DR SUE SMITH, MEDICINE

Students taking part in a cardiovascular practical in one of the multidisciplinary labs in South Kensington.



The cutting edge of allergy

Next month Imperial will launch the UK's first e-learning MSc in Allergy.

Course director, immunologist Dr Jill Warner (Medicine), explains why the course is so important: "There is a real shortage of allergy specialists, so the aim of the course is to get healthcare professionals, such as nurses, dieticians, GPs and hospital doctors, to gain a detailed understanding of the immunological mechanisms as well as the management and treatment of allergic disease."

Rebecca Elder, Paediatric Allergy Clinical Nurse Specialist at King's College Hospital NHS Foundation Trust, is one of the course's new recruits. She explains why she chose the course: "Allergy can often be misdiagnosed and improperly managed, and this course will guarantee that clinicians gain rigorous academic training to ensure gold standards of care are met."

The format

The course is modular, and students have one week of College-based teaching per module during which they'll learn diagnostic

testing methods and will attend practical sessions at one of Imperial's hospitals. The face-to-face teaching will be followed by blocks of e-learning activities which can be accessed via the web.

Another student on the course is Claire Ang, a consultant in paediatrics at the University Hospital of North Durham. She comments: "I am not bound by geography and can access e-learning anytime and anywhere."

E-learning

The web-based part of the course will feature online tutorials, videos, a medical library and a discussion forum. Students will also be able to work with virtual patients and see if they can ease their symptoms.

The e-learning structure has also attracted a high number of international students from countries including Israel and Greece.

Certification

At the end of the first year of the course, students will decide whether to take the postgraduate Certificate of Advanced Study in Allergy or to continue for another one or two years to complete the MSc.

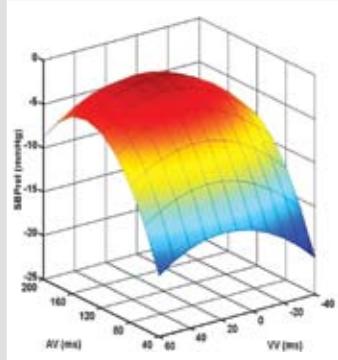
 For more information visit: www.imperial.ac.uk/medicine/teaching/postgraduate/taughtcourses/allergyprogramme

inventors corner

Making the heart pump efficiently

Dr Darrel Francis is working with a leading medical technology company to develop life-improving cardiac pacemakers. Dr Francis is a Clinical Senior Lecturer and Researcher at the National Heart and Lung Institute and a Cardiology Consultant at Imperial College Healthcare NHS Trust. Inspired by his contact with cardiac patients, his research ideas consider how their conditions could be better diagnosed and treated.

Three-dimensional map showing how efficiently the heart pumps



Some of Dr Francis' early discoveries were new methods to improve the efficiency of cardiac pacemakers, which take over the role of the heart's natural pacemaker if the heart is beating at an irregular pace. He and Dr Zachary Whinnett, together with colleagues from other NHS Trusts, carried out a five-year research program to determine the best settings for making the heart pump efficiently. Now Medtronic Inc, the world's largest cardiac device company, is supporting the development of this technology.

Dr Francis explained: "I was encouraged that a multi-billion dollar company was offering us support. They have funded research to determine whether it would be successful and for them ultimately to decide whether to license it. Initial results are positive."

Dr Francis is also developing a method to stabilise breathing in patients who suffer from sleep apnoea, a condition which causes interruptions to breathing during

sleep. His invention can be integrated into a pacemaker, helping cardiac patients who already need to be fitted with the device and also suffer from sleep apnoea.

Dr Francis recognised that a pacemaker could be designed just to stabilise breathing as well, which will provide a solution for patients that only suffer from sleep apnoea but don't have any heart problems. "I have learnt how to think laterally," he said. "When I think of a concept, I now think about whether it can be applied to more than one condition."

Talking about the future of his translational research, Dr Francis said: "I hope that I carry on discovering things that can become immediate new technologies for the diagnosis and treatment of heart disease."

—MICHELLE COTTERILL,
IMPERIAL INNOVATIONS

► For further information please visit: www.imperialinnovations.co.uk

science

from scratch



Polymer

"Swedish Scientist Jöns Jakob Berzelius used the term 'polymer' for the first time in 1833 to describe materials which are made of many similar units.

The word was derived from the Greek words 'poly' meaning 'many' and 'meros' meaning 'part'. Polymers are found in nature in many forms such as tortoise shell, horn, amber, latex, DNA and proteins.

Polymerisation can be demonstrated by linking strips of paper together to make paper garlands or hooking together hundreds of paper clips to form chains.

Since 1800 natural polymers have been chemically modified to produce many useful materials with desirable properties. In 1844 an American inventor, Charles Goodyear, accidentally modified natural rubber by dropping it on a hot plate with sulphur powder. This process was later termed the 'vulcanisation' of rubber. Vulcanised rubber is still used today in making tyres for motor vehicles. Polymers are widely used for making clothes, furniture, explosives, bullet-proof shields, durable or disposable goods, and so on.

All living organisms are, in fact, made of many types of polymers."

—DR ARUN ARORA (ENGINEERING)

Unlocking the mystery of Lowe

Reporter finds out about Imperial's innovative research into the genetic condition Lowe syndrome

Dr Rudiger Woscholski (Cell and Molecular Biology) and Dr Ramon Vilar (Chemistry) have been conducting research on Lowe syndrome since 2003 when they received £50,000 of funding from the Lowe Syndrome Trust for a three-year chemistry PhD geared towards developing a reliable tool for diagnosing the syndrome.

Lowe syndrome is a rare genetic condition found only in boys, which can produce cataracts in the eyes, defects in brain development and kidney problems and as a result can lead to short life expectancy.

The syndrome was first recognised in 1952 by Charles Lowe and is caused by a gene mutation which makes a defective version of an enzyme named OCRL1. This enzyme removes phosphates from a signalling lipid called PIP2, which seems to be responsible for normal function of tissues, particularly in the lens, brain and kidney.

Having a defective OCRL1 enzyme (which is known as a phosphatase) means that carriers experience elevated levels of PIP2, which is known to interact with proteins determining cell shape as well as intracellular transport and uptake mechanisms. It is not clear how the elevated PIP2 levels can bring about the symptoms observed in Lowe syndrome and neither is there a formal treatment route available.

Raising awareness

The Lowe Syndrome Trust was set up eight years ago by Lorraine Thomas when her son Oscar was first diagnosed with the disease. She explains: "At the time I met with various government officials who confirmed there was no UK research and no official statistics. It has been an uphill struggle raising awareness but today the Trust is the main charity in the world funding research into the disease and we have lots of supportive patrons, including former Rector Sir Richard Sykes."

Dr Woscholski explains what sparked his interest in the syndrome: "As a scientist my specialism is lipid phosphatases – so having the opportunity to study the role of PIP2 in more detail is incredibly interesting. And speaking as a parent, I think the project is incredibly worthwhile – there are so many unknowns for our children and I am lucky to be in a position to try and help by looking at one of them."

Developing a diagnostic tool

Dr Woscholski and Dr Vilar worked to develop a chemical, which could form the template for future diagnostic tools or ultimately drugs. It was envisaged that the former could be used to develop a method for the detection of elevated PIP2 levels in patients.

In 2006 when the funding for the PhD had come to an end and a couple of promising chemicals were produced, the Lowe Syndrome Trust gave Imperial a six-month extension for the project so they could take it a step further and test their biological potential. In addition, the Chemical Biology Centre at the College awarded an £87,000 grant to the research team to continue their work on the chemistry side.

The new funding allowed Evelyn Rosivatz, a pharmacologist in the Division of Cell and Molecular Biology, to be brought onto the project to test the chemicals on cells. The idea was to see if the chemicals Dr Woscholski and Dr Vilar had developed would behave in the same way as they did during the chemical tests.

Dr Woscholski describes what happened over the next six months: "Evelyn discovered that the chemical we had developed does bind PIP2 in the cells and thus reduce their levels. These encouraging results imply that the first steps towards a cure have been taken."

Next stage

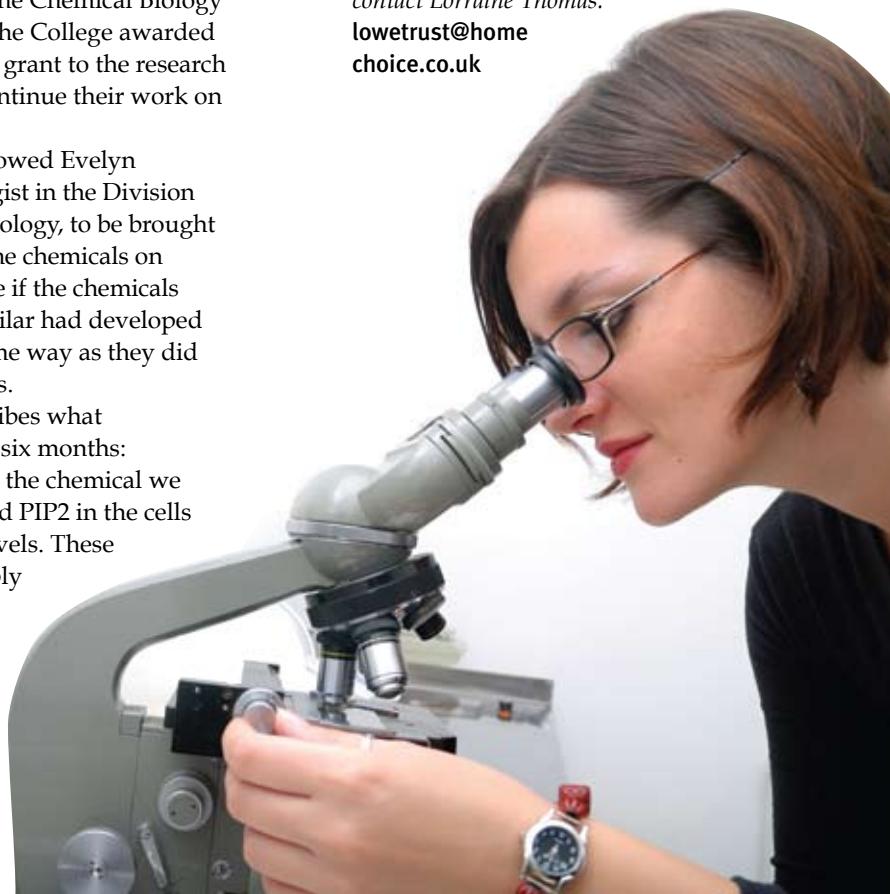
This term the Lowe Syndrome Trust has provided a third grant for Evelyn to conduct a biology PhD over the next three years. Dr Woscholski says: "Evelyn will look at how PIP2 is affecting cellular behaviour employing the chemicals obtained in live cells. The aim is to explain the PIP2 dependent pathways that are governing the development of Lowe syndrome."

The work the scientists are doing is giving hope to families who have children with Lowe syndrome. As Lorraine Thomas explains: "We are excited about the work at Imperial as it may produce a drug to emulate the missing enzyme. I am not sure whether any of our projects will ever help our son Oscar

because of the length of time each project will take but I live in hope, and if I can double the amount raised then we can fund more vital research."

— EMILY ROSS, COMMUNICATIONS

 Applications for a new £80,000 Lowe Studentship grant are open until 30 September. For more details please contact Lorraine Thomas: lowetrust@homechoice.co.uk



vox pop

What are your main priorities for the upcoming year?



"Publicise the Union as not just a place to eat, drink and dance. Promote a better relationship between students and staff. And, of course, to cover the Union building with fluorescent pink and the insides with lime green... oh wait, that's already been done to the RSM building hasn't it?"

—JENNY MORGAN, IMPERIAL COLLEGE UNION PRESIDENT

Catering success



On 15 June, 15 Supervisors from Catering and Conferences passed their NVQ Supervisory course in Hospitality – a programme devised to develop key front-of-house supervisory and leadership skills.

Silwood honey

One of Silwood Park's best kept secrets are the bees kept on campus by John Mumford and Jon Knight (pictured left to right) from the Centre for Environmental Policy.

Jon Knight says: "Bee keeping has quite a long history at Silwood, with members of the Biology Department keeping them in the 1970s, and at least one hive has been present since then. There are currently 10 hives in the grounds and one observation hive in John Mumford's office which is safely isolated and poses no threat to residents or visitors."

"The bees keep themselves clean but we do tidy up the hives in the spring and autumn and feed the bees, to get them going in the spring and to see them through the winter. We normally harvest the honey in the early autumn and sell it to staff and students on the site – however, there hasn't been much of a harvest this year because of the poor summer. The proceeds help to pay for the cost of maintaining the hives and bees throughout the year. Both John and I are entomologists by training, but the bee keeping is just a hobby. I find it very relaxing to watch the bees and fascinating seeing their interactions and organisation."

—DR JON KNIGHT, NATURAL SCIENCES



crossculture

Cross Culture is an empty scrapbook for staff and students to fill with their local recipes, cultural traditions and experiences of moving from another part of the world to work or study at Imperial.



Spicy cauliflower, potato and pea curry
by Leena Barrett
(Sport Imperial)

"This dish, originating from Gujarat in Western India, is a favourite of mine and can be eaten as either a main course or as a vegetarian side dish for meat mains. It can be made at any time of the year but is particularly warming on a cold winter's night.

This is my mum's take on this Gujarati classic – it's very easy to make, nutritious and healthy and definitely won't break the bank!"

To contribute to cross culture please send your ideas to reporter@imperial.ac.uk

Preparation time: 10 minutes

Cooking time: 25 minutes

Serves: 4 as a main course and more as a side dish

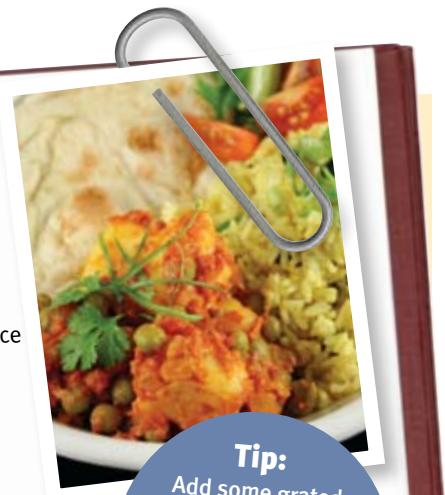
Ingredients:

1 tbsp cumin seeds
2 tbsp sunflower oil
1 medium onion finely chopped
2–3 large potatoes peeled and cubed
1 large cauliflower cut into florets
A mug of frozen peas
3/4 tsp turmeric
1 tsp red chilli powder
3 tsp ground cumin and coriander
1/2 tsp garam masala
1 tsp of fresh lemon juice
1/2 tsp sugar
3 medium tomatoes finely chopped or about 1/3 of a tin of chopped tomatoes
Salt to taste
Handful of chopped coriander to garnish

Method:

- Heat a large lidded pan with the oil on a medium heat. When the oil is hot, add the cumin seeds and cover with the lid.
- When the cumin seeds have browned a little, add the chopped onion and fry gently for a few minutes and then tip in the cauliflower, potatoes and peas and give it all a stir.
- Add the chilli, turmeric, cumin and coriander, garam masala and salt to the vegetables and give everything a stir. Add a cupful of water to the pan and cover with the lid. Allow to simmer for 15 minutes, stirring occasionally. Keep adding water throughout if it gets absorbed – the more water you add the saucier the dish will be in the end.
- When the vegetables are tender but not quite cooked through, add the tomatoes, sugar and lemon juice, stir through, cover and simmer again for about 5 minutes or until the vegetables are cooked through.

Garnish with coriander and serve with plain basmati rice, naan and natural yoghurt.



Tip:

Add some grated cucumber, lemon juice, and salt if required, to the yoghurt for a quick, easy raita.



Students enjoy a sociable read in the members-only library in Beit

Science Fiction

As a genre, science fiction has had its fair share of bad press, aided by comic sketches about sci-fi fans dressed like Spock from *Star Trek* and speaking Klingon—the language of *Star Trek* aliens. But Dr Dave Clements, an astrophysicist from the Department of Physics who has been involved with the Imperial College Science Fiction Society (ICSF) since he was a student, is keen to explain why the stereotypes just aren't true. He says: "People who read science fiction come from all walks of life and professions—they tend to have a

curious nature and an enthusiasm for science."

ICSF was founded in 1977 and at that time members gathered around a cupboard full of books on the top floor of Beit Quad to discuss their favourite authors and swap books. Today the society's resources have expanded thanks to book donations from professors and *Dr Who* author Paul Cornell, and now the ICSF boasts a members-only

"The best thing about science fiction is that it gives emotional weight to the science I do."

library in the west wing basement of Beit offering 9,000 items for loan, including books, videos, DVDs and CDs. The society also holds an annual science fiction convention known as *Picocon*, where

celebrated authors such as Terry Pratchett and Iain Banks have given talks.

Dr Clements is passionate about the club and explains why it makes sense for scientists to delve into

the genre. He says: "The best thing about science fiction is that it gives emotional weight to the science I do. Science fiction forces its readers to really question subjects such as the nature of the universe in a way in which mainstream literature simply does not."

—EMILY ROSS, COMMUNICATIONS

Number of members 90
ICSF library open 12.00–14.00 term-time only
Website www.icsf.org.uk

And they're off...

On 4 June, a team of eight staff from the Department of Primary Care and Social Medicine took part in the British Heart Foundation's Hearts First Jog, which was held at Canary Wharf. The team, made up of Ruthie Birger, Ashly Black, Tom Durley, Shamina Gnani, Stephen Platt, Chris Millett, Sylvia Westrup and Alexandra Williams, took part to raise money for the Heart Disease charity.

Alexandra Williams, Administrative Assistant, says: "I'm glad to confirm that all participants survived the event and indicated that they were very keen to participate in next year's jog! The team managed to raise a whopping £1,104 which is not bad given that most of the team had only two weeks or less to train and raise the money!"



The team would like to thank the Department of Primary Care and Social Medicine and everyone else who supported the event.

Uniform to work day

On 16 July, Rory Goodbury and Ian Hackford from the Faculty of Medicine came to work dressed in their Territorial Army (TA) uniforms to celebrate 100 years of the TA. Rory, a Second Lieutenant at the Royal Yeomanry based in Putney, describes his experience: "I was a bit apprehensive about arriving at work dressed in a uniform, but I was given lots of encouragement by members of the public. At work it was a real conversation starter and it was great to be able to let people know what the TA does."

—EMILY ROSS, COMMUNICATIONS



Biking heroes

Aided by bicycles bought through Imperial's 'Cycle To Work' scheme, this July Neil Mosley and Grant Danskin from Sport Imperial completed a gruelling 500 mile cycle from London to Paris and raised £6,000 for the charity Action Medical Research.

Grant recalls the journey: "Even though it was boiling hot and the hills made the route really tough it was absolutely amazing. We were cycling past cornfields and the scenery in the backstreets was unbelievable."

Neil continues: "When we finally arrived in Paris all the participants cycled *en masse* to the Arc de Triomphe, it was quite emotional—we thought the race would kill us but it was a fab experience."

—EMILY ROSS, COMMUNICATIONS

► To make a donation visit: www.action.org.uk/~njmosley

celebrating long service



50 years



Professor Nicholas Ambroseys, Senior Research Investigator (Civil and Environmental Engineering)

Emeritus Professor Nicholas Ambroseys started at Imperial in September 1955 as a researcher in the Department of Civil Engineering, specialising in seismology—the scientific study of earthquakes. He describes the College in the 1950s: “It was a time of little paperwork where everyone had a secretary and where we’d discuss problems in the lab over coffee at the SCR; it was a big family really.”

In 1963 Dr Ambroseys spent a year working in the University of Illinois but he returned to the College

as he preferred Imperial’s style of teaching. He says: “This is one of the only institutions I know which allows students to sip knowledge through a straw and really gives them time to absorb and work with what they have learnt before giving them more information.”

One of Professor Ambroseys’s favourite aspects of his job is getting to see his research used around the world. In 1967 he worked with Professor Alec Skempton to create the Mangla Dam in Pakistan—something he is particularly proud of. He went on to work with the United Nations on projects that included helping local people in Saudi Arabia to produce earthquake-resistant building designs in 1983. He sits on a number of high profile boards and was a member of the Channel Tunnel Safety Authority until 1989.

Consultancy aside, he really enjoys working as a mentor for his students. He says: “It’s great being a catalyst and working out how to help students progress. After being here for so long you begin to recognise patterns of behaviour and can use your experience of helping one student 10 years ago to help a student with a similar problem today.”

While the College has changed around him, Professor Ambroseys explains what has kept him here for a monumental 50 years: “Because I’m surrounded by friends who always give me fantastic advice.”

Obituaries

Brian Murphy • Brian Murphy, who passed away in May 2008, joined Imperial in 1975 in the Estates Department.

His knowledge of the different faculties and the student accommodation was an invaluable resource and he was always on top of all the developments as the campus began to modernise. In 1987 Brian moved to work in security in the car park and then onto the Department of Electrical Engineering where he took a keen interest in new technology.

Another of Brian’s passions was fishing and he would often join his colleagues on fishing trips.

In addition to his main job, Brian was the College’s branch secretary for the trade union NUPE (today Unison) and was committed to supporting fair pay.

Brian was well-liked in the College and spent the majority of his working life at South Kensington. He will be greatly missed by his friends, colleagues and his partner, Nellie.

Obituaries



Gabrielle Sinnadurai •

Gabrielle Sinnadurai, Head of Teaching Associates within the Department of Computing, died on 23 May 2008. She first came to Imperial in 1993 to study the MSc in Advanced Computing and then completed a PhD supervised by Chris Hankin in 1998. She went on to work as a Research Associate for

Susan Eisenbach and Sophia Drossopoulou, and became a Teaching Associate in 1999.

Paying tribute, colleagues from her department said: “Gabrielle had many strengths and virtues. She was exceedingly caring, as well as being technically very competent and administratively creative. She took on a wide variety of responsibilities, which ranged from teaching Logic, and designing and running laboratory exercises and projects, to managing all the Teaching Associates.

“Although teaching lecture courses is not normally part of a Teaching Associate’s job, Gabrielle wanted to teach. Typical of her professionalism, she first gained the College’s Certificate of Advanced Study in Learning and Teaching. She taught Logic to joint mathematics and computing students, and worked on producing novel tools to support first year courses. These students whom she taught in their first year regularly returned to ask her advice on their future directions. Gabrielle will be greatly missed by her colleagues, friends and students.”

Ian Wright • Ian Wright, who was a member of Research Services, died on 15 June 2008. Ian had been an Imperial employee for over 10 years, working for periods in the Cash Office and in the SORA Division, Faculty of Medicine.



Explaining Ian’s role, former colleague, Mike Robinson, said: “During the last four years, Ian’s work on special projects in Research Services meant that he was responsible for resolving issues arising from many historical research accounts across all the faculties, and was also involved in recovering a large sum of money from several research funders where invoices were in dispute. Most recently he had been working in the newly established EU specialist unit based at St Mary’s which has brought all European Commission accounts under one administrative team.”

Paying tribute to Ian, Mike added: “He was an energetic and extremely helpful individual, who would always make time for others. He was keen to participate in social work events and was always happy to lend a hand when needed. Outside of work, Ian was very active and for many years competed and then coached at the local rowing club in Kent. A charming man, ever the gentleman, he leaves a big hole in Research Services.” Ian leaves a wife, daughter and son, and will be sorely missed.

letters to the editor

Dear Editor,

I thought I would drop you a line about *Reporter*. I particularly enjoyed the article on our new Rector, who was the head of the Biology Department when I first came to Silwood Park in 1988. I think the 'human interest' touches were quite revealing – how about similar profiles of other senior people in the College?

Also, what about focusing on other campuses? I feel that we know a good deal about South Kensington but what about some of the medical campuses?

The Centenary year focused on the strengths and diversity of the College and brought everyone together, from all the different campuses, in celebration. Let's expand on that commitment and build a sense of community.

Regards,
Diana Anderson,
Silwood Park Campus Administrator (Biology)

Editor: Would you also like to see *Reporter* cover more news from your campus? I'm keen to include anything which is important to you, whether it's a refurbishment, a football game or a charity activity. All ideas are welcome – you can email me at: reporter@imperial.ac.uk

As well as your opportunity to comment on *Reporter*, this new section for letters is your space to give your opinions on any science story or College matter which has captured your attention. If your letter is featured in *Reporter* you will win a cup of coffee and a sizeable piece of cake, courtesy of Catering Services.



Please note the editor reserves the right to edit the content for clarity and space.

Welcome new starters

Dr Georges Adamopoulos, Physics
Mr Oliver Alexy, Business School
Dr Emmanouil Antonogiannakis, Cell and Molecular Biology
Dr Marco Apollonio, Physics
Mr Simon Atkinson, Humanities
Dr James Babington, Physics
Dr Elif Bascavusoglu-Moreau, Business School
Dr Nikoloz Bezhaniashvili, Computing
Dr Raymond Bourne, Humanities
Dr Hugh Brady, Cell & Molecular Biology
Dr Elaine Burns, SORA
Mrs Ela Carter, Occupational Health Service
Mr Sankalp Chaturvedi, Business School
Mr Julien Chevallier, Climate Change Institute
Ms Heather Chisholm, ICT
Mr Christopher Coey, Humanities
Ms Heather Combe, Cell and Molecular Biology
Ms Rebecca Corrigan, Investigative Science
Dr Jun Cui, Physics

Professor Marinos Dalakas, NMH
Miss Naomi Desautels, Sport and Leisure Services
Mr Frederick Diacon, Business School
Dr Suresh Doravari, Physics
Mr Samuel Franzen, Investigative Science
Miss Hime Gashaw, NHLI
Ms Tian Geng, Molecular Biosciences
Dr Cristina Gentilini, Materials
Mr Adam Gilbertson, Physics
Dr Haticce Gunes, Computing
Mr Lee Horsburgh, Estates
Ms Siobhan Hughes, SORA
Miss Louise Hull, SORA
Mr Arthur Jamshidi, EEE
Dr Magdalena Jarosz, Chemistry
Dr Mohamed Jaward, EEE
Mr Benjamin Jefferys, Molecular Biosciences
Dr Carla Jones da Silva, NHLI
Mrs Eva Kassab, SORA
Mr Nicholas Kay, Health and Safety Services
Mrs Azadeh Kia Kojouri, Medicine
Dr David Kidd, Biology
Dr Anton Krutskikh, SORA
Dr David Lara, Physics
Dr Robert Leech, NMH

Ms Sanelia Lukanovic, Business School
Mr Hisham Maarki, EEE
Dr Boris Maciejovsky, Business School
Dr Mahlatse Makgoba, SORA
Dr Gerasimos Marinakis, SORA
Mr Ciaran McDonald, Humanities
Ms Ann McGuigan, Finance
Mr Tamas Miklai, Estates
Miss Jenny Miller, Business School
Dr Iona Millwood, EPHPC
Mr Farrukh Mirza, ICT
Dr Danilo Miskovic, SORA
Miss Frances Nicholas, Student Residences
Mr Paul Noke, Student Residences
Dr Matt Nunes, EPHPC
Miss Constance Nyamukapa, EPHPC
Miss Emilia Ordzieniewicz, Student Residences
Mr Kareem Osman, Physics
Dr Filippis Papakonstantinou, Business School
Dr Markus Perkmann, Business School
Dr Maria Picouto Gonzalez, NMH
Dr Jonathan Pinto, Business School
Mrs Ania Plank, Humanities
Dr Karen Polizzi, Molecular Biosciences
Dr Karel Pravda-Starov, Mathematics
Mr Linash Puthenpurayil Kunjumuhammed, EEE
Mr Darryl Readings, Catering Services
Ms Meritxell Rosell Mane, SORA
Professor Anatoly Ruban, Mathematics
Mr Nabeil Salama, Biology
Mr Christopher Shuttle, Chemistry
Dr Neema Sofaer, Clinical Sciences
Professor Stuart Solin, Physics
Ms Clare Stephens, Sport and Leisure Services
Miss Emily Stock, Security Services
Mr Michael Swan, Student Residences
Mr Peter Szpur, Estates
Dr Anne Taegtmeyer, Investigative Science
Mr Steve Tauroza, Humanities
Dr Martijn Timmermans, Biology
Mr Suresh Viswanathan Chettiar, Institute of Biomedical Engineering
Miss Tessa Young, EPHPC
Mr Paul Young, Estates

Farewell moving on

Dr Bruce Anderson, Grantham Institute for Climate Change
Dr Rajaram Bathula, NHLI
Mr Matthew Bell, NHLI
Dr Robert Bennett, Faculty of Medicine
Dr Jason Benton, Cell and Molecular Biology
Dr Martin Berger, Computing
Dr Cesar Bertucci, Physics
Mr Tapan Bhattacharyya, Medicine (6 years)
Miss Neesa Bhudia, NHLI
Dr Richard Blackwell-Whitehead, Physics (5 years)
Ms Deena Blumenkrantz, NHLI
Miss Maria Boni, Catering Services
Dr Alexandra Bruce, NHLI
Professor Laurent Calvet, Business School
Dr Susan Campbell, Medicine
Mr Kwok Cheung, Chemical Engineering
Dr Timothy Cullingford, NHLI (6 years)
Ms Louise Doolan, Library Services
Dr Atabak Fadai-Ghotbi, Aeronautics
Dr Flore Faille, EEE
Dr Elena Filonenko, Clinical Sciences
Dr Clare Gallon, NHLI
Mr Andrius Grigonis, Sport and Leisure Services

Dr Ipek Gurol-Urganci, Business School
Miss Julie Hadlow, Finance (18 years)
Ms Kathrin Hault, NHLI
Miss Mercedes Herben, Development and Corporate Affairs
Mr Kenneth Hopkins, Security Services
Mr John Ipe, Physics
Dr Rafael Jimenez Rodriguez, Civil and Environmental Engineering
Dr Derek Kedra, Molecular Biosciences
Miss Monika Kieczka, Catering Services
Dr Senthilkumar Krishnababu, Mechanical Engineering
Dr Sunil Kumar, EEE
Dr Athanasios Laliotis, Physics
Miss Carolyn Lam, Chemical Engineering
Dr Thomas Lawton, Business School (6 years)
Dr Sophie Lebre, Molecular Biosciences
Mrs Niamh Lennox-Chhugani, Business School
Miss Rachel Massey, SORA
Dr John McGinley, Mechanical Engineering
Mr Stephen McGinn, Catering Services
Mrs Samantha McKiernan, Humanities
Dr Sanjeev Mehta, Medicine
Dr Ara Minassian, Physics (7 years)
Dr Marco Morbidini, Mechanical Engineering
Dr Susana Mourato, Centre for Environmental Policy (9 years)
Dr Yury Nikulin, Civil and Environmental Engineering
Ms Stacey O'Neill, Sport and Leisure Services
Dr Dipesh Patel, Medicine
Miss Kiriaki Platanioti, Mathematics
Professor Jaideep Prabhu, Business School
Ms Sarah Prior, NMH
Mr Michael Reay, ICT
Miss Ailsa Roberts, NHLI
Dr Matthew Schneemilch, Chemistry
Dr Stephen Shaw, Chemical Engineering
Dr Seema Shrivastava, Medicine
Miss Bryony Stott, SORA
Miss Jennifer Stowar, Library Services
Miss Gemma Swain, Cell and Molecular Biology
Dr Gabor Szekelyhidi, Mathematics
Dr Russell Taylor, Chemistry
Dr Deborah Trott, NHLI
Ms Cynthia Tso, Molecular Biosciences
Mr Angelos Tsoukalas, Computing
Dr Maria Vila Grifoll, NMH
Dr Jeremy Wales, Kennedy Institute
Dr Yiqian Wang, Materials
Ms Belinda Wang, NHLI
Dr Sasala Wickramasinghe, Chemistry
Miss Louise Willingale, Physics
Dr Sarah Zerbes, Mathematics

This data is supplied by HR and covers the period 24 Aug–6 September. 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.

For 'Moving in Moving on' covering the period 29 June–23 August visit the online supplement to this edition at: www.imperial.ac.uk/reporter

moving in. moving on.

what's on

22 SEPTEMBER 18.15–21.00

Behind-the-scenes at the UK's first Academic Health Sciences Centre

Professor Stephen Smith, Principal of the Faculty of Medicine and Chief Executive of the Imperial College Healthcare NHS Trust

St Mary's Campus

Registration in advance: admin@friendsofimperial.org.uk

24 SEPTEMBER 13.00–14.00

Non-additive entropy, central limit theorem, and statistical mechanics

Professor Constantino Tsallis, Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro

Seminar Room, 53 Prince's Gate

First come, first served



25 SEPTEMBER 17.30–18.30

Islet transplantation and beta cell replacement therapy for type-1 diabetes

Dr James Shaw, Clinical Senior Lecturer/Consultant, Institute of Cellular Medicine, Newcastle University

Sir Roger Bannister Lecture Theatre, Medical School Building, St Mary's Campus

Registration in advance: g.e.lewis@imperial.ac.uk

29–30 SEPTEMBER 17.00–18.00

The Pendryfest

A meeting to celebrate the 65th birthday and achievements in science of Professor Sir John Pendry, Department of Physics



Blackett Laboratory

Registration in advance: c.dale@imperial.ac.uk

► All events are at the South Kensington Campus unless otherwise stated.



First published in 1995, *Reporter* aims to share stories of Imperial's community and to highlight individual and College achievements. *Reporter* is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter.

The copy deadline for issue 196 is Wednesday 24 September. Publication day is 9 October. Contributions are welcome (no more than 300 words). Please note the editor reserves the right to cut or amend articles as necessary. Information correct at time of going to press.

1 OCTOBER 12.30–17.15

Epidemic spreading and networks

A meeting hosted by the Institute for Mathematical Sciences

53 Prince's Gate

First come, first served

2 OCTOBER 18.00–19.00

The cardio-renal syndrome: how do the heart and the kidneys communicate?

Professor Gary Francis, Department of Cardiovascular Medicine, Cleveland Clinic Foundation, Cleveland, USA

Annual NHLI/RBHT Paul Wood Cardiovascular Lecture 2008

Paul Wood Lecture Theatre, Guy Scadding Building, Royal Brompton Campus

Registration in advance: e.watson@imperial.ac.uk

8 OCTOBER 17.30–18.30

Transport safety—is the law an ass?

Dr Chris Elliott, visiting Professor at Imperial College London, system engineer and barrister

Lloyd's Register
Education Trust Annual Lecture 2008

Clore Lecture Theatre, Huxley Building

Registration in advance: l.brown@imperial.ac.uk

8 OCTOBER 14.15–15.15

Fuel cells

Dr Jonathan Frost, Director, Johnson Matthey Fuel Cells

Porter Alliance/Energy and Environment Office (EEO) seminar

G34, Sir Alexander Fleming Building

First come, first served



take note

Central library closure

The Central Library at South Kensington will close at 14.30 on Thursday 2 October to allow preparations for the official opening of the refurbished ground floor to begin. All other libraries will remain open as usual. From Monday 6 October the library will be open 24 hours a day, except overnight each Friday 23.00 to Saturday 10.00.

classifieds

Double room wanted from October

New staff member searching for double bedroom accommodation near South Kensington campus and/or close to District/Piccadilly Line from October. If you're able to help, please contact Boris Maciejovsky: maciejov@mit.edu.

To place a classified please submit no more than 50 words to the Editor, Emily Ross, by email at reporter@imperial.ac.uk for a chance for your advertisement to appear. The Editor reserves the right to amend advertisements as necessary.

volunteering

Volunteer cooks

Project:	Lead Cook
Project ID:	1000
Organisation:	Food Chain
Time(s):	One Sunday per month
Location:	Different locations—Hammersmith, Kentish Town, Highbury, Stepney Green, Bermondsey and Tooting

The charity Food Chain is looking for volunteer cooks. Food Chain provides nutrition services including home-delivered meals, essential groceries and nutrition advice to men, women and children who are chronically sick as a result of HIV-related illness. Lead Cooks are expected to do their menu planning and grocery shopping during the week, and be at the kitchen on Sunday between 8.00 and 13.00 (approximately). You need to understand the nutritional needs of people living with HIV and AIDS and to be able to create a balanced menu. You'll also need to be able to supervise a team, some of whom are not trained in kitchen skills. You will need to hold a basic food hygiene certificate, which can be taken in-house. The mission of the Food Chain is to improve the health and wellbeing of London's population living with HIV by alleviating hunger and malnutrition.



i For more information

To take part in a scheme or to hear more about volunteering in general, contact Lucy Mitchell

- 020 7594 8141
- volunteering@imperial.ac.uk

For full details of over 250 volunteering opportunities visit: www.imperial.ac.uk/volunteering

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