Remembering Gabriel and Laurent

Imperial mourns the loss of Laurent Bonomo and Gabriel Ferez, students of Polytech’ Clermont-Ferrand/Blaise Pascal University in France who joined the College community in May as part of the Undergraduate Research Opportunities Programme.

The news of their deaths was released on 3 July and the police inquiry is ongoing.

Those who worked closely with Laurent and Gabriel spoke warmly of their contributions during their time in the Department of Life Sciences.

Gabriel was researching how bacteria can be engineered to produce renewable fuels and was described by his supervisor, David Leak, as an enthusiastic and capable student. He added: “Gabriel took an active interest in the ongoing football and tennis championships and, particularly given our very international lab, this was a common topic of discussion. We are completely numbed by what has happened.”

Laurent was researching how the toxoplasmosis parasite attacks its hosts.

Steve Matthews, who supervised Laurent’s work, said: “He stood out as a mature and talented student who was dedicated to his work but also engaged wholeheartedly in group activities.”

Following news of the students’ deaths, messages of condolence were received from across the world. Dave Perks, alumnus of Virginia Tech, USA, said in an email: “We here in Blacksburg know all too well the sense of sadness, confusion and loss that follows a tragic incident like this. My family’s thoughts and prayers will be with your community and the victims’ families as everyone tries to move forward from this terrible tragedy.”

The police would like to speak to any student or member of staff at Imperial who may have known Laurent and Gabriel. Please call the Incident Room on 020 8721 4155 or Crimestoppers on 0800 555 111.

Imperial to influence the RAE replacement

Imperial has been selected as one of 22 universities to help develop the new Research Excellence Framework (REF) in a pilot exercise.

The pilot taking place this summer will explore the use of citations—specifically, the number of times that a research publication is cited—to evaluate research excellence. It will test the methods for capturing information about research publications and their citations, investigate how the information might be used to assess and measure research excellence, and identify the implications of the new system.

As part of the pilot, Imperial and the other selected institutions will provide details of staff who were employed for all or some of the period 1 January 2001 to 31 October 2007 and were eligible for the 2008 Research Assessment Exercise, and the publications that they produced between 1 January 2001 and 31 December 2007. HEFCE appointed contractors will then identify the citations. The pilot will influence which subjects will be assessed by citations along with the extent to which other measures will supplement them.

Speaking about the pilot, Josie Lewis-Gibbs, Planning Officer, said: “This is a great opportunity to influence how the new system will look and also gives us an idea of the information that we may need to gather in the future.”

The recommendations following the pilot will be published in spring 2009 and will be followed by a formal consultation.

—Naomi Weston, Communications

For further information about the pilot, contact Josie. lewis-gibbs@imperial.ac.uk
New Imperial Fellows of Royal Academy of Engineering

Britain’s national academy of engineers has recently elected six Imperial scientists as Fellows, recognising their outstanding contributions to the field of engineering.

Professor Nigel Brandon (Earth Science and Engineering), Professor Jeff Kramer (Computing), Professor Christofer Toumazou (Institute of Biomedical Engineering) and Mr John Loughhead, executive director of the UK Energy Research Centre based at Imperial, now join the 70 other Imperial Fellows of the Royal Academy of Engineering.

The achievements of Professor Sir Gordon Conway (Centre for Environmental Policy) and Lord Winston, Emeritus Professor of Fertility Studies and Professor of Science and Society, were also acknowledged through the award of Honorary Fellowships.

All have made substantial contributions to the field of engineering and expressed their pride and delight at being elected to the Royal Academy.

Professor Brandon is the Executive Director of Imperial’s Energy Futures Lab, and is particularly known for his work on solid oxide fuel cells, which produce electricity from a range of fuels in a clean and efficient way. His work has been commercialised by Ceres Power, an Imperial spin-out company.

Among Professor Toumazou’s many achievements is the development of one of the world’s first cochlear chips which gave hearing to the born deaf, and also a silicon pancreas that mimics the function of the pancreas’ beta cell to regulate the insulin in people with type-1 diabetes.

Professor Kramer and his colleagues have developed architectural languages and tools for complex software systems which were used by the company Philips to create software programs for use in their consumer electronics.

Mr Loughhead is responsible for the development of an engineering analysis system to create thermal designs for spacecraft, which has been used by the European Space Agency for more than 20 years.

Sir Gordon Conway helped to establish the Centre for Environmental Policy at Imperial and is a respected ecologist who has acted as chief scientific advisor to the Department for International Development.

Lord Winston is a renowned fertility researcher. In his new role at Imperial, he is focused on improving interaction and understanding between scientists and the public.

“Our new Fellows are among the very best engineers working in the UK today,” said Academy President Lord Browne of Madingley. “They are pushing the technical boundaries across the most challenging fields, from medical imaging to aeronautics and energy technology. Together they demonstrate that engineering is at the heart of modern society.”

—COLIN SMITH, COMMUNICATIONS

£4.1 million for research into protein interactions

The College’s Chemical Biology Centre has received a £4.1 million award to enable chemists, physicists, mathematicians and engineers to collaborate with biologists, biochemists and medics to tackle diseases and pave the way for new drug treatments.

The funding will provide more than 50 new PhD posts in the Doctoral Training Centre (DTC) of Imperial’s Chemical Biology Centre over the next five years. The award has been made by the Engineering and Physical Sciences Research Council (EPSRC) and includes a contribution from the Biotechnology and Biological Sciences Research Council (BBSRC) and the Medical Research Council (MRC), with additional support from GlaxoSmithKline, AstraZeneca and Pfizer.

The DTC aims to support a new generation of scientists in taking a physical sciences approach to problems in the life sciences. For the next five years, research at the DTC will aim to understand the important but little understood interactions between proteins and other proteins, and proteins and lipids, which underpin virtually every process in all living cells.

“This kind of multidisciplinary approach, which encourages researchers to break down traditional barriers between life sciences and physical sciences, will be key if we’re to crack some of the toughest challenges in drug development and basic biology.”

When a cell becomes diseased, faults in these interactions appear. Professor Richard Templer (Chemistry), Director of the DTC, explained that unlocking the secrets of these molecules and their relationships with each other could lead to the identification of new drug targets for cancers and various other diseases: “If we can understand how protein and lipid molecules interact with each other, then we have the basis for designing drugs that can disrupt or manipulate the very processes that occur inside our cells when they become diseased,” he said.

Professor David Klug (Chemistry), Co-Chair of the Chemical Biology Centre, added: “I’m delighted that we have secured support for another five years for our Doctoral Training Centre. This kind of multidisciplinary approach, which encourages researchers to break down traditional barriers between life sciences and physical sciences, will be key if we’re to crack some of the toughest challenges in drug development and basic biology.”

—DANIELLEEreeves, Communications

• For more information about the Chemical Biology Centre visit: www.chemicalbiology.ac.uk
**ASSOCIATED PRESS • 19 June**

**GM mosquitoes create a buzz**

Genetically modified mosquitoes could be humanity’s best weapon against malaria, a disease that kills three million people each year, according to the Associated Press. Professor Andrea Crisanti (Life Sciences) is at the forefront of this work, tackling issues such as whether it is possible to engineer a malaria-resistant mosquito that would break the transmission cycle. “I think there is a moral good to doing it,” he says. “If we do this right, the mosquitoes will get rid of malaria for us.”

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**EVENING STANDARD 24 June**

**Suck that dust right out of your air**

A machine that can suck dust and pollen out of the air could improve the lives of thousands of asthma sufferers, reports the Evening Standard. The Airshower, which is already used in operating theatres and by industry to create sterile environments, is about to be tested with 75 children over the age of seven while they sleep. “We’ve been trying to do this for 20 years,” says Dr Robert Boyle (Medicine), who is helping to conduct the trials. “It’s bringing clean air technology to a bedside setting for the first time.”

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**THE INDEPENDENT 26 June**

**Engineering a better future**

Civil engineering is the key to a better life, according to Imperial student David Dalgado, who talks to The Independent about a project aimed at building low-cost seismically resistant housing in earthquake-struck El Salvador. “What I like most about working in civil engineering is that you are really able to see your achievements,” he adds. “For example, when you design a reservoir you actually can see it being built.”

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**THE DAILY TELEGRAPH 28 June**

**Sixty and still going strong**

The standard of care in the NHS has been radically improved in the 60 years since it was founded, Professor Lesley Regan tells The Daily Telegraph in an interview marking the health service’s landmark birthday. But there is still room for improvement. “We need to stop the short-termism and reorganisation, and get better at research,” she says. “We are fantastic at coming up with ideas and innovations, but we need to translate those from the lab bench to the bedside.”

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Research costing on track

Imperial’s processes to determine the cost of research have recently received a complimentary report following a quality assurance and validation (QAV) audit conducted on behalf of Research Councils UK.

The QAV process involves auditing over 30 of the most research-intensive universities and aims to provide assurance that a transparent approach to costing (TRAC) methodology and full economic costing (fEC) rates are robustly calculated and applied appropriately.

TRAC was introduced by the government in 1998 to determine the costs of a university’s main activities. fEC was an expansion of the requirements under TRAC and since 2005 has allowed universities to receive additional contributions towards their running costs, such as infrastructure support and academic time, from some research funders.

Imperial’s QAV site visit took place at the end of May, with auditors focusing on the model used to calculate the cost of research.

“Speaking of the outcomes of the audit, Cindy Lai, Head of Research Support, said: “The report was particularly positive about the involvement of senior management in implementing TRAC-fEC methodology and the College’s willingness to engage academic staff. The auditors were also impressed that the TRAC rates are built into InfoEd, the proposal development system used to cost applications for research funding under fEC. This is an excellent result for Imperial and demonstrates how well fEC has been embedded in the institution.”

—Caroline Davis, Communications

Sharing equality practice and innovation

Scientists and specialist practitioners gathered at Imperial for a symposium addressing equality practice and innovation in the field of science, healthcare and widening participation on 26 June.

Organised by Imperial as One, the College’s race equality advisory group, the symposium provided an excellent opportunity to hear speakers from across the academic spectrum giving insight into progress made into equality issues.

Dr Sunday Popo-Ola (Civil and Environmental Engineering) hosted the event.

Sir Richard Sykes, the former Rector, gave the opening remarks. He said: “Focusing on equality and diversity is critically important. I believe the College is moving in the right direction. We have a diverse community here and we must embrace different ideas and ensure equality awareness.”

Professor Lord Robert Winston, the newly appointed Chair of Science and Society, gave a presentation entitled Raising aspirations in science. Other speakers included Chris Gosling, Director of Human Resources, and Professor Mervyn Maze (SORA).

Professor Stephen Smith, Principal of the Faculty of Medicine and Chief Executive of the Imperial College Healthcare NHS Trust, also gave a talk on the importance of inclusiveness. He said: “Equality and diversity are an integral part of what we do and we believe passionately in it. There are a number of internal networks to address these issues including the Disability Equality Sub-Committee and the Academic Opportunities Committee.”

Over 140 people from the College attended the symposium. Christine Yates, Equalities and Diversity Consultant, said: “It is very inspiring working with such distinguished academics and specialists, and being in a position to share our good practice with others.”

—Naomi Weston, Communications

> www.imperial.ac.uk/hr/equality/race/imperialasone

awards and honours

Medical student named Global Leader

Medical student Atif Khan has been named a Goldman Sachs Global Leader and chosen to attend the Global Leadership Institute in New York this month. He is one of only five UK students and 75 students worldwide chosen to attend the Institute, where he will participate in leadership training and seminars on international issues.

Top awards from the Royal Society

Three Imperial researchers have been recognised by the Royal Society. Professor Michele Dougherty (Physics) is awarded the 2008 Hughes Medal for her innovative use of magnetic field data which led to the discovery of an atmosphere around one of Saturn’s moons. Professor Edward Hinds (Physics) is awarded the Rumford Medal 2008 in recognition of his extensive and highly innovative work in ultra-cold matter. Professor Andrew de Mello (Chemistry) has been asked to deliver the Royal Society’s 2009 Clifford Paterson Prize Lecture, in recognition of his outstanding achievements in fields of bioanalytical science and nanotechnology and his major contribution to the development of microfluidic systems for synthetic chemistry and biology.

Outreach scheme wins excellence award

The Clothworkers’ Mathematics Bursary Programme, managed by Imperial’s Outreach Office with its partner, Excitec, has won the Excellent Professional Practice in Curriculum and Student Support Award at the London Education Partnership Awards. The bursary programme is funded by the Clothworkers’ Foundation and offers practical and financial support aimed at encouraging young people to study maths at A level.

Electrical engineer receives Italian honour

Professor Erol Gelenbe (Electrical and Electronic Engineering) was made a Grand Officer of the Order of the Star of Italy last month, equivalent to a knighthood in the UK honours system. He is recognised for major contributions to science and technology over the last 30 years.

RSC Interdisciplinary Award for Jeremy Nicholson

Professor Jeremy Nicholson (SORA) has won the Royal Society of Chemistry’s 2008 Interdisciplinary Award for his work in chemical biology and mechanistic investigations into disease processes. It is Professor Nicholson’s second award from the RSC this year, having already won the Theophilus Redwood Lectureship, the RSC Analytical Division’s international science prize.
Mobile phones—long-term health risks

A new study looking at whether use of mobile phones is linked to long-term health effects, such as brain cancer and neurodegenerative diseases, is underway at Imperial.

The £3.1 million study, part of the Mobile Telecommunications and Health Research (MTHR) programme, will monitor the health of 200,000 mobile phone users across Europe over at least 20 years, 90,000 of whom will be recruited in the UK.

Although the totality of evidence from earlier studies does not indicate a risk of cancers of the brain and nervous system in the short to medium term, the widespread use of mobile phones is relatively recent and there is continuing uncertainty about the possibility of longer term health risks.

The new study will also investigate risks for other disorders, including Alzheimer’s and Parkinson’s diseases, which have not previously been examined in relation to mobile phone use.

The study, known as COSMOS, is led by Professor Paul Elliott (Epidemiology, Public Health and Primary Care). He commented: “The evidence on use of mobile phones and health over the short term is reassuring. With the introduction and widespread use of a new technology, such as mobile phones, it is important also to look for any possible longer term effects, which is why we are carrying out this study.”

The study follows successful pilot research and is being funded with support from the Department of Health and the mobile phone industry, through an established ‘firewall’ arrangement to ensure that the research is fully independent.

— LAURA GALLAGHER, COMMUNICATIONS

Implantable sensor to revolutionise heart disease

An implantable sensor is being developed by the Institute of Biomedical Engineering to provide 24-hour monitoring for patients with chronic heart problems.

Researchers have received a £760,000 grant from the Wellcome Trust to develop a miniature sensor, smaller than a five pence piece, to monitor the hearts of people who have undergone heart operations or who have conditions that could lead to heart failure.

At present, such patients need to be regularly monitored in hospital to detect changes in their condition. The implantable sensor could remotely provide a constant flow of information, enabling doctors to more accurately predict serious illnesses, improve the timing of operations and reduce visits to hospital.

Lead researcher Professor Christofer Toumazou (Institute of Biomedical Engineering) commented: “The heart pressure sensor could transform the lives of people with chronic heart problems and has the potential to revolutionise heart monitoring. At the touch of a few buttons, a family doctor could dial up their patient’s heart history and plot pressure trends to better manage their condition and prevent the progression of heart failure.”

“At the touch of a few buttons, a family doctor could dial up their patient’s heart history”

The sensor (prototype shown) would be implanted in the heart and transmit blood pressure information for analysis by a reader.

— COLIN SMITH, COMMUNICATIONS

Earliest genetic material may hail from the stars

Imperial scientists analysing rock samples have confirmed for the first time that an important component of early genetic material which has been found in meteorite fragments is extraterrestrial in origin.

The findings, published in the journal Earth and Planetary Science Letters last month, suggest that parts of the raw materials to make the first molecules of DNA and RNA may have come from the stars.

Lead author Dr Zita Martins (Earth Science and Engineering) said that the research may provide further evidence to explain the evolution of early life: “We believe early life may have adopted nucleobases from meteoritic fragments for use in genetic coding which enabled them to pass on their successful features to subsequent generations.”

Scientists from Europe and the USA discovered the molecules uracil and xanthine — precursors to the molecules that make up DNA and RNA and known as nucleobases — in rock fragments of the Murchison meteorite, which crashed in Australia in 1969.

The team tested the meteorite material to determine whether the molecules came from the solar system or were a result of contamination when the meteorite landed on Earth. Their analysis shows that the nucleobases contain a heavy form of carbon which could only have been formed in space.

Between 3.8 and 4.5 billion years ago, large numbers of rocks similar to the Murchison meteorite rained down on Earth when primitive life was forming. The heavy bombardment would have dropped large amounts of meteorite material to the surface of planets like Earth and Mars.

— COLIN SMITH, COMMUNICATIONS
Cutting edge laser ‘cameras’ which can film the super-fast movements of electrons inside materials were the subject of an Imperial College exhibit at the Royal Society Summer Science Exhibition this month.

The exhibit, run by a team of Imperial physicists led by Dr John Tisch, explained how they use incredibly short flashes of laser light in their lab to record images of electrons in atoms as they move around at about 10 million kilometres per hour.

To put their research into context, visitors to the exhibit were filmed with a water balloon bursting in their hand in slow motion. The aim of this demonstration was to show how incredibly quick the team’s laser cameras are. The slow motion cameras used to film the water balloons run at about 1,000 frames per second, whereas the team’s laboratory cameras use flashes of laser light to achieve an effect equivalent to 10 million billion frames per second.

Electron movies
Dr Tisch explains: “The incredibly short timescales we use to take pictures in our lab, known as ‘attoseconds’ which are one billion billionth of a second, are very hard to imagine. We hope that playing around with different kinds of high speed cameras at the exhibition gave the public a good introduction to the ideas behind the work we do—and hopefully they had fun bursting balloons at the same time!”

Using laser attosecond ‘cameras’ to record the movements of electrons is important because electrons form the bonds that hold biological molecules together, move around to make chemical reactions happen, and are the engine of all modern electronics.

Dr Tisch adds: “At the moment our work is like that of a movie cameraman, recording the movements of the electrons. One day, we would like to become like movie directors, making the electrons move where we want.”

Spintronics
Imperial scientists also contributed to a second stand at the exhibition which explained the science behind a new technology called spintronics, which promises to revolutionise modern day electronics.

Conventional electronic devices, from iPods to medical equipment, use the electrical charge of electrons to process information. Spintronics aims to use another property of electrons, known as their spin, or ‘magnetic moment’ to do this instead. Scientists predict that this technology will mean more information could be stored on much smaller computer chips.

Dr Ola Wessely (Physics) said: “Our exhibit introduced people to the fundamental principles of spintronics, and showed how we’re trying to control the magnetic structure of tiny strips of metal. In the future, several of these strips will make up a ‘magnetic memory’ which could be used in all kinds of electrical devices.”

—Danielle Reeves, Communications

Chris Arrell, postgraduate student in the Department of Physics, is one of the exhibit team. He spoke about his role in the project with Reporter’s Danielle Reeves.

What have you enjoyed most about being involved with the Summer Science Exhibition?
I’ve really been amazed at the understanding behind some of the questions I have been asked. In fact some of the questions I have been asked by GCSE students over the week have really made me think about my subject in a different way. The best bit has to have been when a school group walked into our exhibit and said “wow”.

What’s been the biggest challenge?
It’s been hard to make sure that we explain everything in a way that somebody with no physics background can understand. We are very used to using jargon like ‘phase-matching’ and ‘carrier envelope phase’—but in reality these are just words we use to explain concepts which you don’t need a degree in physics to understand.

Why do you think these kind of events are important?
Too often science is portrayed as something only boffins can understand and do — when the opposite is true. Hopefully some of the visitors will have gone away with a different view of science and see it as something they might do in the future.
Meet new Rector Sir Roy

Imperial’s fourteenth Rector is new to the job but not to the College. Speaking to Reporter’s Abigail Smith and magazine podcast presenter Gareth Mitchell, Sir Roy talks about the challenges and opportunities for Imperial today.

Sir Roy Anderson first arrived here as a zoology undergraduate student, receiving his first class degree in 1968. He went on to complete his PhD in parasitology in 1971 and spent a great deal of the following 40 years at the College.

He is a distinguished epidemiologist, regarded as one of the world’s leading authorities on the spread and control of infectious diseases including tropical parasitic infections, BSE and vCJD, SARS, AIDS, influenza and foot and mouth.

Sir Roy takes up the post of Rector following a four-year secondment to the Ministry of Defence, where he was Chief Scientific Advisor.

Describing his new role as “an extraordinary pleasure and very exciting”, he says that his first task will be to visit departments around the College and listen.

“I’m still in the phase of listening,” he said, “It’s extraordinary how big the place is. I’m through about just over one-third of the departments and centres.”

“This is a very special place. Richard Sykes has done a superb job for us and my task is to take it even further,” he adds.

“The pace of science is just increasing and increasing in every field. I’m very interested in how we develop time for people to think and innovate.”

Speaking of the College’s role in using science and technology to benefit society, Sir Roy highlights the contributions Imperial can make to global issues.

He says: “I believe quite sincerely that science and technology are the main hope we have for dealing with the energy and food crisis that we’re in today, and indeed the impact of climate change.”

Furthermore, Sir Roy believes Imperial’s expertise can be used to focus on global health. He says: “I hope we might see how our technologies, our management skills, our medical and clinical skills can be brought to bear to focus attention on solving some real practical problems in the developing world.”

Looking back over his career at Imperial, he speaks of one of the many changes during this period: “When I was a student here I was predominately taught by people of UK nationality, now we’re a totally international community, and that’s delightful. One of my tasks is to make this place continually attractive.”

An interview with Sir Roy is available on the July edition of the College’s monthly magazine podcast at: www.imperial.ac.uk/media/podcasts
The real Sir Roy — things you didn’t know about Imperial’s new Rector...

Who is your favourite scientist?
For a biologist there is one very important person — Charles Darwin. But my school, Hertford Grammar, had a house named after Alfred Wallace, who had the same ideas about evolution and wrote to Darwin when he was collecting in South East Asia. That stimulated him to get a move on with The Origin of Species. Perhaps I’m biased by my school — I think that Darwin gets the limelight but Wallace was equally important.

What meal do you enjoy cooking?
I can cook moules, because it's dead easy. That probably comes from my background. Part of my family is from Edinburgh, and as a young child we used to go to North Berwick and collect mussels. My grandmother used to cook them. Mussels, onion, garlic, white wine and then you can make a fantastic garlic onion soup from the remainder. My wife would say that’s the thing I do very well. The rest is more problematic.

What is the last film you saw?
I've spent a lot of time on aeroplanes recently so I won't admit what I watched last because the primary objective is to send me to sleep. But The Lives of Others is the last film that I sat through and was totally obsessed with. It’s very moving and a wonderful bit of photography.

What gadget can’t you live without?
Ever since I was a postgraduate I’ve done a lot of computing, so the real joy in my life is having a very sophisticated laptop. It does everything, without it I’m lost. It travels everywhere with me.

Also, a digital camera. Although I’ve got a professional SLR type camera, nowadays there are one or two miniatures that are quite outstanding technology-wise and fit into your pocket. So I must admit there’s one of those which I’m particularly obsessed with.

And I shouldn’t say this, but the Blackberry I couldn’t live without, I’m afraid.

What websites do you use most?
I constantly have to look at the railway delay site! Apart from that, I’m a Google user for everything. And the World Heath Organisation and the major infectious disease sites and disease surveillance sites are things that I look at all the time, because they pick up novel epidemics.

What’s your favourite holiday destination?
The world is extraordinarily diverse and interesting so I wouldn’t go back and back to the same location. As a student, I went to Mauritius, where we did a variety of projects like trying to discover dodo bones or controlling the pathogens of the tropical fish on the coral reef. And I love south east Asia in particular. I’ve been privileged to wander up Myanmar, before the current problems, because I was assigned there by the World Health Organisation at one stage of my life for a period. I also like the jungles in the north of Thailand very much.
Rewarding staff and students for engineering excellence

A pioneering educator in biomedical engineering and students helping to build sustainable earthquake-proof homes in El Salvador were among those honoured at Imperial’s Awards for Teaching Excellence in Engineering last month.

The awards are part of the Faculty of Engineering’s drive to reward innovation, creativity and excellence in teaching and learning.

Dr Peter Cashman (Bioengineering), Dr Shaun Crofton (Mechanical Engineering) and Professor Omar Matar (Chemical Engineering and Chemical Technology) were awarded £10,000 each and congratulated by the Chair of the National Physical Laboratory, Sir Peter Williams CBE, for their outstanding work.

Dr Cashman was recognised for his work to establish the undergraduate degree in biomedical engineering and for his pastoral care of students, particularly his commitment to their personal and professional development.

Honoured for his dedication to engineering and teaching, Dr Crofton was praised for bringing to life engineering subjects, enabling undergraduates to understand their relevance in the real world.

Professor Matar’s contribution across the undergraduate curriculum in chemical engineering was acknowledged, alongside his dedication in providing out-of-hours help to students.

This year, for the first time, the outstanding contribution of students to teaching and learning in the Faculty was also recognised. The inaugural Professor John Lever Memorial Award, established in memory of John Lever who headed the Department of Bioengineering in 2003–06, was awarded to undergraduate civil and environmental engineering students.

Elena Bailey, Alice Clarke and Michael Maks Davis received £10,000 towards work in El Salvador, where Imperial students are helping to construct safer buildings in the earthquake-prone country.

—Colin Smith, Communications

New plant sciences facilities

Controlled environment plant growth rooms, imaging laboratories and mass spectrometry facilities were among the new research facilities for plant sciences unveiled at the College on 25 June.

Researchers from the Division of Biology will use the newly refurbished laboratories to look at how plants respond to biological stress, such as attack by pests and pathogens, and environmental stresses, including drought and lack of nutrients. The plant growth rooms can be used to simulate a wide variety of environments, with different levels of humidity, temperature and light.

The facilities, located in the RCS1 and Sir Alexander Fleming buildings on the South Kensington Campus, were unveiled at a launch event attended by guest speakers Professor Alison Smith, Head of the Department of Metabolic Biology at the John Innes Centre and Professor Ian Crute, Director of Rothamsted Research.

The new facilities have been installed to coincide with the relocation of six plant sciences research groups from Imperial’s Wye Campus to South Kensington and will support other staff already located there.

“These new facilities provide our researchers with the tools they need to understand how we can protect plants from environmental change, and use them to benefit society.”

Professor John Mansfield (Biology) said: “Understanding plant biology holds the key to solving some of the biggest challenges faced by the world today—from providing enough food for the planet’s population, to developing new green energy sources.

“These new facilities provide our researchers with the tools they need to understand how we can protect plants from environmental change, and use them to benefit society.”

Professor Martin Buck, Head of the Division of Biology, added: “The College’s investment in these new labs and growth rooms means that our colleagues joining us from Wye will have a state-of-the-art environment in which to continue their research.”

Plant sciences facilities will get a further boost when a glasshouse is built on the roof of the Roderic Hill Building at South Kensington next year.

—Danelle Reeves, Communications
Growing innovation

The Imperial Incubator celebrates its second birthday this month. Michelle Cotterill and Lucy Ahfong from Imperial Innovations explore how this facility is supporting some of the College's most innovative work.

Hidden away on the lower ground floors of the Bessemer building on the South Kensington Campus, the Imperial Incubator is an impressive facility that provides valuable office and laboratory space for Imperial’s spin-out companies and other technology businesses.

In 2006, with funding from both the London Development Agency and Imperial, the incubator facility was built by converting a long-dilapidated storage facility in the basement, full of rocks from the Royal School of Mines. Today, the Imperial Incubator is reaching its second year of operation. It is managed by Imperial Innovations, the commercialisation company of the College, which actively helps and supports early stage companies, giving them the best chance of survival in this highly competitive environment.

Encouraging innovation

It is not unusual to find Imperial College academics working in the laboratories and offices of the Incubator. These academics usually play a major role in the development and management of the spin-outs, becoming chief technology officers, directors or advisors. Imperial Innovations, in conjunction with the Business School, offers entrepreneurial courses at the Incubator teaching Imperial academics the skills they need to run a company, such as marketing, business planning and directorship. Breakfast seminars are run in parallel and are designed to make spin-outs aware of issues facing start-up companies, covering such topics as funding, tax and HR policy.

Unique space in the College

Daniel Green is CEO of Imperial spin-out BioCeramic Therapeutics, which has been an Incubator tenant since October 2006. Speaking of the benefits offered by the Incubator he said: “The Incubator is a great environment for turning innovative science into commercial reality. It encourages the interaction of departments and disciplines by providing a centre where inventors and entrepreneurs can get together to discuss ideas and implement plans. Imperial Innovations plays a major part by making introductions and putting inventors in touch with the right people from its wide network of contacts within and beyond the College.”

Imperial spin-out companies

Currently, there are 17 early-stage companies occupying the Incubator, 12 of which are developing research from different departments within Imperial. Companies will spend anything from 18 months to three years establishing themselves and evolving before they ‘out-grow’ the facility. During their time using the Incubator, the spin-outs are able to adapt the spaces to suit their individual needs and can quickly come and go as they please.

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Imperial spin-out companies

Currently, there are 17 early-stage companies occupying the Incubator, 12 of which are developing research from different departments within Imperial. Companies will spend anything from 18 months to three years establishing themselves and evolving before they ‘out-grow’ the facility. During their time using the Incubator, the spin-outs are able to adapt the spaces to suit their individual needs and can quickly come and go as they please.

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Encouraging innovation

It is not unusual to find Imperial College academics working in the laboratories and offices of the Incubator. These academics usually play a major role in the development and management of the spin-outs, becoming chief technology officers, directors or advisors. Imperial Innovations, in conjunction with the Business School, offers entrepreneurial courses at the Incubator teaching Imperial academics the skills they need to run a company, such as marketing, business planning and directorship. Breakfast seminars are run in parallel and are designed to make spin-outs aware of issues facing start-up companies, covering such topics as funding, tax and HR policy.

Unique space in the College

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Students chase the sun in solar-powered boat race

A solar-powered boat constructed by a group of mechanical engineering undergraduates competed in Europe’s only solar-powered boat race at the end of June.

The team of students raced against 49 teams from eight different countries in the Frisian Solar Challenge, which took place in the Netherlands and covered 200 kilometres over six days.

After a good start to the race and climbing to tenth place at their peak in the competition, the team encountered a streak of bad luck after water flooded the electronics systems and reeds got caught up in the boat’s propeller. After repairs were made for the final day of racing, the team headed off to a good start but 500 metres from the finishing line, the boat’s electronics failed.

Team leader Oliver Fairbairn said: “The race was definitely a ‘one of a kind’ experience for all of us. All in all, we were very unlucky in the final two days after doing well at first. The result left us frustrated but at least we knew that our boat could run with the best of those in our group. “We gained a spot on the podium as the recipients of the ‘Bad Luck’ prize for our efforts which was a nice consolation.”

Aimed at encouraging new applications of solar energy, the Challenge required each team to build solar-powered boats suitable for racing in all weather conditions. The Imperial team designed, built and tested the boat, named Solar Spirit, as part of their third year project.

The boat is made of glass fibre and is powered by five solar panels which drive an electric outboard motor.

Project Supervisor Dr Shaun Crofton (Mechanical Engineering) said: “This competition is a great example of Imperial students applying their knowledge to a practical real-life project.”

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Project Supervisor Dr Shaun Crofton (Mechanical Engineering) said: “This competition is a great example of Imperial students applying their knowledge to a practical real-life project. Hopefully Solar Spirit will be the first of a long line of such boats and challenges for our undergraduates.”

—NAOMI WESTON, COMMUNICATIONS

For more information on Solar Spirit, visit: www.solarspirit.co.uk

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Chamber music

If you’ve got a passion for music and are looking to team up with other aspiring players, then the Imperial Chamber Music Society could help you get in touch with players of a similar level.

The society, open to both staff and students, allows members to practise in small groups at the Blyth Music Centre on the South Kensington Campus.

Dr Anne-Marie Magnan, Research Associate (Physics), is a violinist and has been a member of the society for two and a half years. The society helped her find a pianist who she practises with twice a week for two hours.

She says: “The Chamber Music Society is perfect for me as I enjoy playing music spontaneously and

“The Blyth suite is such a great facility and playing music is a really pleasurable thing to do at lunchtime!”

I couldn’t really commit the time to join the orchestra because of all the travel I do for my postdoc. The Blyth suite is such a great facility and playing music is a really pleasurable thing to do at lunchtime!”

The society also puts on performances and organises trips to concerts in London, as well as organising ‘masterclasses’ three times a year, where professional musicians come into the College. Dr Magnan explains: “You get the chance to perform a piece of music in small groups to a professional, and then get their feedback. I always feel nervous before performing but it is so interesting to hear their comments. The last masterclass was performed by Michal Kaznowski, the cellist from the Maggini Quartet—one of the UK’s leading string quartets. It was very inspirational.”

—EMILY ROSS, COMMUNICATIONS

Society size: 25
Number of groups: 11
Group size: 2–5
Practices and activities: ad hoc, masterclasses three times a year, a Chamber music concert once a term, the annual Artfest concert.

www.imperial.ac.uk/union/arts/chamber
Music and architecture brings Exhibition Road to the centre of London’s cultural life

World music and architectural innovation merged into a kaleidoscope of sights and sounds to make South Kensington the focus of London’s cultural life on 21 June.

The annual Music Day and the London Festival of Architecture combined for the first time this year, drawing visitors to Imperial’s doorstep where they listened to world music. Cutting edge architectural installations were also on display along Exhibition Road.

More than 150 different musical performances took place on the day, featuring groups including the Imperial College Gospel Choir, the College Sinfonietta and the Wind Band.

Lucy Smith, a chemistry undergraduate from the Imperial College Wind Band, said they really enjoyed playing in the festival: “We chose to play a couple of light-hearted pieces to entertain the public and we were pleased that people stopped to listen to us play and showed their appreciation with rounds of applause.”

Festival of Architecture aimed to reflect the vitality of London’s architecture. Companies including 6a Architects and Paticas Architecture designed and erected a diverse range of temporary structures along Exhibition Road to demonstrate how contemporary architects create and experiment with new ideas and structures. Materials on show included recycled plastic and cardboard boxes, while the roof of one large installation was designed to resemble flower petals.

—Colin Smith and Naomi Weston, Communications

Dancing the night away at the Summer Ball

Thousands of students celebrated the end of term on 21 June, with the Imperial College London Summer Ball, one of the biggest events of the College calendar.

Attracting 2,400 students and 60 alumni of the College, the event was a huge success with a four course formal dinner followed by an array of musical entertainment and a funfair. Revellers also enjoyed a fireworks display, a casino, DJs and musical acts.

Chris Larvin, the organiser of the ball and Imperial College Union Deputy President for Finance and Services, said: “By far the most enjoyable part of the evening for most people is the music. The Summer Ball is a unique event in the academic year due to the sheer number of people attending.”

Former Rector, Sir Richard Sykes praised the event in his after dinner speech. He said: “This evening has become a highlight of the College year for both staff and students. Thank you to the organisers of the ball for making it such a success.”

—Naomi Weston, Communications

www.imperial.ac.uk/news/summerball2008
An international move

The International Office, which has previously been split between two locations on the South Kensington Campus, will enter a new era at the end of July when the whole team will move into a new office in the Sherfield Building.

The mission of the International Office is to support all levels of the College’s international activities, from encouraging highly-qualified prospective overseas students to study at Imperial to working with senior staff to develop collaborative programmes with partner institutions.

The new office on level 1 of the Sherfield Building has been designed to enable the International Office to provide a better service to College staff and international students. As well as bringing together the team of eight, it will have two interview rooms where staff will be able to speak to students confidentially. Issues dealt with by the team include student visa extension applications and student welfare.

Among the year’s highlights for the International Office is the annual welcome day for new international students, which they organise in October alongside a series of orientation workshops. The team’s calendar is also packed with events at which they lead the College’s marketing and recruitment activities aimed at international students. Last year members of the office went to 35 fairs and 70 schools in 25 countries outside the UK.

— EMILY ROSS, COMMUNICATIONS

- www.imperial.ac.uk/international
- From the end of July the International Office will be located in Room 163, Level 1, Sherfield Building near the campus branch of the NatWest Bank.

Changes to fire assembly points

Make sure you know the fire assembly points for buildings on the South Kensington Campus, following changes to be implemented from 14 July. The current 35 points across the Campus will be rationalised to 10 and each building will be allocated a maximum of two of these as areas where occupants should assemble in case of a fire alarm. The new set-up will enable the Emergency Response Team to quickly reach assembly points following an alarm and to brief staff, students and visitors on the situation.

To find out the assembly points for your building, visit: www.imperial.ac.uk/facilitiesmanagement/security/services/fire.
Green fingers

On 4 July staff from the Graduate Schools chose to spend their team away day volunteering for Groundwork West London. The team of eight spent the day carrying out practical conservation tasks in Ravenscourt Park Nature Conservation Area. This included putting mulch matting around young trees, weeding areas to encourage young trees to grow, and building log edging for paths. The day was organised by Imperial Volunteer Centre.

Research Open Day

Chelsea and Westminster Hospital will be staging an Open Day, themed Making patients better—the role of research, on 16 July from 11.00 to 18.00.

Staff, students and the public are invited to the event, where posters will be on show describing how research has helped to provide faster diagnosis, new treatments and improved care for patients with conditions from asthma to arthritis. There will also be interactive demonstrations and activities, refreshments and entertainment.

To find out more, contact: research@chelwest.nhs.uk
**what’s on**

**11 JULY 14.00–19.30**

Graduate School of Life Sciences and Medicine summer research symposium

With guest speaker Professor Mark Chase, Royal Botanical Gardens, Kew

Sir Alexander Fleming Building

☑️ First come, first served

**24 JULY 17.00–18.00**

Ligand-directed targeting and molecular imaging in cancer and obesity

Professor Wadih Arap and Professor Renate Pasqualini, University of Texas

Rothschild Lecture Theatre, St Mary’s Campus

☑️ First come, first served

**28 JULY–1 AUGUST**

Saturn after Cassini Huygens symposium

Talks and poster sessions culminating in the publication of a Springer-Verlag book on the Saturn system

Lecture Theatre 220, Mechanical Engineering Building

☑️ Registration in advance: www.saturnaftercassini.org

**18 JULY 14.30–19.00**

Imperial as One third anniversary celebration

With guest speakers Sir Roy Anderson, Professor Lord Winston and Professor Washington Ochieng

Sir Alexander Fleming Building

☑️ Registration in advance: imperialasone@imperial.ac.uk

**8 SEPTEMBER**

Attacking the disease spiral in chronic obstructive pulmonary disease

Professor Michael Polkey, Professor of Respiratory Medicine

Inaugural lecture

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

☑️ Registration in advance: e.powell@imperial.ac.uk

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

**take note**

Commemoration Day

The 2008 Undergraduate graduation ceremonies will take place on 22 October. All academic staff are expected to attend and an invitation will be sent out in September asking them to take part in the procession. Other staff may apply for audience tickets in the Royal Albert Hall by emailing: graduation@imperial.ac.uk.

☑️ Full details can be found at: www.imperial.ac.uk/graduation

**classifieds**

**Vauxhall Astra for sale**

Silver grey metallic 1.6 16v SXi Twinport, December 2005 registration, five door hatchback, manual transmission, alloys, front electric windows, air conditioning, P/S, sports seats with lumbar support, CD/radio with audio remote control, ABS, electric door mirrors, immobiliser, steering wheel adjustment. Regularly serviced and taxed to August. Mileage – 28,000. Excellent condition throughout, £6,300 ovno. Contact Mandy on 07929 861099 or 020 8255 8895.

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

**Volunteering**

Samaritans

Project: Samaritan Volunteers (Central London branch)

Project ID: 708

Date(s): Ongoing

Time(s): One shift per fortnight and one night-watch shift per month

Location: Soho

Volunteers are needed to offer confidential support to people who are experiencing feelings of distress or despair, including those which could lead to suicide. Volunteers need to be able to listen and give people time to talk through whatever they are feeling. It is important that volunteers understand that the Samaritans does not offer advice and therefore volunteers need to be non-judgemental and neutral. All potential volunteers will be invited to an information hour to find out more about the Samaritans. After applying, volunteers are required to attend a selection day, and those who are successful at this day will be given extensive training and preparation classes before they start to take calls.

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

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