Imperial College London

reporter

Issue 284 ▸ 1 May 2015

Sharing stories of Imperial's community

Magic mix

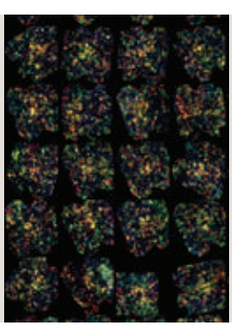
Concrete win for Hara in first Althea-Imperial prize for women entrepreneurs

CENTRE PAGES

GIVING IMPACT

Talking with Imperial's first Vice President of Advancement

PAGE 10



WHEN GIANTS RULED

Uncovering the galaxy clusters of the early universe

PAGE 6

SCIENCE IS VITAL

Stephen Curry on fighting to maintain research funding

PAGE 11

EDITOR'S CORNER

The long game

For me, one of the most interesting moments of the Althea-Imperial female entrepreneurship competition, aside from the superb student pitches, was when Liz Choonara briefed the judges about the programme she and her team in the Enterprise Division had developed for the larger cohort of applicants (centre pages). She emphasized the importance of the journey as well as the final destination and the transformational change and **increased confidence** she witnessed in some of the young women who had taken part. The programme included a development session aimed at confronting and dealing with the possibility of business failure, which studies show is a particular barrier to women starting a business. In the end there were three prize winners on the day, but in the long game of business, there's every chance that **success might eventually spring forth** from one of the runners up, having learned from the experience, gained confidence and reshaped their plans and ideas. Watch this space.

ANDREW CZYZEWSKI, EDITOR

Reporter *is published every three weeks during term time in print and online. Contact Andrew Czyzewski:* ✉ reporter@imperial.ac.uk

NHS election pledges questioned by Imperial researchers

The likely effects of the Conservatives' and Labour's pledges to improve access to primary care are unclear, according to Imperial researchers writing in the *British Medical Journal*.

Both main parties have promised large increases in the number of GPs and significant improvements in access to appointments, yet the pledges are unlikely to be achieved within a parliamentary term, the authors say.

The Labour Party has pledged to recruit 8,000 new GPs and plans to reintroduce the guarantee of an appointment within 48 hours. This target was far from being achieved under the last Labour government, with only 81 per cent of patients able to see a GP within two weekdays in 2009–10.

As well as recruiting 5,000 extra GPs, the Conservatives have promised that if they are re-elected, patients in England will be able to see a GP between 8am and 8pm, seven days a week. This policy has been piloted in 14 per cent of GP practices, but results of an independent evaluation are yet to be published.

Corresponding author Thomas Cowling (School of Public Health) said: "It's important that policies like extended access are independently evaluated before being implemented more widely. The NHS should follow research evaluating new types of appointment that have been proposed to increase GP capacity, such as consultations and triage by phone or online. It should also consider other types of staff who could take on some of the work of GPs, like providing pharmacist-led minor illness services, and investing in public health programmes that could reduce primary care demand in the long run through improving the population's health, which is the most important thing."

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS

'Now is the time for climate justice' says Robinson

The former President of the Republic of Ireland Mary Robinson called for immediate action on climate justice at the Grantham Annual Lecture at Imperial on 16 April.

Former Irish President Mary Robinson at Imperial

Mary Robinson is currently the United Nations Secretary-General's Special Envoy on Climate Change and also the President of her eponymous foundation focused on climate justice.

She delivered a rousing talk emphasising the pivotal role of upcoming international negotiations in tackling both climate change and human rights issues culminating in UNFCC's climate conference (COP21) in Paris in December.

"Now is not the moment to manage expectations or get cold feet. 2015 is the moment to catalyse a transformation. Now is the time for climate justice."

Robinson called for strong leadership and ambition in Paris from developed and developing countries. International cooperation is vital to support developing nations in producing a new model for fossil-fuel-free economic development, she said.

"It was an honour to welcome Mary Robinson to Imperial and to learn about how our own research relates to future social justice," said Martin Siegert, Co-Director of the Grantham Institute. "She emphasised the need to step outside of our silos to achieve success. Through the Grantham Institute's increased collaboration with social science, and experts in poverty alleviation, we can tackle this truly interdisciplinary challenge."

—ALEXANDRA CHEUNG, THE GRANTHAM INSTITUTE FOR CLIMATE CHANGE

IMF chief speaks at Imperial

The International Monetary Fund's Chief Economist Olivier Blanchard was among those speaking at a major conference on sovereign debt restructuring on 30 March.

Blanchard, who is one of the most cited economists in the world, gave the keynote address at the conference, which was jointly organised by the Brevan Howard Centre for Financial Analysis (based in Imperial College Business School), the Initiative on Global Markets at the University of Chicago Booth School of Business, and the International Insolvency Institute.

Delegates heard Mr Blanchard discuss the evolution of the IMF Lending Framework, which required adjustment following the global financial crisis. He explained the issues surrounding debt reprofiling, concessional financing and contagion and the IMF's current thinking to address these.

He told the conference: "Countries with debt are not helped by adding more debt to them. The IMF is therefore looking for ways to improve its Lending Framework."

Franklin Allen, the Executive Director of the Brevan Howard Centre and Professor of Finance and Economics, said: "Sovereign debt restructuring is an issue which many nations are grappling with, following the Global Financial Crisis. The conference was an important opportunity to bring together some of the world's leading experts to discuss ideas and approaches. We are very grateful to Olivier Blanchard for his thought-provoking keynote address as well as all the other speakers who made the conference such a resounding success."

—PETER ZARKO-FLYNN, COMMUNICATIONS AND PUBLIC AFFAIRS

Washington Post editor visits Imperial

Marty Baron, Executive Editor of the Washington Post, met with students and staff during a visit to the College this month to see first-hand some of the College's work.

Baron, Editor of the Washington Post, one of the world's most respected and influential daily newspapers, took the chance to visit the College on 15 April during a trip to London.

Marty met with students studying at the College's Science Communication Unit for an informal discussion on his career in the media, the responsibilities of journalists when reporting science and the future of the newspaper industry.

In the discussion, chaired by Dr Stephen Webster, Head of Imperial's Science Communication Unit, students pressed Marty for his views on a number of issues ranging from balanced coverage of scientific debates to the effect of 'click bait' headlines in online journalism.

Rachel David, studying a Masters in Science Communication, was at the discussion. "I asked a question about new digital focusses in journalism and the decline in investigative journalism as a result," she said. "It was interesting to hear his thoughts as someone running a long running print publication with a strong digital focus too."

During other parts of the visit, Professor Maggie Dallman, Associate Provost (Academic Partnerships), discussed Imperial's work as a key partner in London's new Francis Crick Institute; Professor Yike Guo, Director of the Data Science Institute, spoke about the revolutionary potential of big data; whilst Professor Franklin Allen updated Marty on the work of the Brevan Howard Centre for Financial Analysis.

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

in brief

Bank of England Deputy speaks at Imperial

The UK is in a state of 'good deflation,' according to a speech at Imperial College Business School on 27 March by the Bank of England Deputy Governor for Monetary Policy. Dr Ben Broadbent presented on 'The Economics of Deflation' at an event attended by members of the media, staff, students and external guests. The Bank of England chose Imperial to host the speech, which is one of the institution's last ahead of the lead-up to the general election in May.

"I'm trying to develop a digital mental health app that will accompany you every day discreetly for the rest of your life."

SARAH JONES, FROM THE INSTITUTE OF GLOBAL HEALTH INNOVATION, LAYS OUT HER PLANS TO HELP PEOPLE OVERCOME ANXIETY.

Listen to the full interview here: bit.ly/jones-app

For the people

Imperial College Union has been recognised with the Investors in People (IIP) standard. Employing over 50 full-time staff and over 250 students, it is the first area of the College to hold the standard, which recognises organisations that have great staff satisfaction, a commitment to personal development and a positive culture of improvement. At the end of April Louise Lindsay, Director of Human Resources, joined the Union in a celebratory event in the Beit Quad. Joe Cooper, Imperial College Union Managing Director, said: "This is a great achievement for the Union and a real testament to the hard work of all of our staff. We are working hard to develop a culture where all staff understand their impact on our strategic objectives and are recognised for their contribution."

The Grand Union Canal is part of the Old Oak Common and Park Royal Opportunity Area

Debra Humphris to advise on West London regeneration

The Mayor of London has invited Professor Debra Humphris Vice Provost (Education) to join the newly launched Old Oak and Park Royal Development Corporation (OPDC).

The Corporation will lead the regeneration of Old Oak Common in West London and will seek to deliver up to 24,000 homes and more than 55,000 jobs. A High Speed 2 (HS2) and Crossrail Station is due to be constructed at Old Oak Common by 2026. The new station will be the size of Waterloo, handling 250,000 passengers a day and acting as a super hub between London and the rest of the UK, Europe and the world.

Old Oak Common is adjacent to Imperial's flagship new student accommodation, Woodward Hall in W3, which will open its doors to 600 students this October. The area also neighbours the College's new 25 acre research and innovation district, Imperial West.

Professor Humphris, said: "This is a significant and exciting development for London's evolution as a global city. The OPDC has the chance to make a profound and lasting impact on West London. I look forward to helping OPDC realise the area's great potential for educational opportunities. Complementing the OPDC's initiatives, Imperial will work to strengthen its ties to the area over the coming years, and grow our contributions to the local community and economy."

— ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS

Business students gain data analytics skills with IBM partnership

Imperial College Business School has joined forces with IBM to provide future marketers with crucial skills in data analytics.

Students on Imperial's MSc Strategic Marketing programme are working with IBM and its Digital Analytics platform to apply advanced marketing analytics to live data and case studies.

Angela Dalrymple, Programme Director, MSc Strategic Marketing the Business School, said: "The digital revolution has had a major impact on the way marketers have to approach data. For example, online shopping companies collect vast amounts of data on consumer behaviour and their buying preferences. If you are to thrive as a marketing specialist in today's business world, it's critical to have strong analytical skills.

"Our partnership with IBM means our students have access to real-world tools which help them to select and make sense of the relevant data. We will be teaching them a wide range of analytical skills, and also enabling them to put these skills into practice using this cutting-edge technology."

> "To thrive as a marketing specialist in today's business world, it's critical to have strong analytical skills."
> Angela Dalrymple

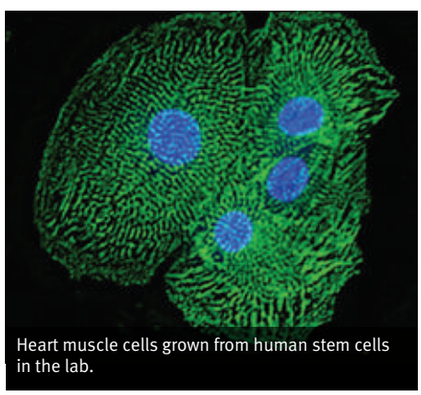
Eric Vonheim, Seed to Succeed Program Manager at IBM, said: "IBM has a long history of helping universities when it comes to enabling students with world-class enterprise technology and resources. Our partnership with Imperial College Business School will play a critical role in helping students become employable and successful in the marketplace."

—PETER ZARKO-FLYNN, COMMUNICATIONS AND PUBLIC AFFAIRS

For more information about the course visit: **bit.ly/strat-mark**

Heart attack drug research awarded £2.7m funding

Imperial has been awarded a £2.7 million grant from the Wellcome Trust's Seeding Drug Discovery (SDD) initiative to develop drugs that lessen the damage caused by a heart attack – supporting two years of work on a programme of research that has already made important progress.



Heart muscle cells grown from human stem cells in the lab.

A heart attack occurs when a clot blocks a blood vessel supplying the heart muscle. Starved of oxygen, the heart muscle cells produce stress signals that ultimately trigger cell death.

Treatments that restore blood flow, such as angioplasty, stents and clot-busting drugs, have been extremely successful at improving survival from heart attacks over the past 30 years. But survivors lose a significant part of their heart muscle irreversibly, which cannot be restored.

Professor Michael Schneider (NHLI) and his team are aiming to develop drugs that could be administered in the early hours of a heart attack to prevent the death of heart muscle cells.

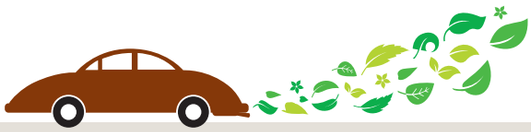
The group has identified an enzyme, MAP4K4, that appears to play a central role in triggering the death of heart muscle cells in response to stress signals. They have also developed potent and selective small molecules that inhibit this enzyme.

The new funding will allow the team to develop and improve these compounds further, test the molecules in human cells and in mice, and identify the most effective, safest candidates to take forward.

"There are no existing therapies that directly address the problem of muscle cell death," said Professor Schneider. "This would be a revolution in the treatment of heart attacks."

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS

media mentions



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

The Economists' Manifesto

FINANCIAL TIMES ▸ 18.04.2015

If Britain's top economists were in charge, what policies would they implement? Tim Harford sets the challenge in the *Financial Times*. Research by Professor Jonathan Haskel (Business School) finds that government funding of science is the perfect complement to private, practically minded research funding. "This is an example of crowding in," he says, meaning that if the government spends more on scientific research it is likely to draw in private funding too. According to Haskel's estimates, the rate of return on basic scientific research is around 20 per cent at current funding levels – a level that would not displease Warren Buffett himself.

Dose of realism for Greens

THE GUARDIAN ▸ *14.04.2014*

The Green Party manifesto, launched on Tuesday 14 April, outlined ambitious climate change targets that would see the UK running a zero carbon economy by 2050. But energy analysts have told the *Guardian* that, while laudable, elements of the Greens' climate agenda may be impossible to implement even if the funding floodgates are opened. "I wouldn't say they are impossible, but you'd really have to be able to put things on a war footing to get to those levels of roll-out in such a short space of time. It would be unprecedented, for offshore wind in particular," said Rob Gross the Director of Imperial's Centre for Energy Policy and Technology.

Friday Boss: Alice Gast

BBC RADIO 4 TODAY ▸ 17.04.2015

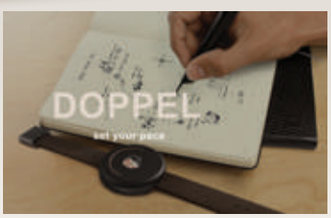
BBC Business presenter Tanya Beckett interviewed Professor Alice Gast, President of Imperial, as the *Today* programme's 'Friday Boss'. Professor Gast spoke about: collaboration; speeding up the translation of academic research at Imperial West in White City; London's strengths in universities, finance and entrepreneurship; the value of outreach work to foster children's natural curiosity in science; the importance of providing opportunities and mentoring to support women entrepreneurs, highlighting the Althea-Imperial which recognise the most innovative female student entrepreneurs in science and tech; and the pressures faced by academics.
To listen, visit: **bit.ly/gast-bbc**

Oil find claim met with caution

NEW SCIENTIST ▸ 15.04.2015

Well, well, well. South-East England could be sitting on a huge oil field, as much as 100 billion barrels, according to reports by the UK Oil & Gas Investments, covered in the *New Scientist*. But some experts have since cautioned about over-hyping the find. Professor Alastair Fraser (Earth Science and Engineering) has questioned the reliability of the estimates, which rely on analysing the oil content of chips of Kimmeridge clay from 760 to 900 metres underground. A better approach, he says, would be to analyse a full cylindrical bore. "Then you know the depth of the oil-bearing deposits, where it comes from and that there's no contamination from higher up."

awards and honours



ENGINEERING

Up the tempo

A device that helps people harness their body's response to rhythm has led an Imperial team to success at a competition hosted by the Duke of York. Alumni Nell Bennett, Jack Hooper, Fotini Markopoulou and Andreas Bilicki, who make up Team Turquoise, were voted the winners of the People's Choice Award at Pitch@Palace 3.0 for their wearable-technology product Doppel. Doppel uses the principle of entrainment – the body's tendency to synchronise with external rhythms – to help users relax or energise themselves. Worn on the wrist, the device delivers a pulse which can be sped up or slowed down by the wearer depending on the desired effect. The team claim that Doppel produces a similar response to listening to upbeat or relaxing music.

ENGINEERING

Pure glass

Professor of Biomaterials Julian Jones has been elected a Fellow of the American Ceramic Society, the premier membership organisation for the global technical ceramics and glass community. The Fellowship recognises outstanding contributions to the ceramic arts or sciences, broad and productive scholarship in ceramic science and technology, conspicuous achievement in ceramic industry, or outstanding service to the Society. Professor Jones' research is focused on developing bioactive glasses for applications in regenerative medicine and tissue engineering and he has pioneered many novel techniques.

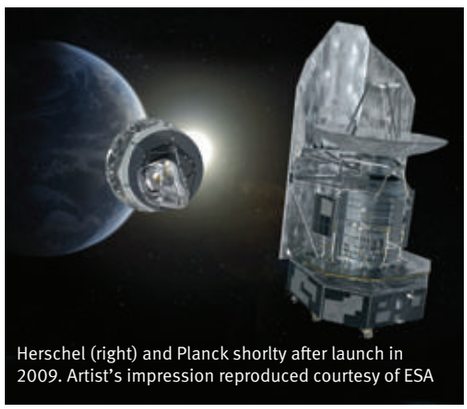
MEDICINE

Medal for Michael

Michael Crawford, Visiting Professor in the Department of Surgery and Cancer and alumnus of the College, has been awarded the Chevreul Medal for his pioneering work in lipid chemistry and brain health. The award was bestowed by the Society for Chemistry and Industry (SCI) and Société française pour l'étude des lipids (SFEL) at a conference in Paris. In 1972 Professor Crawford demonstrated that the brain requires docosahexaenoic acid, an omega-3 fatty acid for its growth, structure and function and could play a role in many brain disorders from Alzheimer's disease to depression.

Looking back in time at the giants of the early universe

"We can now get a much clearer understanding of what's going on."
Dr David Clements (Physics)



Herschel (right) and Planck shorlty after launch in 2009. Artist's impression reproduced courtesy of ESA

Astronomers have spotted more than 200 rapidly star-forming clusters of galaxies that could shed light on galaxy evolution.

These clusters are the largest objects in the universe, containing hundreds or thousands of galaxies, and were discovered by the international Planck Collaboration by combining data from the European Space Agency's (ESA) Planck and Herschel missions.

"We had hints of these kinds of objects before, but this study found a huge number of these things," said co-author Dr David Clements (Physics), adding: "We can now get a much clearer understanding of what's going on."

Light takes time to travel thus when we observe objects far away in the universe we are actually seeing them as they looked in the past, in the case of these clusters up to 10 billion years ago – just 3 billion years after the formation of the universe.

The star-forming galaxies in the clusters are thought to be early stages of what we see today as giant elliptical galaxies, containing many stars but little dust and gas.

The next steps will be to look in more detail at the clusters in order to accurately define their ages and investigate the shape and environment of their star-forming galaxies. This might uncover galaxy collisions thought to lead to the formation of giant elliptical galaxies. In approximately four billion years our own galaxy, the Milky Way, will collide with the neighbouring Andromeda galaxy to form a new giant elliptical galaxy.

—HAILEY DUNNING AND REBECCA RENE, COMMUNICATIONS AND PUBLIC AFFAIRS

Eye on the sky

The European Space Agency (ESA) launched the Planck and Herschel missions on 14 May 2009 to study the origins of the universe. The two missions were quite different but complementary and shared a ride to space on an Ariane 5 rocket. Planck's main objective was to measure the Cosmic Microwave Background which can reveal the universe as it was about 380,000 years after the Big Bang; unveiling the initial conditions from which the universe evolved. On board Herschel is the most powerful infrared telescope ever flown in space, able to study the origin and evolution of galaxies and stars. The Planck satellite scans large areas of the sky, allowing the Planck Collaboration to select interesting candidate areas, which they then look at more closely with the Herschel space observatory to confirm the presence of galaxy clusters.

A lonely landscape

Species numbers have decreased by an average of 14 percent where humans have altered the landscape, affecting the functioning of major ecosystems according to an international study.

The researchers compiled data from 90 countries and 450 scientific papers, representing more than 40,000 species, to map the changes in biodiversity since the year 1500. The research shows how human caused land-use changes, such as the growth of agriculture, plantations and urban centres, have caused a global fall in the numbers of species found in local ecosystems.

Most of these losses have come in the last 100 years, following the industrial revolution. If human impacts continue on the current trend, the study predicts another 3.4 percent loss in species globally by 2100. However, if practices change, and highly diverse forest ecosystems are given economic value to reflect their importance in reducing climate change, the last 50 years of losses could actually be reversed.

Lead scientist Professor Andy Purvis (Life Sciences) said: "These findings are a significant milestone in understanding our impact on the planet. They show that what happens next is completely down to us. If society takes concerted action, and reduces climate change, then by the end of the century we can undo the last 50 years of damage to biodiversity on land."

—HAYLEY DUNNING, COMMUNICATIONS AND PUBLIC AFFAIRS

The new research is part of the Projecting Responses of Ecological Diversity In Changing Terrestrial Systems (PREDICTS) project involving the Natural History Museum, the United Nations (UNEP-WCMC), and British universities including Imperial.

Rock solid storage

Scientists may have found the best method for trapping carbon dioxide permanently in rocks deep underground, bolstering support for Carbon Capture and Storage (CCS) technology as a viable method in the fight against climate change.

Advocates of CCS have long proposed a method which involves replacing salty water trapped inside the microscopic pores of rock with carbon dioxide, referred to as capillary trapping. However, it's not clear if this method is suitable for the types of rocks currently earmarked as potential underground reservoirs, such as sandstone and carbonate deposits.

Now scientists from Imperial have replicated the capillary trapping process in the lab and experimented on Berea sandstone. They found that 50 per cent of carbon dioxide stays in the immediate vicinity of where it is injected in the rock, with the rest being trapped as it rises further up the layers of rock between the sandstone and the surface.

The team then subjected the sandstone to a range of environmental conditions and found that the rock could withstand the enormous pressures and temperatures it was subjected to without losing trapped carbon dioxide. They also continuously pumped salty water through the Berea sandstone to replicate an 'ageing process' over 100 years – which again failed to dislodge the impregnated carbon dioxide.

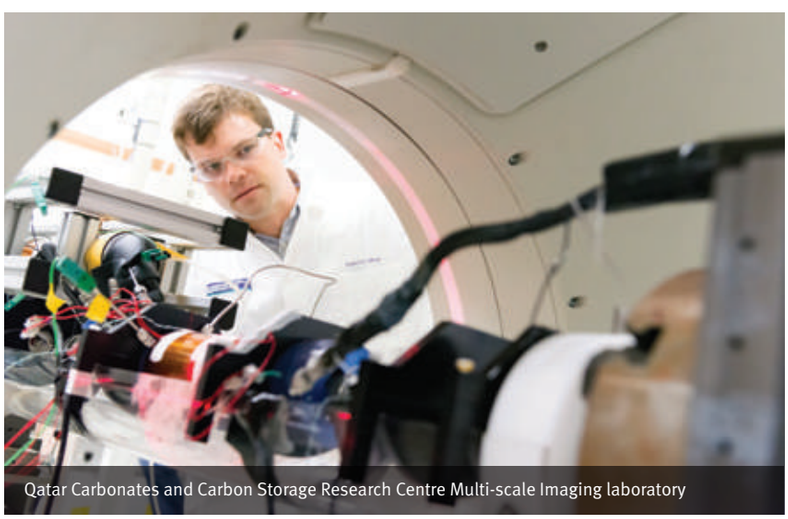
Study co-author Dr Samuel Krevor (Earth Science and Engineering) said: "Fossil fuels still dominate the global economy and we need technologies that are going to help us to make the transition to a cleaner environment. Our findings show that with capillary trapping there is little risk that it will leak, making it a safe and robust method for carbon dioxide storage, which could help us to tackle climate change."

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

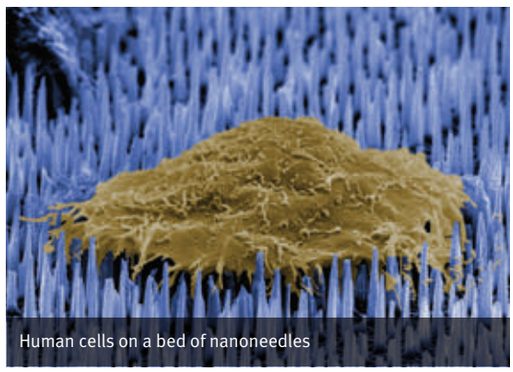
> "We need technologies that are going to help us to make the transition to a cleaner environment."
> Dr Samuel Krevor

Method

The research was carried out in the Qatar Carbonates and Carbon Storage Research Centre Multi-scale Imaging laboratory, which is only one of three laboratories around the world with the ability to observe how carbon dioxide is stored in rocks. The researchers used a large set of specialised high pressure pumps to circulate fluids through the rock in the same conditions that occur deep underground. They used an x-ray imaging device to image the fluids in 3D within the rock core, while carbon dioxide and water were moving through the rock.



Qatar Carbonates and Carbon Storage Research Centre Multi-scale Imaging laboratory



Human cells on a bed of nanoneedles

Nanoneedles deliver the goods

Scientists have developed tiny nanoneedles that have successfully prompted parts of the body to generate new blood vessels, in a trial in mice.

The nanoneedles work by delivering nucleic acids including DNA to a specific area to genetically re-program cells and it is hoped that the technique could ultimately help damaged organs and nerves to repair themselves and help transplanted organs to thrive.

Reporting results from the first trial of the technique, a team from Imperial and Houston Methodist Research Institute in the USA showed they could deliver the nucleic acids DNA and siRNA into human cells in the lab, using the nanoneedles. They then inserted a small chip with an array of the nanoneedles into the back muscles of mice. After seven days there was a six-fold increase in the formation of new blood vessels in the mouse. The technique did not cause inflammation or other harmful side effects.

"Unlike existing techniques to deliver nucleic acids to cells, such as using a virus vector, the nanoneedles localize the delivery to a very confined and specific area, thereby avoiding side effects that might occur through exposing the entire body to the treatment and also sidestepping any concerns about safety and toxicity of viral delivery," says co-author Professor Molly Stevens (Materials).

The researchers are now aiming to develop a flexible bandage that can incorporate the nanoneedles that would be applied to different parts of the body, internally or externally, to deliver the nucleic acids necessary to repair and reset the cell programming.

Co-author Dr Ciro Chiappini (Materials) added: "Perhaps in the future it may be possible to apply these bandages to severely burnt skin to reprogram the cells to heal that injury with functional tissue instead of forming a scar. Alternatively, we may see surgeons applying the nanoneedle bandages inside the body to promote the healthy integration of new organs and implants."

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

The Althea-Imperial finalists (front row, L-R): Vidhi Mehta; Clementine Chambon; Charikleia 'Hara' Spathi; Kerry O'Donnelly; Angela de Manzanos; Ravneet Bhuller

High growth potential

The pioneering scheme inspiring a new generation of entrepreneurial female students

The economic downturn has presented businesses and traders in the UK with both challenges and opportunities. An emerging trend is that the climate has led more women to start their own ventures, with government statistics showing that since 2008 the number of women in self-employment has increased by 34% compared with a 15% rise in men.

Yet behind the figures there are some telling disparities. For example, across the science, engineering and technology sectors, there are 10 times as many male-owned than female-owned companies. Fear of debt is the single largest barrier to entrepreneurship for both men and women, although the effect is far more pronounced in women. Also, women tend to start businesses with lower levels of capital – in terms of financial capital, human capital (management training and experience) and social capital (effective networks).

Tackling some of these issues was the driving force idea behind a pioneering scheme conceived by Imperial and the social venture philanthropic organisation the Althea Foundation to invest $100,000 in a three-year entrepreneurship programme and prize.

Launched in October last year, the scheme invited female undergraduates and postgraduates at the College to take part in a series of development and mentoring sessions – as Programme Champion Professor Maggie Dallman (Associate Provost for Academic Partnerships) recalls.

"When we conceived the programme, our biggest fear was that very few women would come forward, and so we tried to manage our own expectations and agreed that we would be happy if we had five groups in total.

"Amazingly, 67 applicants joined the programme. It was a resounding vindication of the concept – we knew that great talent and amazing ideas were out there we just had to provide the right forum and the right opportunity for our young women to engage in entrepreneurial activity."

The Althea Foundation

The Foundation's goal is to invest, measure and scale the expansion of important ideas that may otherwise be neglected, underfunded or overlooked. It provides both early-stage development funds and non-repayable grants aligned with its objective. Chair and Founder Alexsis de Raadt St James (below, right) comments: "It has been my honour to work with Imperial, an institution that shares my passion for promoting innovation and entrepreneurship. With a high turnout among students and truly ground-breaking ideas, the Althea-Imperial Programme sets a precedent for excellence that I look forward to building on in years to come."

If you want to get involved in the Althea scheme as a student entrepreneur or staff mentor visit this link to register your interest: **bit.ly/Imp-althea**

> “We knew that great talent and amazing ideas were out there we just had to provide the right forum and opportunity.”
>
> **Professor Maggie Dallman**

Those 67 applicants underwent five developmental sessions between October and February that focused on solving grand challenges; unlocking creative skills; developing leadership skills; learning from failure and harnessing public speaking skills. In the end 21 groups submitted proposals for businesses and of these five were selected to pitch their ideas in front of a panel of judges made up of international technology and investment experts on 21 April.

Head judge and Althea Board member Lesa Mitchell, currently Chairman and Founder of Networks for Scale, commented: “I have had the opportunity to judge many other competitions in the US, yet we were genuinely taken aback by the poise with which these young women presented their ideas for taking nascent technologies to the market. They were amazing.”

In the end the judges chose one overall winner who will receive £10,000 in funding and two runners up who will get £5,000 each. All three proposals were noted for their ingenuity, humanity and social impact – chiming with the Althea foundation’s mission (see right).

WINNER // **Charikleia ‘Hara’ Spathi**
Civil and Environmental Engineering PhD

Watertight

Charikleia ‘Hara’ Spathi won over the judges with rock solid confidence in her idea and business model coupled with an excellent command of the figures and potential market. Hara spells out the aims of her project in typically bold fashion: “I want to waterproof the world!” she says, adding: “But I want to do it sustainably.”

Concrete is a ubiquitous material; in fact our entire Western Civilisation is built upon its versatility and strength. “The ancient Greeks were some of the first people to use the material,” says Hara, in a nod to her distant compatriots. Yet, concrete is far from invulnerable and can degrade – in most cases due to the ingress of water, which can also speed up degradation further by carrying chemicals that attack steel reinforcements. With extreme weather conditions brought on by climate change, the problem can only get worse. “Repair costs can be as high as £2,000 per square metre, which equates to £3 billion pounds in the UK annually, and $2 trillion world-wide,” says Hara. There are additive agents currently on the market that can be used to increase waterproofing of concrete, but they are expensive, use hazardous chemicals and are not sustainably sourced. Hara and team have found a way of creating super hydrophobic additive powder for concrete using only waste produce from the paper industry (referred to as paper sludge ash, PSA).

Tests in the lab have shown that it could be four times more waterproof than existing additives with no detriment to strength or density. “The worldwide market for waterproof concrete additives is in the region of £2-4billion and we believe that we could in theory capture around 35%,” says Hara. Rather than trying to scale up production themselves which would require huge capital, Hara’s team has shown real business acumen in their plan to license and outsource their technology.

RUNNER UP //

Clementine Chambon, Chemical Engineering PhD

Empowering change

Clementine Chambon is the co-founder of Oorja (meaning ‘energy’ in Hindi). She captured the judges’ attention with a powerful and emotive pitch, focussing on the plight of some eight million women living in rural Uttar Pradesh, Northern India, who have no access electricity and a precarious livelihood blighted by ever-increasing crop failures. Oorja’s solution is to literally put power back in their hands – by installing community-owned power plants that use locally-sourced agricultural waste including rice husks to generate sustainable electricity, gas for heating and cooking as well as fertilising biochar as a by-product. Oorja has developed a unique design for a pyrolysis reactor that can be manufactured and operated with only minimal training. Central to the idea though is to franchise the operation to communities themselves.

RUNNERS UP //

Kerry O’Donnelly and Angela de Manzanos, Chemistry PhD

Farmers’ friend

Kerry O’Donnelly and Angela de Manzanos of FungiAlert are no strangers to success, having already netted £30,000 in seed funding as winners of the Institute of Chemical Biology CDT-DEN and Venture Catalyst Challenge. And they clearly have great faith in their idea, believing they can corner a market worth billions, with a device they say would act like “a smoke alarm for farmers,” who lose on average 30% of their crops to the soil-borne plant pathogen phytophthora. Current detection methods are too slow, alerting farmers to the problem after infection by the fungus, by which point the crops are untreatable. FungiAlert is an in situ, simple-to-use device that enables the early detection of plant diseases in soil and water with a simple colour-based signal. The team are planning field trials of their technology in the coming months.

Raising the stakes

Sarah Porter Waterbury is Imperial's first Vice President of Advancement

To an outsider, advancement and philanthropy can seem rather enigmatic and shrouded in mystique – a sort of dark arts in the higher education sector. How exactly are individuals and organisations persuaded to give – sometimes great sums – to universities?

That's one of the main questions I wanted to find out before meeting Sarah – who has an exemplary track record in this area. Perhaps there's a secret recipe or formula?

It quickly becomes clear though from Sarah's answers and the questions she asks, that it's less about persuasion and more about building good relationships.

"People are people, the world over," says Sarah who has worked in Latin America, the Middle East and the US. "And people like to give to people. Donors need to feel comfortable and trust us, which can take time. As you get to know someone you begin to see what matters to them, and you can then make suggestions and develop ideas that resonate with them personally."

The first priority for Sarah though will be building relationships internally, by getting to know members of the Imperial community – including staff across the departments and student groups. Sarah sees that as absolutely essential in establishing the foundations from which to work.

"Ultimately we're trying to showcase the university to the right audiences, whether it's people or organisations that can help us with our financial and resource needs – or recommend us to prospective staff and students and tell them what a great place it is to work and study."

Impact of giving

For Sarah, job satisfaction comes in a large part from seeing the impact that advancement activities and gifts can have – both on the recipient institution and the donor themselves.

She's especially keen to point out how impact is distributed across different levels – £5,000 could transform the life of a student who might otherwise not have been able to come to an institution like Imperial; while £50 million could transform the university, bequeathing new facilities or establishing an endowment.

On the other side of the coin, the impact on a donor can be just as profound Sarah says.

"It deepens their connection to the institution and they begin to feel more engaged in its mission and the work. I love seeing that side of human nature; it's always inspiring."

A new way of thinking

As Vice President of Advancement, Sarah and her team will be responsible for all aspects of fundraising as well as alumni relations and events.

Sarah is aware that she has a lot to learn about how giving to higher education is viewed in the UK, where generally people are accustomed to seeing the state as the principal supporter.

"In the US, most people understand that universities need philanthropic support and that to compete effectively they need to attract the very brightest students who may not have the resources to pay tuition, so people are more willing to fund scholarships. Often families with the means will pay for their own child and then pay for another child at the same time. It's just wonderful to see that kind of generosity."

Sarah has already been in touch with development colleagues across the UK at other leading universities and some of the great museums and cultural institutions and she's delighted to see the important work happening in philanthropy. "It's a great group and I know I'm going to learn a lot about UK philanthropy and hopefully make my own mark."

Sarah's CV

- *Major Gifts Officer*
  Harvard Business School
- *Director of Development and External Relations*
  Fletcher School, Tufts University
- *Deputy Vice President for Development*
  American University, Beirut
- *Senior Director of Campaign and Major Gifts*
  Children's Hospital Boston
- *Vice President for Development and Campaigns*
  New York University

> "Donors need to feel comfortable and trust us, which can take time."

3 facts about Sarah

1// As a teenager she was a competitive swimmer and has retained a hint of that competitive instinct. "Get me near a pool and I still want to win!"

2// Studying a BA in History at Princeton University she specialised in Latin American History and the impact of colonial powers on ancient native civilisations.

3// She and her husband are both keen birdwatchers. "We're excited to head out to the British countryside and get to know the birds here."

inside* story

mini profile

Professor Stephen Curry

Stephen Curry is Professor of Structural Biology in the Department of Life Sciences and Vice Chair of Science is Vital – which campaigns to prevent damaging cuts to UK science funding.

How do you look back at this government's record on research spending?

It's been a real mixed bag. Going back to May 2010 there were all sorts of dark threats about cuts across the board and that the science community would have to do more with less. That catalysed the formation of Science is Vital and mobilised many other scientists and members of the public to protest, and in the end there was a ring fence settlement with the budget frozen at £4.6 billion from 2010 to 2014. Yet over that period there's been a 15% erosion of the budget in real terms due to inflation, such that the UK's research spending has dropped to just 0.5% of GDP – the lowest in the G8. That's why we are calling for a budget commitment of 0.8%, the G8 average – and campaigning to get people to talk about this issue with their parliamentary candidates during the election.

But the UK has always punched above its weight?

If you look at the global picture, about 3% of total investment in research is spent in the UK but we produce 10% of the scientific papers. But you simply cannot expect to sustain a vibrant system over the long term if the budget continues to decline.

What is the future outlook in terms of election pledges?

Neither the Conservatives nor Labour have given any indication that they will protect the existing ring fence around the research budget, which is a real concern. The Liberal Democrats have committed to increase the budget 3% year-on-year above inflation, but that would require negotiation with any future coalition partner. Interestingly, the Green Party has committed to increase the research budget as a percentage of GDP from 0.5% to 1%, which is highly ambitious; yet they would ban any form of animal testing, which would seriously harm medical research.

For more info see: **scienceisvital.org.uk**.
Stephen is also speaking at Imperial Festival on Saturday 9 May

Plane sailing

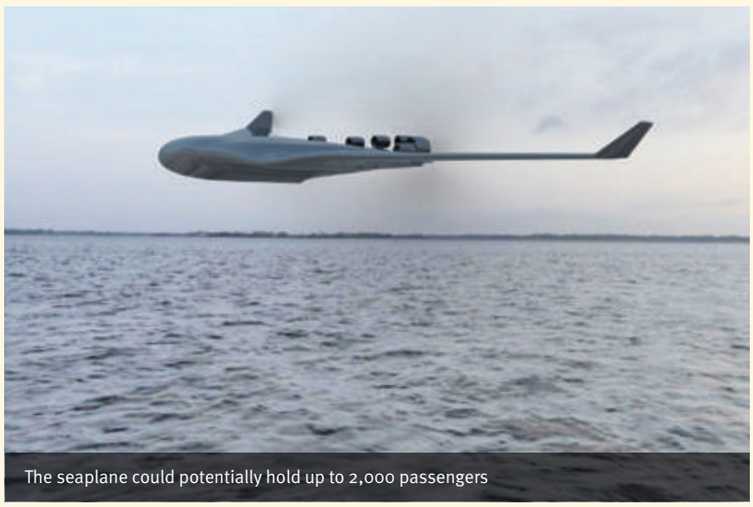
These striking concept designs show a futuristic trans-Atlantic seaplane that could be the answer to growing pressure on commercial airlines, according to Imperial engineers.

In a study published by the Royal Aeronautical Society, the researchers assessed the possibility of using highly advanced waterborne aircraft as an alternative to conventional planes for trans-Atlantic travel.

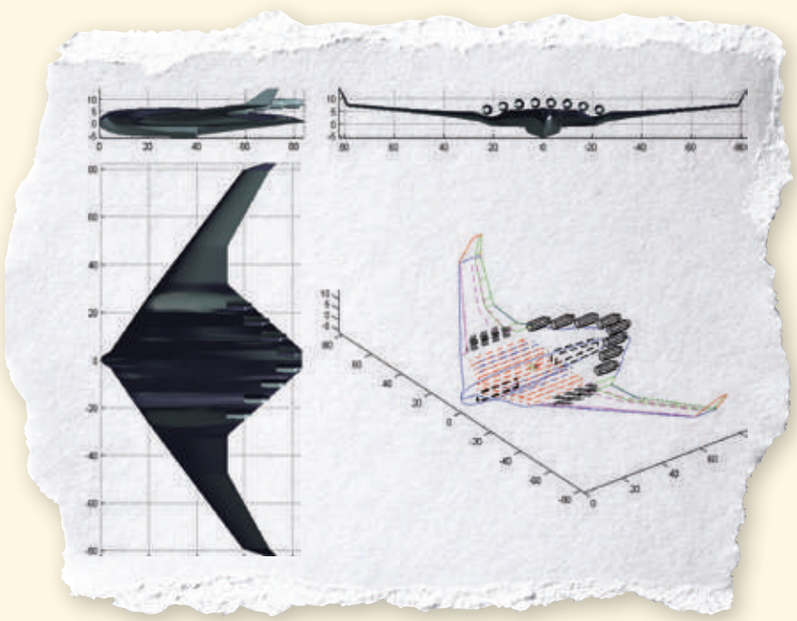
The design takes its inspiration from the flying boat aeroplanes of the 1940s, which had a V shape hull, giving the plane buoyancy and navigability when landing and taking off from the water and reducing air resistance, or drag, when it is in the air, which could make it more fuel efficient.

"For many people the majestic seaplanes of the 1940s evoke a more romantic era in aviation history. In the Twenty First Century, the aviation industry is facing new challenges and we wanted to show a radical approach to the constraints on land-cased airports, and look at how advanced seaplanes, using today's technology, could once again become an alternative mode of travel for long-haul flights," said Dr Errikos Levis (Aeronautics).

—SARAH GAUNT, SCHOOL OF PROFESSIONAL DEVELOPMENT



The seaplane could potentially hold up to 2,000 passengers



Pari made his signature coffee for members of Imperial's senior team during a meeting held at H-bar

Brewing up a storm

A member of Imperial's staff was crowned national university barrista champion at a competition in Blackpool on 17 March that attracted the best catering staff from across UK higher education institutions.

A dedicated team from Campus Services – comprising baristas Pariwartan Nepal and Andrea Galanska, and chefs Stevan Bedward, Steve Robertson and Andy Crook – made the trip up to Blackpool to take part in the finals of The University Caterers Organisation (TUCO) 2015 competition.

In a fiercely competitive field, barrista Pari Nepal maintained his composure in a set of timed skills challenges and wowed the judges with his signature creation to claim the gold medal.

"Having competed last year I knew what to expect this time round and I put in hours of preparation and hard work. Thanks to the support of my Imperial colleagues and Peros Coffee Company we succeeded and my dream came true," said Pari.

His signature creation 'Smooth Passion' is a rich and creamy blend of star anise infused espresso, passion fruit, lime and hint of vanilla.

"I originate from Nepal where we use lots of different spices in our food and drinks. I wanted to bring a part of my culture to this particular drink whilst creating an unforgettable flavour. I also drew inspiration from the popularity of our own bubble tea at Imperial. The mixture of these ingredients gives the drink very special aroma."

Jemma Morris, Head of Catering Operations, added: "We're extremely proud of Pari's achievement, it perfectly reflects his tireless enthusiasm and passion to deliver that little bit extra for staff, students and guests to Electrical Engineering Café."

"We're extremely proud of Pari's achievement."

blog SPOT

Student blogger Nebz: **Enjoying the moment!**

When this year started I was convinced that by now I would have achieved so many things – such as joining basketball, gospel choir, writing, learning Japanese, etcetera etcetera. However as of yet nothing's happened. I find myself getting caught up with studying and working, with little money left to do what I'd planned.

However living in London has made me see that cash has little to do with having a decent time. In all honesty, all you need is great company! Whether it's roller skating along the South Bank at night with friends, having extra practice with the church band or catching up with my family over some delicious but cheap pizza-cookie topped with ice-cream to share, I'm already loving this year, even though I haven't done all that I planned to do. Don't get me wrong, I still have my list, but I'm learning to live in the moments as they happen and not worry so much about the future.

More from Nebz and our other student bloggers:
wwwf.imperial.ac.uk/utils/sites/studentblogs/

Imperial staff member marries half way through the London Marathon

There were celebrations all round at the finish line for the London Marathon on Sunday 26 April... but some had more to celebrate than others.

Whilst most runners were focused on their race times during Sunday's London Marathon, one runner from Imperial marked his own personal milestone as he tied the knot midway through the 26.2 mile course.

Paul Elliott, a HR Adviser in the College's Faculty of Natural Sciences, and his partner Laura Harvey paused at the 12.5 mile mark to exchange vows in front of nearly 100 guests at a 45 minute ceremony held near St Katharine Docks.

The couple, who have so far raised more than £6,000 for Cancer Research UK from people sponsoring their Marathon nuptials, then continued with the 26.2 mile race, passing their guests a second time at 21 miles before crossing the finish line together at Buckingham Palace.

"We knew we didn't want a traditional wedding, and I had always wanted to run the London Marathon, so it seemed like a good idea to combine the two! My partner has run it before, and always said she would never do it again. I've managed to convince her to come out of retirement just this once for the occasion.

We're raising money for Cancer Research UK, which is a charity very close to my heart as my father died from bowel cancer in 1995. As he can't be at the wedding, it feels very fitting to do this in his memory."

—DEBORAH EVANSON, COMMUNICATIONS AND PUBLIC AFFAIRS

Imperial celebrates its long serving staff

Imperial staff came together to mark milestone anniversaries at the College's annual Long Server celebrations in April.

Staff who had reached 20, 25 and 30 years of service in 2014 gathered at a drinks reception on Tuesday 14 April, while on Monday 20 April those marking 35 and 40 years with Imperial attended a formal dinner.

Congratulating staff, Imperial's President Professor Alice Gast, said: "You have given a very significant amount of your working life to Imperial and it's important that you know how much we, your colleagues and friends, appreciate your commitment. You have played an important role in shaping the College we know today. Imperial's continuing excellence is because of people like you."

At the events, staff reminisced about their favourite memories of Imperial and the changes they had witnessed since they first arrived at the College.

Christine Gale (ICT) celebrated 40 years of service. She said: "The thing that I have always enjoyed most about working for Imperial is that everyone tries to help each other and they always have time for you. When I started my Imperial career – in the Computer Centre as the Department was then known – I was pleasantly surprised to find how friendly everyone was and that everyone was on first named terms. I had worked for a large bank before then, so that level of familiarity was strange to me then! Many of my colleagues have now gone on to become my close friends."

Dr Daryl Williams (Chemical Engineering) was marking a quarter of a century at Imperial: "Certainly a highlight of my time at Imperial would be when we opened the College's Carbon Capture Pilot Plant in 2012. I was Director of the Pilot Plant project, and the unveiling of the facility was the culmination of four years of hard work by a large departmental and College team. Over 250 people attended the opening, and since then we've had more than 5,000 people visit the Pilot Plant, including visiting dignitaries and VIP guests."

Dr Matt Lee (Medicine) was recognised for 20 years of service. He said: "A highlight of my time here has got to be the fantastic people – students and staff alike. I'm fortunate to have a great team within the Department of Medicine, and I actually ended up attending the weddings of some of the students I was personal tutor to."

—DEBORAH EVANSON, COMMUNICATIONS AND PUBLIC AFFAIRS

GET SET FOR **FAB FOURTH FESTIVAL**

The Festival returns for a fourth time on Saturday 9 and Sunday 10 May with exhibitions, demonstrations and talks on Imperial's cutting edge research, including zones dedicated to robots, the brain, superbugs and light.

This year, in addition to music and dance performances there will also be an opportunity to hear from Imperial researchers who have recently published popular science books.

In the Explore Zone, younger visitors can experiment with jelly worms and Lego engineering, and extract DNA from strawberries. In the Robot Zone, Festival-goers can fly a drone, play Jenga through the eyes of a machine and meet a mechanical dance partner. In a series of talks, researchers will discuss their work on earthquakes, genetics, pandemics and psychedelic drugs.

They will be joined by a host of performers including a cappella groups, a string ensemble, award-winning Bhangra dancers and Imperial's ever-popular belly dancers. Food will be on sale from the London Farmers' Market and drinks available from Imperial's pop-up pub the Haemo Globe Inn.

Imperial Festival runs from Saturday 9 – Sunday 10 May 2015 at South Kensington Campus. See back page for details.

FESTIVAL SNEAK PEEK

X-ray-like vision for doctors

Drs Ben Glock and Jiefei Ma from the Department of Computing will be showcasing their work aimed at creating new ways of visualising medical images at the Research Zone (see back page).

"Every day doctors use images to look inside the bodies of their patients; these images help them diagnose disease and plan treatment and operations. In our research we are developing computer programmes that allow doctors to assess images more efficiently and more objectively. We are building a system based around a headset that provides doctors with 'superman-like x-ray vision' to allow them to see medical images directly overlaid on the patient. In this way they can essentially peek inside the patient's skull and see anatomical structures like blood vessels and brain tumours before opening the skull to do the actual surgery.

"You can come along to our booth at Imperial Festival and try the head-set to get hands on experience of what the future of neurosurgery could look like."

Watch a video of the technology in action: **bit.ly/fest-prev**

Welcome

new starters

Dr Muhammad Afzaal, Chemical Engineering
Miss Zen Alaestante, Surgery & Cancer
Mr Amin Alamshah, Medicine
Dr Virginia Alonso Gutierrez, Mechanical Engineering
Dr Aseel AlSaleh, Medicine
Dr Salzitsa Anastasova-Ivanova, Computing
Mr Giuseppe Antonacci, Physics
Dr Hussain Anwar, Physics
Mr Mo Asif, ICU
Dr Mohamed Bellahcene, NHLI
Mrs Yvie Bingham, NHLI
Miss Charlotte Binney, Sport and Leisure
Dr Gabriel Birgand, Medicine
Miss Johanna Bishop, Accommodation
Mr Jonathan Blackledge, ICT
Mr Tom Boyce, Accommodation
Miss Eleri Canning, Registry
Mr Joshua Chadney, Physics
Mr Adam Clancy, Chemistry
Dr Carlos Correia Braga, Chemical Engineering
Miss Winifred Coyne, Accommodation
Mr Bojan Cvijan, Registry
Mrs Agnieszka Damasiewicz, Mathematics
Dr Leonardo De Oliveira Martins, Materials
Dr Janet De Wilde, Graduate School
Mr Bisrat Debebe, Medicine
Miss Sian Devlin, NHLI
Miss Lara Dooley, Accommodation
Dr Tania Dottorini, Life Sciences
Mr Anh Duong, Finance
Mr Omer Elfakir, Mechanical Engineering
Mr Mark Ellis, Public Health
Dr Alicia Estacio Gomez, Life Sciences
Mr Lionel Fafchamps, Physics
Ms Verity Farnham, Public Health
Dr Sam Farrell, Public Health
Mr Daniele Filaretti, Computing
Dr Lydia Finney, NHLI
Miss Kiera Fitzsimons, Public Health
Mr Pedro Fonseca Rodrigues, EEE
Mr Christopher Foord, Catering Services
Dr Letizia Foroni, Medicine
Ms Cathryn Fox, Physics
Dr Maria Fuentes Perez, Clinical Science
Mr Gediminas Galinis, Physics
Mr Daniel Gao, Medicine
Mr Sylvain Gennaro, Physics
Mrs Sara Ghoreishizadeh, EEE
Ms Alyssa Gilbert, Grantham Institute
Dr Julie Glanville, Clinical Science
Dr Matthew Greetham, Civil and Environmental Engineering
Dr Jana Hagen, Life Sciences
Mr Grani Hanasusanto, Computing
Mr James Hardy, Registry
Miss Rosie Hart, Mathematics
Dr Nico Henriquez, Public Health
Miss Laura Heseltine, School of Professional Development
Ms Louise Hill, ICT
Dr John Hosking, Library
Miss Allison Hunter, Life Sciences
Ms Martha Imprialou, Medicine
Miss Courtney Johnson, Accommodation
Mrs Nelly Jolinon, Medicine
Dr Andreas Kafizas, Chemistry
Dr Ilkka Kalliala, Surgery & Cancer
Mr Sebastian Kaltwang, Computing
Dr Tahereh Kamalati-Buluwela, Public Health
Dr Jonathan Keating, Development
Mr Nick Keith-Barnett, Public Health
Dr Sandra Kemp, Materials
Dr Ahmad Khoder, Medicine
Miss Lisa Kleiminger, Chemical Engineering
Mr Matthias Knop, Materials
Dr Peyda Korhan, Life Sciences
Miss Evie Kritioti, Public Health
Dr Sacheen Kumar, Surgery & Cancer
Dr Zeynep Kurban, ESE
Miss Rebecca Lane, Physics
Mr Qingyang Lin, ESE
Mr Zhiq Liu, Chemistry
Dr Naomi Low-Beer, Surgery & Cancer
Dr Nathalie MacDermott, Medicine
Dr Tanya Maric, Surgery & Cancer
Mr Eamon McMurray, Mathematics
Dr Charlotte Millership, Medicine
Mr Joan Miro Blanch, Medicine
Dr Justyna Miszkiewicz, Medicine
Miss Susana Murphy, Faculty of Medicine Centre
Dr Pratheeban Nambyiah, Clinical Science
Mrs Daiva Naudziuniene, Computing
Miss Kerri Nepean, Faculty of Medicine Centre
Dr Binh Nguyen, ESE
Dr Simon North, Life Sciences
Dr Stephen Nyangoma, NHLI
Dr Oluwaseun Ojo, NHLI
Dr Raffaele Palladino, Public Health
Miss Victoria Palmer, Public Health
Mrs Pooja Pandey, Life Sciences
Dr Philippos Papathanos, Life Sciences
Dr James Pearson, EEE
Mr James Pecover, Physics
Mrs Elisa Pedraza Caballero, ICT
Mr Oliver Pike, Physics
Mr Nemanja Rakicevic, Computing
Mr Jorgen Rennemo, Mathematics
Mr Kyriakoulis Resvanis, Mechanical Engineering
Ms Rebecca Rhead, Public Health
Dr Roberto Rinaldi Sobrinho, Chemical Engineering
Mr Jordie Roberts, Medicine
Ms Katherine Rogers, Medicine
Dr Rebecca Rolfe, Bioengineering
Dr Arnaud Ruellan du Crehu, Mechanical Engineering
Mr Anderson Santos, Mathematics
Dr Pooya Sareh, Aeronautics
Dr Karthik Sasihithlu, Physics
Mr Jorrit Schafer, Life Sciences
Ms Anastasija Schmidt, NHLI
Miss Paraskevi Seferidi, Public Health
Dr Saurabh Shah, Chemical Engineering
Mr Rob Sherwood, ICT
Mr Kirill Shkura, Medicine
Dr Markus Sikkel, NHLI
Miss Effrosyni Simou, Computing
Miss Laura Singleton, Communications and Public Affairs
Miss Sivatharjini Sivarajasingam, Surgery & Cancer
Ms Anna Skordai, Medicine
Dr Roberto Solari, NHLI
Dr Sanooj Soni, Surgery & Cancer
Mr Hugh Sparks, Physics
Mr Iain Stewart, Computing
Miss Andria Stylianou, Public Health
Miss Johanna Sukumar, Public Health
Mr Fei Teng, EEE
Dr Joseph Tobias, Life Sciences (Silwood Park)
Miss Rita Trombin, Public Health
Miss Jenny Troy, Surgery & Cancer
Mr Victor Urubusi, Physics
Dr Martina Valentini, Life Sciences
Miss Kimberley Walsh, HR
Mr Zheng Wang, EEE
Mr Dean Ward, ICT
Mr Nigel Ward, Security Services
Mrs Sarah Waterbury, College Headquarters
Mr Gareth Williams, HR
Mr Michael Wilson, College Headquarters
Miss Catherine Yao, Surgery & Cancer

Farewell

moving on

Dr Luis Adrio Castineira, Chemistry
Mrs Parvin Ahmed, Medicine
Mr Simon Alexander, Estates Division (7 years)
Mr Hutan Ashrafian, Surgery & Cancer (8 years)
Dr Morteza Aslanimejad, Physics (7 years)
Dr Fernando Avila Rencoret, Surgery & Cancer
Mr Ali Ayoub, Public Health
Dr Monika Bajorek, Medicine
Mrs Valerie Barber, Development
Mrs Rachel Barker, Physics
Dr David Bernardo Ordiz, Medicine (5 years)
Mr Andy Blyth, Medicine
Dr Vassiliki Bravis, Medicine
Mr Joshua Buckman, Public Health
Dr Elaine Burns, Surgery & Cancer
Dr Luke Chipperfield, Physics
Mr Matthew Clough, Chemistry
Dr David Connell, NHLI
Dr Blair Crewther, Computing (5 years)
Mr Andy Crombie, Faculty of Natural Sciences (9 years)
Dr Jian Cui, Physics
Mr Pedro da Rocha Pinto, Computing
Dr Mark Daniels, Public Health
Dr Tyler Davis, Life Sciences (Silwood Park)
Mr Martin De Borbon, Mathematics
Mrs Kristien De Wolf, Business School
Ms Emmeline Dobson, Public Health
Dr Claire Donoghue, Bioengineering
Dr Benjamin Dyer, NHLI
Dr Mario Falchi, Public Health (7 years)
Mrs Chinwe Floerchinger, Surgery & Cancer
Mr Antonio Forte, Mechanical Engineering
Mrs Plum Garland, Physics
Mr James Garvie-Cook, Physics
Dr Gareth Gerrard, Medicine (7 years)
Mr Mark Gleeson, Sport and Leisure
Dr Jason Go, ESE (5 years)
Mr Matthew Gold, Surgery & Cancer
Mr Ottmar Golf, Surgery & Cancer
Miss Mariel Harrison, Life Sciences (Silwood Park)
Miss Susanne Herbst, NHLI
Mr Clint Ho, Computing
Ms Yen Holicka, Medicine
Dr Jessica-Rose Holley, Medicine
Ms Kailyn Hui, Life Sciences (7 years)
Dr Momi Iwata, Life Sciences (8 years)
Mr Chengyang Jiao, Computing
Dr Emrys Jones, Surgery & Cancer
Dr Euihun Joung, Physics
Dr Christos Kalyvas, Chemistry
Dr Georgia Karapostoli, Physics (7 years)
Dr Jeroen Ketema, Computing
Dr Jodie Kirk, Outreach (9 years)
Mrs Beata Klejevskaja, Chemistry
Dr Romi Korotana, Chemistry
Dr Elizabeth Koshy, Public Health (5 years)
Mrs Jennifer Landmann, Faculty of Medicine Centre
Dr Sarah Langley, Medicine
Mr Michael Long, Surgery & Cancer
Dr David Looney, EEE
Dr Felicity Lynagh, Surgery & Cancer
Miss Subashini M, Surgery & Cancer
Dr Matthew Malek, Physics (6 years)
Miss Kate Martin, Centre for Environmental Policy
Dr Richard Matthews, Chemistry
Mrs Pam McCarthy, Business School
Mrs Jenny McDonagh, Finance
Mr Lukas Medisauskas, Physics
Dr Janet Midega, Life Sciences (6 years)
Dr Iona Millwood, Public Health (6 years)
Dr Paul Mintz, Surgery & Cancer
Mr Christopher Moffat, ESE
Dr Sara Mohtashami, EEE
Mr Alexander Morris, Bioengineering
Dr Vance Naughton, Medicine
Dr Aamod Nawathe, Surgery & Cancer
Mr Simon Newman, Surgery & Cancer
Mr David Norris, Library (13 years)
Mr Gian Ntzik, Computing
Dr William Okell, Physics
Dr Magdalena Opanowicz, Medicine
Miss Basmah Othman, Materials
Dr Andreas Pamboris, Computing
Mr Richard Parasram, Civil and Environmental Engineering (5 years)
Dr Dirk Pattinson, Computing
Dr Ryan Pedrigi, Bioengineering
Dr Oscar Pello, Medicine
Mr Joshua Petersen, Mechanical Engineering
Professor Ana Pombo, Clinical Science
Dr David Richards, Life Sciences
Miss Maria Richter, Physics
Dr Louise Rickard, HR
Dr Anne Ropiquet, Life Sciences (Silwood Park)
Mr Ash Salam, Surgery & Cancer
Dr Zahid Sattar, Public Health
Dr Jeroen Schillewaert, Mathematics
Ms Lauren Schulte, Medicine
Ms Felicity Scott, International Relations Office
Professor Miguel Seabra, NHLI (17 years)
Miss Shilpi Sheth, Life Sciences
Dr Richa Singh, NHLI
Ms Anna Skordai, Medicine
Mr Mikael Sodergren, Surgery & Cancer (6 years)
Dr Afzal Sohaib, NHLI
Dr Elena Sokolskaja, Surgery & Cancer
Dr Kristyna Sovova, Surgery & Cancer
Ms Bamfo Stephen, Finance (15 years)
Mr Graham Stutter, Physics
Dr Sinbad Sweeney, NHLI
Dr Emmanouil Symianakis, Chemistry
Dr Roger Tatoud, Medicine (7 years)
Mr Clive Taylor, Computing
Miss Pei Teo, Surgery & Cancer
Dr Adam Thomas, Mathematics
Dr Leila Towhidi, Bioengineering
Miss Amy Townsend, Careers
Mr Will Warburton, Surgery & Cancer
Mr Thomas Watson, Faculty of Engineering
Dr Tim Weaver, Medicine (24 years)
Dr Matthias Weidlich, Computing
Dr Gillian Whyte, Chemistry
Mr Mark Wilkinson, Life Sciences
Mr James Wilton, Medicine
Dr Xu Wu, Materials
Dr Youwen Yang, NHLI
Dr Sagen Zac-Varghese, Medicine (6 years)
Miss Zhe Zhang, Life Sciences

retirement

Professor Philip Allen, ESE (9 years)
Mrs Mary Bowe, Education Office (24 years)
Mr John Hughes, School of Professional Development
Mrs Miranda Lubbock, HR (35 years)
Dr Chris McLeod, EEE (6 years)
Mr Julio Menendez Lopez, Security Services (26 years)
Mrs Jackie Sime, Civil and Environmental Engineering (20 years)

This data is supplied by HR and covers staff joining the College during the period 26 March – 24 April 2015. This data was correct at the time of going to press.

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

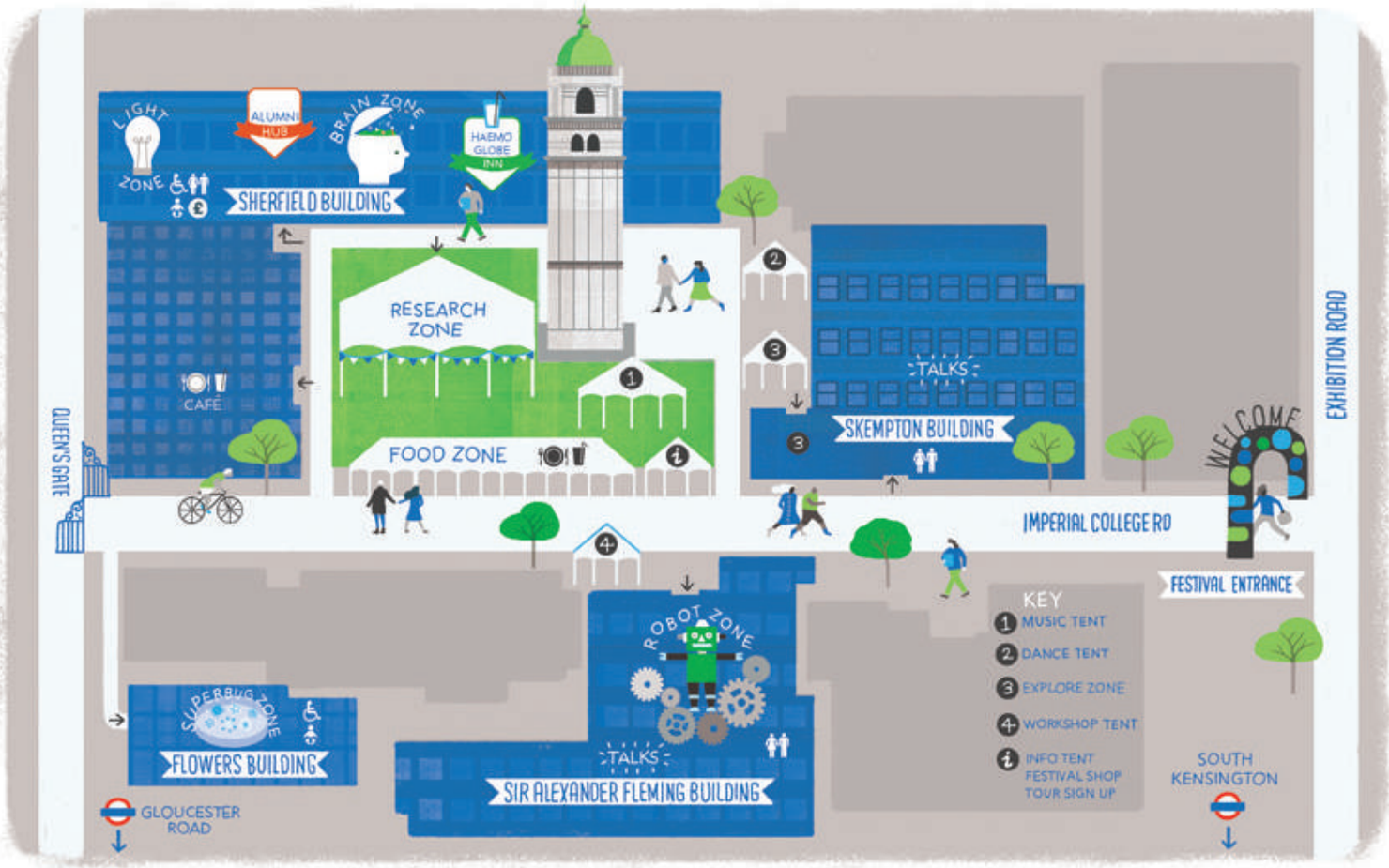
The Editor reserves the right to edit or amend these as necessary.

moving in. moving on.

IMPERIAL **FESTIVAL**

SAT 9 MAY 12.00–18.00 ⁘ **SUN 10 MAY** 12.00–17.00

Explore the unexpected side of science with a weekend full of hands-on research activities, talks, music and dance for all ages



www.imperial.ac.uk/festival imperialfestival #impfest

Stay in the loop

✉ Visit www.imperial.ac.uk/events for more details about these events and others. To sign up for regular updates about Imperial events please email: events@imperial.ac.uk

Designed and produced by Communications and Public Affairs, Imperial College London // Principal photography: Imperial College London
Additional photography: Benjamin Lester (pages 3 & 16); David Hawgood (page 4)