Imperial College London

reporter

Issue 292 ▸ 18 February 2016

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EDITOR'S CORNER

Outside the box

What does it mean to be creative? In days gone by it seemed rather simple – there were poets, artists and the like on one side and industrialists and more serious types on the other. This is to a certain extent reflected in our education system right through to university, with Bachelors in Arts and Science degrees. But it's becoming increasingly clear that such a stark divide no longer holds water – if it ever really did. Here at Imperial – a bastion of scientific and technical excellence – there is a **wellspring of overtly creative activity**, including student and staff fiction writing (centre pages), fine art (page 13) and computer application designing (page 13). Yet, these are just the most obvious examples. Even the most technically involved areas of research require original thinking and **bold new ideas**. In the support services too it requires creativity to overcome the obstacles of working in an institution with finite space, resources and finance, as manager Clive Hargreaves explains (page 11). Hopefully this issue might help inspire your own creative side.

ANDREW CZYZEWSKI, EDITOR

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

Topping out at new White City Campus hub

Imperial marked the completion of structural building work for its Molecular Science Research Hub and the Translation & Innovation Hub on 28 January.

The two interconnected hubs form one of the first major parts of the innovation ecosystem for the College's new White City Campus.

The Translation & Innovation Hub will house co-located laboratories with major corporate partners and new technology start-ups. Scheduled to open in summer 2016, it forms part of a larger innovation ecosystem, managed by Imperial College ThinkSpace.

Due for completion in 2017, the Molecular Science Research Hub will be a state-of-the-art science building housing research from Imperial's Department of Chemistry to seed a new molecular sciences neighbourhood, connecting with work in synthetic biology, data sciences, digital and health.

Imperial has partnered with investment firm Voreda to build the Hub, in collaboration with construction experts Laing O'Rourke.

Imperial's White City Campus takes shape

Dr Eulian Roberts, Chief Executive of Imperial College ThinkSpace, said: "This is a significant milestone in our ambitious vision for Imperial's White City Campus. The Translation & Innovation Hub will provide us with the environment to drive innovation and growth on an unprecedented scale. I look forward to welcoming colleagues and partners to the facility."

—DEBORAH EVANSON, COMMUNICATIONS AND PUBLIC AFFAIRS

Professor David Gann lays the final cement in the construction of the Translation and Innovation Hub

Miscarriage research centre will help thousands of families

The UK's first national clinical research centre dedicated to early miscarriage is to open at Imperial.

The National Early Miscarriage Centre, which will be funded by Tommy's – the UK baby charity that funds research into miscarriage, stillbirth and premature birth – will comprise a partnership between Imperial , the University of Birmingham and the University of Warwick.

The three sites will run specialist clinics enabling 24,000 women per year to access treatment and support and participate in Tommy's research studies. At Imperial, the centre will be based clinically at the Early Pregnancy Unit at Queen Charlotte's and Chelsea Hospital and the Recurrent Miscarriage Clinic at St Mary's Hospital.

While miscarriage is by far the biggest cause of pregnancy loss in the UK, it's also the least understood. Tommy's aims to halve the number of miscarriages by 2030 by funding medical research into the cause and effect of miscarriage.

Professor Phillip Bennett, Director of the Institute of Reproductive and Developmental Biology at Imperial, said: "As a doctor, I wish I could give my patients the answers they are looking for. The thing is, we have the expertise, the technology, the drive – we just need the funding. Tommy's National Miscarriage Centre is the most promising chance yet of making breakthroughs in early miscarriage.

—KATE WIGHTON, COMMUNICATIONS AND PUBLIC AFFAIRS

Future materials take centre stage at Davos

The role of materials science in driving the 'fourth industrial revolution' was showcased by a group of Imperial academics at the World Economic Forum in Davos last month.

Imperial's IdeasLab presentations at the World Economic Forum showed the gathering of global government, industry and NGO leaders how advances in materials science are transforming industries from energy-efficient production and rapid prototyping to nanorobotics and invisibility cloaks.

Imperial's President Professor Alice Gast published a blog with the World Economic Forum about how fundamental research is at the heart of the fourth industrial revolution – the set of technological changes that will enable almost anyone to invent new products and services quickly and cheaply.

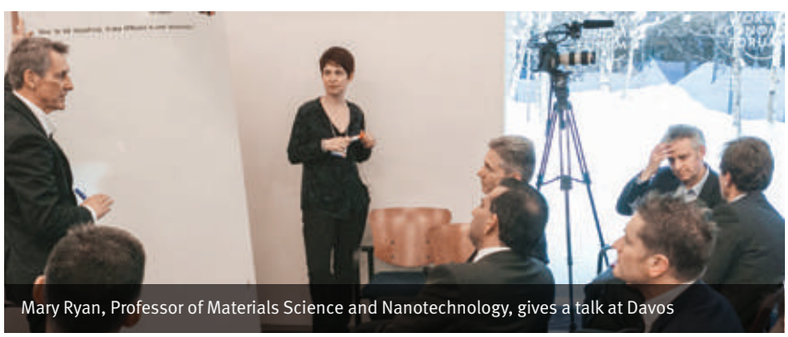
"Universities provide the crucible for completely new areas of science and technology to emerge, like biomedical engineering, data science and synthetic biology; and the business opportunities will follow," President Gast said.

During the Davos events, Professors Mary Ryan, Natalie Stingelin, Neil Alford and Robin Grimes also presented their respective work about heat capture technologies, polymers that can manipulate light, maser technology and computer simulations of novel materials.

Beyond the materials science sessions, Professor Maja Pantic presented in an IdeasLab panel on 'building an intelligent machine', covering machines that can read human emotions and the rise of social machines.

Gareth Mitchell, lecturer in broadcast communication at Imperial, moderated panels on 'the promise and peril of omnipresent sensors', and the 'violent universe' of black holes and supernovae.

—ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS



Mary Ryan, Professor of Materials Science and Nanotechnology, gives a talk at Davos

Making our digital world safer from cyber attacks

Testing the resilience of the UK's infrastructure from cyber-attacks and sharing data safely is the focus of two new Imperial projects.

Two research teams from the College with collaborators in Singapore, have received funding from the Engineering and Physical Sciences Research Council and the National Research Foundation, Singapore. As the digital world becomes more connected and ubiquitous, these three-year long projects will help to ensure that cyber security develops in step with changes in technology and with emerging threats.

One project will focus on developing safer methods for sharing confidential digital information, which do not compromise the privacy rights of citizens and organisations. It will be led by Professor Michael Huth (Computing), Associate Professor Wolfram Wiesemann (Business School) and Assistant Professor Xu Huan from the National University of Singapore.

The second team will investigate new approaches for making infrastructure, such as the electricity grid and water utilities, more secure from evolving cyber threats. The team will be led by Dr Deeph Chana, Deputy Director of Imperial's Institute for Security Science and Technology, and Professor Aditya Mathur from Singapore University of Technology and Design.

"It isn't possible to test high impact risks in the real world, such as getting a hacker to break into the electricity grid, because the ramifications are too serious," said Dr Chana. "We are building model systems that will enable rapid, repeated simulations that represent realistic breaches in cyber security."

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

in brief

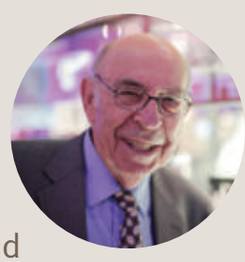
Top signing

One of the world's most distinguished computer scientists, Professor Nick Jennings, is to become Vice Provost (Research) at Imperial from April 2016. Professor Jennings is currently Regius Professor of Computer Science at the University of Southampton. Professor Jennings also served as the government's inaugural Chief Scientific Adviser for National Security from 2010 to 2015, providing independent scientific advice on issues of national security.

Apollo fund to propel innovation

Pharmaceutical companies and university technology transfer offices have pledged £40m to establish the Apollo Therapeutics Fund, which aims to drive forward therapeutic innovation for a wide range of diseases. The consortium behind the Fund consists of AstraZeneca, GlaxoSmithKline, Johnson & Johnson and Imperial Innovations, Cambridge Enterprise and UCL Business. The Fund is open to applications from academics based in the three universities behind the participating technology transfer offices.

"It's the joy and excitement of science; if one is lucky and able to continue with interesting and important research that's a disincentive to giving up."



PROFESSOR COLIN CARO SHARES HIS SECRET TO ACADEMIC LONGEVITY AS HE MARKS HIS 90TH BIRTHDAY AND 50 YEARS AT IMPERIAL. WATCH A VIDEO INTERVIEW HERE: bit.ly/colin-caro

Trans issues centre stage at LGBT History Month

Imperial marked LGBT History Month on 9 February with a thought-provoking lecture from Anjeli Patel, who discussed her own journey as a trans woman.

Anjeli shared her experiences of growing up and transitioning in the British Asian community, and the challenges she faced in education and employment. She also discussed changes in legislation and the importance of supportive policies from employers.

"LGBT history month is vital for two reasons," says Anjeli. "Firstly to showcase how far we have come as a community, and secondly to highlight how far we still have to go".

Alongside her current job in Wealth & Asset Management at Ernst & Young, Anjeli is a member of trans*formation, a group for professionals who identify as trans and their friends and supporters. The group was founded recently, and aims to connect and inspire trans professionals, alongside working to achieve real change in the workplace.

"To me it's a matter of equality," said Anjeli. "Employers should look at a person for what they have to offer the organisation, rather than their personal history or background."

Leyla Okhai, Head of the Equality, Diversity and Inclusion Centre at Imperial, said: "We were delighted to have Anjeli come and speak about her experiences and contribute to the work we are doing on trans awareness in the College. The lecture has drawn a lot of interest and having an insight into Anjeli's experience as a British Asian will help us to understand how transitioning is a different journey for everyone."

—ELIZABETH NIXON, COMMUNICATION AND PUBLIC AFFAIRS

National Student Survey 2016 launches at Imperial

Imperial's final year undergraduates are invited to share their views, as the National Student Survey 2016 gets underway.

Final year undergraduates are asked to rate their experience at Imperial, giving scores on areas such as academic support, learning resources and assessment and feedback. This year's survey is now open and closes on 30 April.

Professor Sue Gibson, the College's Acting Vice-Provost (Education), said: "The NSS is an important opportunity for final year students to reflect on their experience during their time at Imperial and share their views and ideas in order to contribute to positive change in years to come."

The results of the survey, which are published later in the year, help inform key education-focused developments. Each department creates an action plan aimed at enhancing areas such as teaching and student support as part of the College's strategic commitment to enriching the student experience.

Imperial College Union also produces a formal response to the survey's results, to help the College and Union work together on improvements.

Chun-Yin San, Imperial College Union's Deputy President (Education), said: "Last year, 77% of eligible students took the survey, giving the Students' Union a wealth of insights that has helped us chart a powerful course of action. We are hoping to increase participation; the more students completing the survey the more reliable and useful it will be in improving the student experience."

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

WISE move: how gender diversity drives innovation

Industry experts joined Imperial staff at a panel discussion focusing on gender diversity and its potential to drive innovation.

The discussion was the first knowledge sharing event hosted by a university for the WISE campaign, which promotes women in science, engineering and technology. Chairing the discussion was the Provost's Envoy for Gender Equality at Imperial, Professor Dorothy Griffiths, who guided the panellists through an exploration of how gender affects innovation and entrepreneurship.

The panel included Imperial entrepreneurs and recent PhD students Dr Kerry O'Donnelly and Dr Angela de Manzanos, alongside Professor Charlotte Williams from Imperial's Department of Chemistry. They were joined by Dr Kate Ronayne, Head of Innovation at the Science and Technology Facilities Council (STFC), and Toby Mildon, Head of Diversity and Inclusion for BBC Digital.

The three Imperial panel members have successfully founded their own businesses. Dr O'Donnelly and Dr de Manzanos co-founded FungiAlert while Professor Williams is the founder of Econic Technologies – an achievement for which she won the 2015 WISE award in the Tech Start-up category. They spoke about some of the challenges they have faced as women in the tech start-up space, but explained how opportunities to enter competitions, alongside support from peers, colleagues and family had helped them. They also emphasised the importance of creating a culture of equal opportunity in which diversity could be encouraged and differences communicated.

—ROBYN LOWE, ELIZABETH NIXON, COMMUNICATIONS AND PUBLIC AFFAIRS

As an institutional member of WISE, Imperial can offer individual staff and students a number of benefits including priority invitations to events, networking opportunities, and access to training. For further information, visit: **wisecampaign.org.uk/membership**

media mentions

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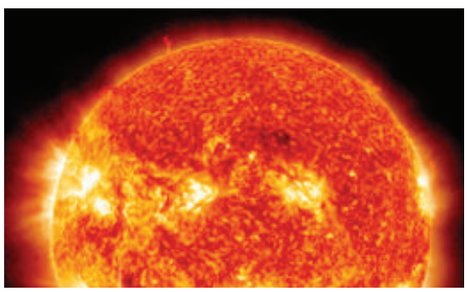


The last great mysteries of the solar system

NEW SCIENTIST ▸ 20.01.2016

In a special feature, *New Scientist* looks at the six greatest mysteries of the solar system – including the nature of the sun's magnetic field, which stretches out into the solar system, releasing gas from the sun's atmosphere. The trouble is that we can't predict when and where these ejections will happen. "We don't know how the sun's magnetic cycle works," says Professor Tim Horbury (Physics). ESA's Solar Orbiter could change all that. Launching in 2018, it will fly close to the sun, inside the orbit of Mercury. Horbury is the principal investigator of its magnetometer, one of 10 instruments that will study the sun in unprecedented detail.

Does everyone have an app inside them?

FINANCIAL TIMES ▸ 31.01.2016

FT journalist Jonathan Margolis spoke with Professor Mike Wright, Head of Innovation and Entrepreneurship at Imperial College Business School, about predictors of innovation success. "People get obsessed with financing," says Mike. "We're awash with crowdfunding. But having the entrepreneurial skills to match that with potential markets is often missing." He is also sceptical of the ultimate buzz concept: disruption. Not everything, he points out, that's going to be successful needs to be disruptive. "A lot of process or efficiency innovations are equally valid. A modest innovation that works nationally rather than globally can be very successful."

LSD may improve psychological wellbeing

THE TELEGRAPH ▸ 08.02.2016

LSD can make you more optimistic and more open to experience, according to a new study by researchers at Imperial reported in *The Telegraph*. Volunteers were each given a 75 microgram dose of LSD or a placebo and subjected to a number of repeated tests. Researchers said their findings reinforced the view that psychedelic drugs bring on psychosis-like symptoms — yet improve psychological wellbeing in the mid to long term. "Increased optimism and trait openness were observed two weeks after LSD (and not placebo) and there were no changes in delusional thinking," said study lead Dr Robert Carhart-Harris (Medicine).

Banks complacent on digital currency

CITY AM ▸ 25.01.2016

Writing in *City AM*, Imperial College Business School Dean Professor G Anandalingam says the financial services industry is dangerously complacent in its approach to digital money. "Some of the major banks almost look like they fear technological change that promises greater transparency, efficiency and security at a lower cost. Cryptocurrencies like bitcoin cannot be dismissed as the preserve of those engaged in suspicious transactions on the dark web. At Imperial College Business School, digital money has become the new normal. Our students are fintech-savvy. Many take classes on digital money and experiment with blockchain. Our graduates are helping to build digital money startups like mobile payment firm Yoyo."

awards and honours

BUSINESS

Super scholars

Imperial has presented two MBA students with a new scholarship designed to encourage more women to undertake postgraduate business education. The scholarships, worth £20,000, were awarded to incoming Executive MBA students Julie Driscoll and Jennifer Chung. The scholarships have been created by Imperial College Business School in partnership with the 30% Club, whose goal is to see women comprising 30% of FTSE-100 Board members.

COLLEGE

Reach out success

Imperial has been recognised in the annual Bett Awards (British Educational Training and Technology) for its primary science CPD resources developed in partnership with digital education company Twig World Ltd. Known as 'Reach Out CPD', the web-based programme provides teachers with continuing professional development (CPD) resources and ideas to support their teaching. Since its launch in October 2014, more than 7,000 teachers have signed up for Reach Out CPD, which is currently being used in more than 4,000 schools.

ENGINEERING

Bioengineering excellence

An Imperial expert in joint mechanics and the effects of blast injuries has been recognised for his achievements by a prestigious US institution. Professor Anthony Bull, Head of the Department of Bioengineering, was elected to the American Institute for Medical and Biological Engineering (AIMBE) for outstanding contributions to the 'basic mechanics of joints and tissues, and the study of military blast injuries'.

ENGINEERING

Tower of strength

An Imperial researcher who helped to stabilise the Leaning Tower of Pisa has been elected to the US National Academy of Engineering. Emeritus Professor John Burland (Civil and Environmental Engineering) has been elected as a Foreign Member. Professor Burland was only one of 22 Foreign Members and the only UK engineer to be elected this year. His research focuses on engineering challenges related to the interaction between the ground and structures made of masonry. He is responsible for the design of many large engineering projects.

World's largest canyon could be hidden under Antarctic ice sheet

The world's largest canyon may lie beneath the Antarctic ice sheet, according to an analysis of new satellite data.

The previously unknown canyon is thought to be over 1,000 km long and in places as much as a kilometre deep, which would make it comparable in depth to the Grand Canyon in United States, but many times longer.

Professor Martin Siegert, from the Grantham Institute, who co-authored the research, said: "We are filling gaps in our knowledge and in maps of the last and least explored landmass on our planet.

"There are places in Antarctica where you can stand on the ice and be more than 200 km away from any point of data about the land underneath – we know more about the surface of the Moon, Mars, and even now Pluto."

The canyon system is believed to be made up of a chain of winding and linear features buried under several kilometres of ice in one of the last unexplored regions of the Earth's land surface: Princess Elizabeth Land (PEL) in East Antarctica.

The researchers believe that the landscape beneath the ice sheet has probably been carved out by water. They say it is either so ancient that it existed before the Antarctic ice sheet covered the area, or it was created by water flowing and eroding the rocks beneath the ice.

Faint traces of the canyons were observed in satellite images, and small sections of the canyons were then found using radio-echo sounding data, whereby radio waves are sent through the ice to map the shape of the rock beneath it.

Princess Elizabeth Land (PEL) in East Antarctica

An airborne survey taking measurements over the whole buried landscape is now underway, aiming to confirm the existence and size of the canyon and lake system, with results due later in 2016.

The research team was made up of scientists from Newcastle University, Imperial and Durham University in the UK, University of Texas at Austin, USA, University of Western Australia, Australian Antarctic Division, University of Tasmania in Australia, and the Polar Research Institute of China.

—SIMON LEVEY, THE GRANTHAM INSTITUTE FOR CLIMATE CHANGE

What does it take to be an Antarctic scientific explorer?

Professor Siegert has more than 20 years of experience in Antarctic science and has visited the continent three times on scientific missions.

"The challenges in doing research in Antarctic are considerable and the problems are obvious: it's cold and things don't tend to work. There is no infrastructure and you've pretty much got to take everything with you so consequently you have a limited amount of resources. In many ways it is very much like space exploration; it's very unworldly.

When you're doing research it's very important to keep a sense of humour – it would be desperate place without that. I think that the type of people who are attracted to working in Antarctica have that as part of the makeup of their character. They have to be pragmatic but also see the funny side of things and keep cheerful. It is hard, serious work, but there are moments. For example, when you're doing hot water drilling deep into the ice sheet and you create a tub of hot water at the surface – it's quite interesting having a bath in that especially when you haven't washed for three or four weeks. You savour those moments. We have to remember that it's a privilege and an honour to do this research."

> "It's very important to keep a sense of humour"

—HAYLEY DUNNING, COMMUNICATIONS AND PUBLIC AFFAIRS

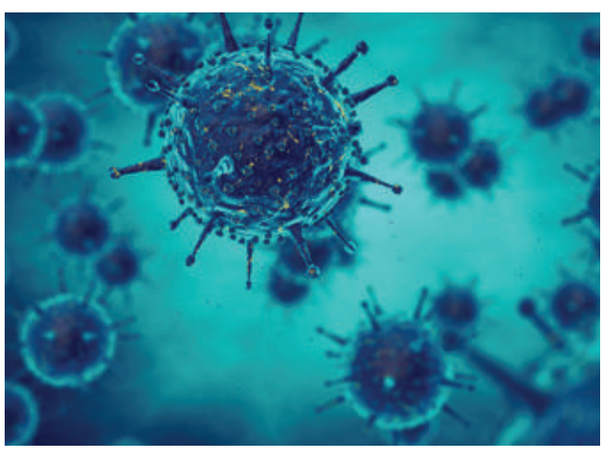
Flu virus hijacking tactics revealed

Scientists at Imperial have discovered how flu viruses 'hijack' cell machinery when they infect the body.

The findings may pave the way for more effective antiviral treatments for pandemics and for seasonal flu, which infects over 800 million people worldwide every year.

In the research, the team used hamster-chicken hybrid cells to discover why avian influenza virus (bird flu) cannot usually infect mammal cells.

They found that a particular host protein – called ANP32A – which is also found in human cells, acts as an 'insider' and helps the virus replicate once the virus has gained entry into the cell. Bird flu viruses can't use the mammalian ANP32A unless they carry a particular mutation.



As well as understanding how bird flu viruses can make the jump from birds to humans, scientists can now also explore whether it is possible to develop drugs that target this human protein, to prevent the flu virus replicating.

Professor Wendy Barclay (Medicine) and senior author of the study, explains: "All human flu viruses in the world originally came from birds. However, luckily for us, viruses don't often jump from birds to people because the virus can't replicate in our cells. When they do transfer to humans, it's because the virus mutates in a number of ways. This enables it to gain a foothold inside the cell, and hijack the cell machinery to replicate."

The next stage is to start investigating treatments that may block this specific interaction between virus and cell, with the hope of stopping the virus in its tracks.

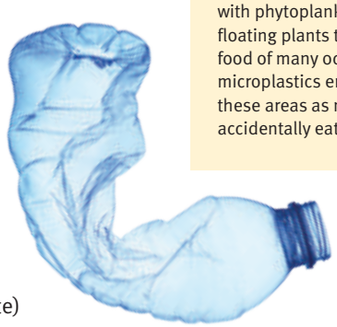
—KATE WIGHTON, COMMUNICATIONS AND PUBLIC AFFAIRS

Clean-up act

The most efficient way to clean up ocean plastics and avoid harming ecosystems is to place plastic collectors near coasts, according to a new study.

Plastic floating in the oceans is a widespread and increasing problem (see box). Plastics including bags, bottle caps and plastic fibres from synthetic clothes wash out into the oceans from urban rivers, sewers and waste deposits.

Larger plastics are broken down into smaller fragments that can persist for hundreds or even thousands of years, and fragments of all sizes are swallowed by animals and enter the food web, disrupting ecosystems.



A new analysis by Dr Erik van Sebille and undergraduate physics student Peter Sherman (both Grantham Institute) used a model of ocean plastic movements to determine the best places to deploy plastic collectors to remove the most amount of microplastics.

The team found that placing collectors near coasts, particularly around China and the Indonesian islands, would remove 31 per cent of microplastics. With all the collectors in open ocean patches, only 17 per cent would be removed.

"It makes sense to remove plastics where they first enter the ocean around dense coastal economic and population centres," says Dr van Sebille. "It also means you can remove the plastics before they have had a chance to do any harm. Plastics in the patch have travelled a long way and potentially already done a lot of harm."

Sherman added: "We need to clean up ocean plastics, and ultimately this should be achieved by stopping the source of pollution. However, this will not happen overnight, so a temporary solution is needed, and clean-up projects could be it, if they are done well."

Peter Sherman conducted the study as a 10-week summer project under the Undergraduate Research Opportunities Programme at Imperial.

—HAYLEY DUNNING, COMMUNICATIONS AND PUBLIC AFFAIRS

Great Pacific Garbage Patch

One area of open ocean in the North Pacific has an unusually large collection of microscopic plastics, or microplastics, and is known as the Great Pacific garbage patch. The patch is enclosed by ocean currents that concentrate the plastics into an area estimated to be larger than twice the size of the United Kingdom. The patch has gained international attention, and there is now a project called The Ocean Cleanup that plans to deploy plastic collectors to clean up the region.

Microplastics can also overlap with phytoplankton – microscopic floating plants that form the basic food of many ocean ecosystems. Many microplastics enter the food web in these areas as microscopic animals accidentally eat them.

Lung cells that battle cold virus identified

Scientists have identified a type of immune cell in the lungs of humans that may help fight respiratory syncytial virus (RSV) and suggest nose sprays could be the most efficient way of delivering a vaccine against the virus.

The virus is one of the main causes of childhood hospitalisation, severe lung infection in the elderly, and the common cold.

"We now know it's the most common cause of hospitalisation of babies – resulting in up to 200,000 baby deaths worldwide every year. And in the older population it's almost as dangerous as flu," says Dr Christopher Chiu (National Heart and Lung Institute).

In their latest study Chiu and team infected 49 healthy volunteers with RSV in closely monitored conditions. They kept the participants in hospital for 10 days – studying them before and after infection. Just over half developed an infection – with most of the infected group developing symptoms of a common cold.

The team took small tissue samples from the airways of the volunteers who developed an infection. They found that a type of immune cell, called a resident memory T cell, is particularly active during RSV infection. These immune cells help to identify invaders, raising the alarm to the rest of the body and killing infected cells.

The work also suggests current vaccine efforts should be directed toward nose sprays.

"There are around 50 potential vaccines being investigated at the moment, and a few of these will be delivered in nasal sprays. Our work suggests a nasal vaccine will be more likely to reach these immune cells, which are in the lungs, than injecting a vaccine into the arm. The hope is that within the next five years there will be a vaccine licensed for use to reduce the massive toll of this infection."

—KATE WIGHTON, COMMUNICATIONS AND PUBLIC AFFAIRS

Creative legacy

It is 1897, and Herbert George Wells sits quietly over his writing desk, the first draft of *War of the Worlds* spread before him. As a struggling biology student, who complained of being 'constantly hungry' he could not possibly have foreseen how his burgeoning passion for writing would eventually transform his fortunes and indeed give rise to an entirely new genre of literature.

Wells, the 'father of science fiction,' of course went on to enjoy a successful writing career, publishing over 50 books and earning four nominations for the Nobel Prize in Literature along the way.

Curiously, Wells' first published work was in fact a biology textbook in 1893. Shortly after its release, he won a scholarship to study Biology at the Royal College of Science, which ultimately became part of Imperial. Wells later helped to set up the student publication *Science Schools Journal*, which paved the way for *Phoenix* and then *Felix*. He continued his studies at the Royal College until 1887, the same year he finished writing his dystopian *War of the Worlds*.

By fusing his scientific education with his love for writing, Wells created a literary hybrid now widely regarded as one of the greatest science fiction novels of all time.

Wells was a pioneer, and the path he took from science education to literary fiction is still an unusual one. Yet, in this age of increasing interdisciplinary collaboration, the insight that scientists can bring to literature is perhaps starting to be acknowledged more. One indication of this is the introduction of optional humanities modules to traditional STEMM (Science, Technology, Engineering, Mathematics, and Medicine) degrees.

Imperial Horizons is one such programme run by the College's Centre for Languages, Culture and Communication. It offers students across all years of their degree course the option to study everything from Mandarin for Beginners, through to Cultural Anthropology and Philosophy and Sociology of Art. But perhaps the module Wells would have opted for is Creative Writing – which culminates in students writing a short story and a critical analysis of their own creative and technical progression.

As well as being formally assessed, these short stories can be submitted for an annual College competition – the Sir Arthur Acland Prize. Mathematics MSc student Cassandra Yong won the prize in the 2014/15 academic year – and then went on to submit her short story to a national competition, fittingly named the HG Wells Prize for Creative Writing, picking up the Junior Category Judging Panel Prize.

"The whole awards process was slightly bizarre," Cassandra recalls, "I talked to the other shortlist nominees and they were shocked that I was a maths student; writing was a primary focus for all of them."

> "I talked to the other shortlist nominees and they were shocked that I was a maths student."

Cassandra had enjoyed reading and writing since she was young, but had stopped any formal literary study after her GCSEs. "Horizons presented a great opportunity to pick up writing again after a long break. I had no idea if I would be good at it but I thought 'why not?' It was something different from maths, which I loved, but I really wanted to go a little more leftfield and out of my comfort zone. The Creative Writing module was fantastic because going into it I had no idea how to write a story and they coached me back into it really quickly; in many ways it reignited my passion."

Cassandra's short story *Adrift* gracefully weaves fascinating family history with fictional embellishments, as she unravels the harrowing experiences of her great grandmother Ngow – sold as a child bride aged nine to settle her father's gambling debts in Malaysia at the turn of the 20th Century (coincidentally around the same time Wells was in his writing prime). It is a wistful story of class, family, loss and love that drags the reader into Ngow's frightening past. Cassandra built her story upon fractured recollections

An extract from Cassandra's short story, 'Adrift', based on the life of her great grandmother (far left)

she compiled from her grandmother (Ngow's daughter). "The story couldn't have happened without her in all honesty; she put hours of her time into recounting Ngow's history for me."

It was this painstaking, and emotively charged research that really stood Cassandra apart and caught the judges' eyes in the HG Wells creative writing prize. The short story competition was founded to celebrate the life and works of HG Wells and encourage creative writing, especially among the young.

"It was slightly surreal having my story get all of the attention it did," says Cassandra. "I had to read it out to an audience at the Folkestone Book Festival which was rather daunting – I was a maths student more accustomed to sitting in a quiet room hunched over a textbook all day! It was a really intense experience but I'd do it again in a heartbeat."

The idea of cultivating STEMM students' educations with formal humanities teaching, as US universities have done for years, is gradually gaining traction in the UK. Imperial's Horizons courses provide excellent opportunities for students to broaden their education, enhance their skillset and, importantly, bolster that crucial CV.

For Cassandra, now working as an associate at the Boston Consulting Group in London, it was a no-brainer. "Studying maths you don't write much at all, so being able to write creatively has been extremely useful at work. Communication is so important once you've graduated: writing reports, giving presentations, even simple stuff like writing a clear, succinct cover letter or email. The creative writing module taught me all about critical analysis, writing concisely and working with others – these skills have been invaluable since graduating."

The demand for Imperial Horizons modules is on the rise. Enrolment figures have almost trebled since Horizons' inception in 2012, with close to 50% of all Imperial undergraduates enrolling this academic year.

Dr Aifric Campbell is a published author and lecturer on the Horizons creative writing modules; she was also Cassandra's Horizons tutor last year. Dr Campbell has worked with both STEMM and traditional literary students during her time teaching in further education.

"The first thing I noticed when I started teaching here is the outstanding work ethic amongst Imperial students. Their writing is inspired by their own diverse backgrounds which makes the storytelling really fresh and interesting. I've been consistently impressed by the quality of student writing. Creative writers study things very closely, observe the world, and explore what angles one can take on those observations. This is not totally dissimilar to what scientists or engineers are trained to do."

Dr Campbell is particularly keen to challenge the notion, still prevalent across the STEMM sector, that creative writing is a soft option and a distraction from real studies.

"The world is changing, and those in STEMM jobs are engaging with the public and media more and more – it comes with the job now. Being able to do that effectively can get you a long way."

In a sense, Cassandra's success brought the HG Wells prize back full circle to Imperial, and could well kickstart a new wave of scientifically-trained literary writers.

"At the very least, I do hope that success stories like Cassandra's can show that STEMM students are not rigid thinkers and have just as much of a creative spark as anyone else. Either way, the future is certainly bright for the literary world."

—HARRY PETTIT, FOR COMMUNICATIONS AND PUBLIC AFFAIRS

> "Creative writers study things very closely, and explore what angles one can take on those observations ... not dissimilar to what scientists or engineers are trained to do."

The HG Wells Prize Anthology, containing Cassandra's story 'Adrift', is available now on Amazon and Kindle.
Visit: **bit.ly/wells-stories**

For more information about Imperial Horizons visit: **imperial.ac.uk/horizons**

Disturbed Universes

It's not only Imperial student scribes getting fiction published and recognised – staff are in on the act too. Dr Dave Clements, is a Senior Lecturer in the Department of Physics, specialising in extragalactic astronomy and observational cosmology. He has been writing short form science fiction since his student days at Imperial and is about to launch his first collection of short stories called Disturbed Universes, published by NewCon Press. He will also be a guest of honour at the British National Science Fiction Convention in Manchester 24–28 March.

Listen to an audio interview with Dave here: bit.ly/dave-clem

Dr Trotta uses food to explore lunar craters – the ingredients of the solar system and origins of the universe – at Imperial Festival 2014

Quick fire

1// Favourite novel?

Jonathan Franzen's *The Corrections*. An incredibly vivid portrait of modernity, and of the complexities of human relationships.

2// Favourite film?

If a series counts, it must be *Breaking Bad*. Gripping and amazingly shot.

3// Favourite artist?

Ai Weiwei. His recent Royal Academy show was a troubling reflection of our times.

Cosmos meets culture

Dr Roberto Trotta warps into a new role as Director of the College's Centre for Languages, Culture and Communication (CLCC).

Statistics and supernovae have long been the main stock-in-trade for distinguished astrophysicist Dr Roberto Trotta. After completing a degree in physics and a PhD in theoretical physics from his native Switzerland, he then moved to the University of Oxford to become the Lockyer Fellow of the Royal Astronomical Society in 2005, before joining Imperial as Lecturer in 2008.

Yet, for this charismatic and effervescent scientist, a strictly traditional academic career was probably never on the cards. Roberto's passion for public engagement is clear and he sees this work as part and parcel of what it is to be an academic in the modern world. In 2014 he published his award winning book, *The Edge of the Sky*, which explains the workings of the cosmos using only the most common 1,000 words in the English language.

"An important role of being a scientist is to connect with the public to ensure that there is a dialogue so they better understand what it is we're doing and why it's important that we do it."

Roberto found himself becoming more and more interested in public engagement, successfully applying for a STFC Public Engagement Fellowship. When the opportunity to lead the CLCC arose it seemed like an obvious next step, especially coupled with his interest in education, teaching and learning.

"The role seemed both unexpected but also very exciting for me. It joined together a number of areas I'm interested in and what I've been trying to do in my career."

Now four months into his new role, Roberto is starting to get to grips with the challenges ahead and making plans for the future.

"Improving the Centre's prominence, both internally and externally, is a big priority for us. It's had quite a few different names over the past few years and the first question is: 'how do we make sure people know who we are and what we're about?'"

As a passionate science communicator and author Roberto is keen that the CLCC make more of opportunities to engage the public in the work of the Centre and the College as a whole.

"I really want to create an environment where we can grow our profile through public engagement.

> "I really want to create an environment where we can grow our profile through public engagement."

For example, by offering more evening classes we can bring more people into the College, showing them the great science and cutting edge research that we do here."

Among the undergraduate student body, the Centre is perhaps best known for the Imperial Horizons programme, which launched in 2012 and offers students across all years of their degree course the option to study everything from Mandarin for Beginners, through to Cultural Anthropology. Nearly half of all students have enrolled on the programme this academic year.

With his own eclectic range of interests Roberto is a strong advocate of the role of humanities and the benefit they can bring to students at the College.

"I think Horizons provides fantastic intellectual stimulation. The humanities programmes on offer at Imperial help widen our thinking and give us opportunities to think outside the box and beyond the narrow confines of our specialist disciplines.

Indeed Roberto makes a direct pitch to students still considering Horizons.

"You will experience learning in a way that you have never thought was possible – it's very different to anything else we do at Imperial. You won't regret it."

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

Visit the Centre's webpage: **imperial.ac.uk/clcc**

Follow Roberto on Twitter: **@CLCCDirector**

inside* story

mini profile

Clive Hargreaves

Clive Hargreaves, Technical Services and Facilities Manager, received the British Empire Medal in the New Year's Honours for his work supporting research in the Department of Civil Engineering for more than 35 years.

How did your Imperial journey start?

In the early days I was working exclusively on research projects. It was a very exciting time because the Department played a big role in national and global challenges in the field of structural and civil engineering at that time. For example in the early 1970s a number of building and bridges collapsed during construction as a result of failure of their box girders. As a result there was a ban placed on building with box girders until the problem could be resolved. The Department was involved in testing full sized box girders and got extremely good experimental results.

Then you changed direction somewhat?

Yes, I took on the role of Technical Services and Facilities Manager in 1993, which I have performed to this day. I stepped away from doing the research itself and accepted the challenge of trying to make research actually happen – or at least facilitating it and putting in place the infrastructure to enable it. My role entails overseeing our five very unique and diverse laboratories. We have the structures lab with its almost cathedral proportions; the hydrodynamics lab with its wave tanks; the geotechnics lab; environmental lab and intelligent transport lab.

You are known for being unassuming and modest but you must be proud of the Empire Medal?

The Department has always been very good at recognising and rewarding staff achievements and this honour is a good example of that. I wouldn't have been able to deliver the job without the hard work other people have done – it's as simple as that.

What next for you?

Well, probably retirement but that's a bit embarrassing having just been nominated for a medal. There's a joke going round the Department that they only did this to keep me here.

Five ways to get the most out of your doctor's appointment

With GPs in the UK spending an average of 8–10 minutes with each patient, it's important to know how to get the information you need. Here GP Dr Sonia Saxena, from the School of Public Health, suggests how to make the most of your appointment.

Don't go empty-handed

Before you see your doctor think carefully about what you want to get out of your appointment. Write down the questions that are most important to you.

Be direct

As time is short, be clear about what you want the doctor to do, such as refer you to a specialist or prescribe a different medication. Be assertive if you need to, but always be polite. If your request isn't possible, ask the doctor to explain why.

Bring a friend

Research suggests patients forget half of what they are told by the doctor when they're stressed. Take someone you trust with you to remember what is said, or help occupy or entertain your child if needed.

Repeat if necessary

Ask the doctor to repeat and explain anything you don't understand, such as instructions for taking medication. If you're not clear – write it down or ask if there is any written information or a website you can refer to. Make sure you are clear on what happens next, and whether you need to make further appointments.

Check your safety net

Make sure to ask about what doctors call 'safety netting' – find out what you do if things don't improve, or get worse – and who you contact. In the UK, GP surgeries always have an emergency out-of-hours contact number, and there will always be someone who can see you.

Imperial Alumnus swoops to World Gliding Gold

Tom Arscott collects his Junior World Gliding title

Mechanical Engineering graduate Tom Arscott captured the title at the 23rd Junior World Gliding Championship in Australia in December.

Tom, a member of the Imperial College Gliding Club, clinched the title at his first international event representing the UK against 32 other young pilots from 16 countries in the Club Class competition.

The competition, which took place over 10 days in Narromine in New South Wales, saw competitors race daily across courses of 500km with the fastest competitor receiving the most points.

"I was aiming for a top-half finish originally and saw it as good practice for the future," said Tom, who joined Imperial's gliding club in 2011.

"I definitely got into the competitive side of gliding as part of the gliding club here and it was only really when I joined that I was able to improve and start flying in competitions."

Tom's success in Australia means he will be representing Great Britain in the 2016 Senior World Gliding Championships this August before defending his Junior World Title in Lithuania in 2017.

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

Imperial College Gliding Club

The club was founded in 1930, making it the oldest University gliding club in Europe, and since then has produced three world champions plus several others who have represented Great Britain as part of the Team GB. The Gliding Club has also maintained strong links with the College's Aeronautics Department, contributing to research and allowing Aeronautics students to gain practical, hands-on experience with the aircrafts as they study. The department's Professor Frank G. Irving flew with the club and in 1955, with his flying partner Lorne Welsh, took the first two-seater glider flight across the English Channel. Today the club's modern fleet of three gliders at Lasham Airfield in Hampshire gives students and staff the opportunity for dual and solo flying, supported by expert instruction.

ICGC's first glider in 1930 – the student designed and build IC-1 (above) and Felix coverage of Frank Irving's first two-seater glider flight across the English Channel in 1955

blog SPOT

Student blogger Emma: **Visiting CERN**

"Two years ago I won an Imperial Essay competition and part of the prize was a trip to CERN. Due to various complications the trip was postponed, but in January it finally happened! I've always wanted to go to CERN, ever since I first heard about it, when I was too young to even know what a hadron was.

The trip was even better than I imagined however, as we were shown round by Imperial's Professor Sir Jim Virdee who, was one of the founding members of the CMS (Compact Muon Solenoid) detector. He was also incredibly thoughtful, giving us an introductory talk, signing us a picture book of the construction of the detector, introducing us to everyone, and even arranging our own very fancy lunch in the CERN restaurant. He also tipped us off on the possible discovery of a new, never-before-hypothesised particle which may be starting to emerge from the recent high energy runs... something to watch out for!

As I mentioned I am slightly obsessed with CERN, so have seen hundreds of pictures of the detector, but I couldn't imagine the scale of it until I was standing right above it. It is huge and vastly complex. Surrounded by snow-capped mountains and Lake Geneva, the CMS itself is striking and brightly multi-coloured, looking like some impossibly intricate children's toy.

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

New art installation highlights how research is helping cancer care

A new art display showcasing how patients and clinicians work with researchers to improve cancer care has been launched.

The Imperial Butterfly Artwork Installation: Bringing Research to the Clinic is an art installation of 250 ceramic pieces in the waiting area of Clinic 8, an out-patient cancer clinic at Charing Cross Hospital, part of Imperial College Healthcare NHS Trust (see box).

The art installation includes ceramic butterflies and flowers demonstrating how patients receive care while simultaneously giving back to scientific research, which helps researchers and clinicians to find new treatments and therapies.

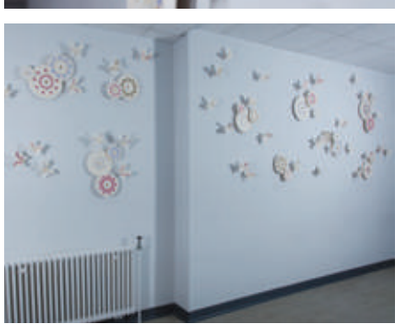
The installation was created by ceramic artist David Marques who worked with patients to get their views on the best way to showcase their care at the clinic. The butterflies each represent a patient coming to the clinic and the meadow of flowers represents the therapies patients receive during treatment, as well as the people they meet during their care.

Kelly Gleason, Senior Research Nurse at the Cancer Research UK Imperial Centre, said: "Research carried out over the last 10 years has shown that there are health and wellbeing benefits of incorporating art in healthcare settings. Our art installation is a great way of showcasing to our patients how care and research at Imperial are linked and how patients benefit from our approach. The feedback from our patients was vital in shaping our art installation and transforming the waiting area space at Clinic 8. I hope that patients, staff and visitors enjoy the display and are inspired to learn more about our research and care."

The art installation was commissioned by the Cancer Research UK Imperial Centre and funded by Cancer Research UK. It was launched at a special reception on Thursday 4 February 2016 to coincide with World Cancer Day.

— MAXINE MYERS, COMMUNICATIONS AND PUBLIC AFFAIRS

Patient benefit
Researchers from Imperial College London and clinicians from Imperial College Healthcare NHS Trust work together in the Imperial College Academic Health Science Centre, which aims to improve patient outcomes by harnessing scientific discoveries and translating them as quickly as possible into new diagnostics, devices and therapies, in the NHS and beyond.



Meet CHOPCHOP – your digital kitchen assistant

An Imperial student is part of a team that has just launched CHOPCHOP, a new cooking app to help you plan your way to culinary success.

CHOPCHOP lets you select the dishes you want to cook and the number of people you're serving, and then creates a full plan to make sure your meal is ready with ease.

The brainchild of JinA Bae and Johnson Wang, the idea for the app came during a road trip along the Great Ocean Road in South-East Australia.

"We relied a lot on the GPS on the drive and we got to thinking about applying that same type of dynamic guidance to other areas of life," JinA said.

The pair took their idea to Google's Start-up Weekend in 2014 where they met co-founders Sergio Cecarini, George Trevill and Imperial PhD student Max Frenzel.

Max said: "My PhD is in Quantum Information Theory, which is quite an interdisciplinary area of research connecting many different fields in new and creative ways. I really enjoyed applying my mathematical and problem solving skills to a very real problem like cooking."

As the project developed, the team entered into Imperial Create Lab's Venture Catalyst Challenge (VCC), a pre-accelerator programme for early stage start-ups.

Max said: "Imperial has some great resources and programmes for start-ups, and my research and experience at Imperial prepared me very well for tackling new problems in all sorts of areas."

Download CHOPCHOP from the App Store for iOS: **bit.ly/chop-app**

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

Venture Catalyst Challenge
Imperial Create Lab's Venture Catalyst Challenge (VCC) is a pre-accelerator program to test the commercial viability of early-stage science and technology ideas. With an emphasis is on testing the VCC helps teams get into the world to test their products viability so they can leave the programme with a revenue-generating venture. The format is evening masterclasses and workshops for 6 weeks from February to March. The program culminates in an annual Showcase.

obituaries

LARRY HENCH

Larry Hench, Emeritus Professor of Ceramic Materials died peacefully on 16 December 2015, aged 77. His colleague and friend Professor Julian Jones (Materials) pays tribute.

Larry joined Imperial in 1995 from the University of Florida, having made the seminal discovery in 1969 of Bioglass – the first reported synthetic material to form a bond with living tissues.

As Chair in Ceramic Materials at Imperial, Larry set out to uncover the basic cell biology mechanisms that give Bioglass its remarkable properties. He set up the Tissue Engineering and Regenerative Medicine Centre with the late Professor Dame Julia Polak. There they made the fascinating discovery that the unique bone growing properties of the glass were due to the dissolution products of the glass stimulating bone cells at the genetic level. Members of their team went on to make the glass into 3D scaffolds for use in bone regeneration.

To date, Bioglass has been used in more than one million patients worldwide to treat dental and orthopaedic bone defects.

While Larry is best known for Bioglass, he also has carried out research into electroceramics, optics and nuclear waste immobilization amongst other topics – publishing more than 800 papers, 30 books and 32 US patents.

Larry was passionate about continuing education, for example setting up a new Biomedical Engineering programme at the Florida Institute of Technology. He also has published a popular series of children's books which introduce science to young children in an accessible way.

He was a generous, caring man, very popular in the science and engineering community. As a supervisor, he gave total freedom for his students yet his door was always open.

Larry is survived by his son Alan and companion Margaret as well as step children Martin, Sally and Joanna and 14 grandchildren and 1 great grandchild.

long service

Staff featured in this column have given many years of service to the College. Staff listed celebrate anniversaries during the period 1 January – 31 January 2016. The data are supplied by HR and correct at the time of going to press.

20 years

- Mrs Maria Barria, Senior Library Assistant: Metadata, Library Services
- Anthony Battams, Shift Security Officer, Security Services
- Professor Farhat Beg, Visiting Professor, Physics
- Professor Chris Braddock, Professor of Organic Chemistry, Chemistry
- Julie Bryant, Customer Service Centre Manager, Estates Division
- Professor Anthony Bull, Head of Department of Bioengineering
- Anne Hough, Departmental Administration & Postgraduate Manager, Electrical and Electronic Engineering
- Mr Colin Poulton, Honorary Research Fellow, Centre for Environmental Policy
- Anita Quigley, Senior Library Assistant: Faculty Support Services, Library Services (Hammersmith Medical Library)
- Dr Jacqueline Russell, Research Fellow (GERB Project Scientist), Physics
- Dr Steffen van Bakel, Senior Lecturer, Computing

30 years

- Dr Martin Bax, Emeritus Reader, Medicine
- Theresa Debono, Employment Adviser and Job Evaluation Manager, HR
- Dr John Hassard, Reader in Physics, Physics
- Professor Martin Liebeck, Head of the Pure Mathematics Section, Mathematics
- John O'Brien, Maintenance Supervisor, Estates Division
- Dr Mihailo Ristic, Senior Lecturer, Mechanical Engineering
- Simon Turner, Senior Technician (Teaching), Chemistry

40 years

- Kevin Cope, Head of Building Operations, Estates Division

50 years

- Emeritus Professor Anthony Caplin, Distinguished Research Fellow, Physics
- Susan Van Noorden, Honorary Senior Research Officer, Medicine

SPOTLIGHT

Kevin Cope, Head of Building Operations 40 years

My first experience of Imperial was of a cold, damp, dark November afternoon, as I arrived full of trepidation to be interviewed for the position of trainee science technician in the Biochemistry Department. I was brought to an imposing brass nameplate reading 'Departmental Superintendent'. Fortunately the interview went well and I started working in the biochemistry teaching laboratories on 5 January 1976, attending the College two evenings and one day each week.

In 1979 I joined Professor Brian Hartley's protein chemistry research team as a Senior Technician, rising to Laboratory Superintendent in 1985. This role allowed me to teach first year undergraduates safety and laboratory techniques, which was very rewarding. During the early 1980s I also found time to play a little cricket, captaining the College staff team.

In April 1998 I joined Estates to manage the new Sir Alexander Fleming Building and five years later I was overseeing a Building Management team serving the whole estate. It was at that time that I initiated a sustainability programme optimising building plant and services which ultimately attracted several national HE sector awards.

I'm a member of the College's Disabilities Action Committee and a mentor on the IMPACT (Imperial Positive About Cultural Talent) programme, both of which are hugely important to me.

Outside of my main College role, I serve as President of Bexley RFC, having previously captained the first team.

All in all I've had a challenging but personally rewarding career at Imperial.

Welcome

new starters

Mr Ayo Adegbiji, Business School
Dr Deborah Adkins, Design Engineering
Miss Lucy Ahfong, Public Health
Miss Fran Ahtuam, Registry
Dr Khondoker Akram, NHLI
Professor Pavlos Aleiferis, Mechanical Engineering
Dr Nicolas Alferez, Mechanical Engineering
Dr Khalid Alhaj Abdalla, Civil and Environmental Engineering
Miss Emily Amezdroz, Public Health
Miss Elizabeth Andrew, Medicine
Miss Natalie Andrews, Life Sciences
Dr Nicholas Appelbaum, Surgery & Cancer
Mr Joao Arnauth Pela, Physics
Mr Carlton Assie, Business School
Ms Hayley Atkinson, Public Health
Dr Pierre-Louis Aublin, Computing
Mr Vitali Avagyan, Business School
Miss Vanessa Barber, Centre for Environmental Policy
Mr Michael Barclay, Chemistry
Miss Rachael Barry, Life Sciences
Dr Deren Barsakcioglu, EEE
Dr Ana Batista Gomes, Life Sciences
Mrs Joanna Bednarska, Medicine
Mr Trevor Beek, Physics
Ms Janette Beetham, HR
Miss Margaret Bennett, Surgery & Cancer
Mr Terry Bent, Estates Division
Dr Ver Bilano, Public Health
Dr Lauren Bourke, Medicine
Miss Sophie Bozorgi, Mechanical Engineering
Dr Laura Bridgeman, School of Professional Development
Mr Stefano Buoso, Aeronautics
Mr Ben Campion, Faculty of Medicine Centre
Miss Hayley Carr, Sport and Leisure
Miss Elizabeth Carter, Advancement
Dr Lorenzo Cattarino, Public Health
Dr Ondrej Cerny, Medicine
Dr Manigandan Chandrasekaran, Medicine
Dr Ridwana Chowdhury, NHLI
Dr Charlotte Clark, Faculty of Medicine Centre
Mr James Cobb, Estates Division
Mr Spencer Cockerell, Registry
Ms Elisa Collado Fregoso, Chemistry
Dr Pedro Cordas da Rosa Dias, Business School
Mr Giacomo Corleone, Surgery & Cancer
Dr Victoria Cornelius, Public Health
Mr George Coutinho, Security Services
Mr Andrew Cox, Advancement
Mr Mitchell Cuddihy, Mechanical Engineering
Dr Erlend Davidson, Materials
Mr Jon Davis, NHLI
Ms Lucia De Campos Braz, Medicine
Mr Thomas Dehn, Surgery & Cancer
Mr Justin Devito, Chemistry
Mr Gurtinderjit Dhanoa, Estates Division
Dr Erica Di Federico, Bioengineering
Miss Tessa Dibble, Surgery & Cancer
Mrs Michaela Dijmarescu, Public Health
Mr Andrew Dimond, Clinical Science
Miss Chiara Dionisi, Medicine
Dr Cornelius Donat, Medicine
Dr Ming Dong, Mathematics
Dr Laurent Dortet, Life Sciences
Dr Rui Dos Santos Climaco Pinto, Public Health
Mr James Eaton, EEE
Miss Victoria Ebo, Faculty of Engineering
Dr Malcolm Edwards, Strategic Planning
Mr Peter Edwards, Finance
Dr Ethaar El-Emir, NHLI
Miss Lucy Elsby, Faculty of Engineering
Dr Catalina Estrada Montes, Life Sciences (Silwood Park)
Dr Lukasz Farbaniec, Physics
Dr Samantha Field, Faculty of Medicine Centre
Ms Shona Flannigan, Public Health
Ms Eftychia Fotiadou, Computing
Dr Annabel Frearson, School of Professional Development
Miss Giuliana Fusco, Life Sciences
Mr Thomas Galer, Finance
Ms Joanne Gardner, Advancement
Mr John Geeson, Business School
Ms Athina Georgiadou, Medicine
Miss Maria Giorgalli, Life Sciences
Dr Frank Gommer, Aeronautics
Dr Barbara Gordon, Aeronautics
Ms Maggie Gorman, Public Health
Mr Jack Grimes, Civil and Environmental Engineering
Ms Elizabeth Gueyffier, International Relations Office
Dr Thomas Guillerme, Life Sciences (Silwood Park)
Dr Kathryn Hadler, ESE
Ms Helen Haines, Mathematics
Dr Matthew Hall, Public Health
Dr Cong Han, Medicine
Dr Zong-Pei Han, Public Health
Mr Benjamin Hardcastle, Bioengineering
Dr Stephen Hardwick, Physics
Dr Marsilea Harrison, Bioengineering
Mr Thomas Harvey, Registry
Miss Fevziye Hasan, Student Recruitment & Outreach
Ms Raunaque Hasnat, Development
Dr Neil Hoose, Civil and Environmental Engineering
Dr Simon Hu, Civil and Environmental Engineering
Miss Cynthia Hu, Chemistry
Mr Junjie Huang, EEE
Miss Aimee Hudson, Advancement
Professor Graham Hughes, Civil and Environmental Engineering
Ms Deborah Hunte, ICU
Mr Richard Husbands, Estates Division
Miss Caroline Janes, Business School
Dr Michael Johnson, Medicine
Miss Helen Joseph, Education Office
Miss Mohini Kalyan, Medicine
Mr Osman Kamara, EYEC
Miss Aikaterini Kandylaki, Bioengineering
Dr Sadia Kanvil, Life Sciences
Ms Bernice Kaplan, Advancement
Miss Angeliki Karamani, NHLI
Ms Abiola Kazeem, Advancement
Ms Maureen Kearney, NHLI
Mr Joshua Kennard, Medicine
Mr Kristofer Kerrigan-Graham, Business School
Dr Amina Khalil, NHLI
Mr Angus King, Advancement
Dr Andrei Kirilenko, Business School
Mr Harry Kkoufou, Public Health
Dr Przemyslaw Kruczek, NHLI
Mrs Valentina Kskhafa, Faculty of Medicine Centre
Dr Paolo La Montanara, Medicine
Dr Ronald Lambert, Life Sciences
Dr Maialen Lasa, Medicine
Dr Fanny Lebosse, Surgery & Cancer
Mr Damon Lee, Mechanical Engineering
Miss Jolanta Leonaite, Development
Dr Jun Li, Chemistry
Miss Georgina Lira, Centre for Environmental Policy
Mr Loong Ly, HR
Mr Bastian Manz, Civil and Environmental Engineering
Mrs Katherine March, NHLI
Dr Damian Marquez, Medicine
Miss Louise Marston, Life Sciences
Dr Ekaterina Maslova, Public Health
Mr Antonio Mateiro, Medicine
Mr Andrea Mattavelli, Computing
Mr Joshua Mayers, Chemical Engineering
Mr Sean McGuinness, Estates Division
Mr Alex Mellor, ICT
Miss Liisa Miil, Registry
Dr Marija Milojevic Jevric, Computing
Mr Richard Moffatt, Estates Division
Dr Paolo Montaldo, Medicine
Mrs Rebecca Moody, Business School
Mr Nicholas Moult, Graduate School
Mr Will Mueller, Public Health
Mr Jamie Murphy, Surgery & Cancer
Dr Eamonn Murray, Physics
Ms Sara Nanchian, EEE
Dr Rhodri Nelson, Mathematics
Mr Wilten Nicola, Bioengineering
Mr Andreas Nold, Chemical Engineering
Ms Nazila Noorkhan, Business School
Dr Alexander Norori-McCormac, ESE
Ms Amy Obradovic, Public Health
Mr Harrison O'Brien, Medicine
Mr Folusho Ojutalayo, Library
Ms Ronke Olomola, Public Health
Miss Ashley Owen, Student Recruitment & Outreach
Dr Vito Palladino, Physics
Mrs Virginie Papadopoulou, Medicine
Miss Andriani Papageorgiou, Medicine
Dr Stelios Pavlidis, Computing
Mr Thomas Payne, Surgery & Cancer
Mr Max Pearson, Medicine
Miss Tabitha Pearson-Moore, Medicine
Mr Mohammad Pedramfar, Mathematics
Mr Francois Peirani, ICU
Dr Frederic Piel, Public Health
Mr Barry Pinder, Estates Division
Dr Constandina Pospori, Life Sciences
Dr Sebastian Potter, Public Health
Miss Olivia Powell, Advancement
Mr Aaron Prendergast, Surgery & Cancer
Professor Toby Prevost, Public Health
Ms Claire Puddephatt, NHLI
Mrs Alima Qureshi, Life Sciences (Silwood Park)
Miss Saadia Rahman, NHLI
Mr Saumya Ramanayake, Medicine
Mr Christian Ramtale, Surgery & Cancer
Mr Tony Regan, Advancement
Miss Sas Rhodes, ICU
Miss Leone Richmond, Advancement
Dr Andrea Romano, Surgery & Cancer
Dr Francesca Rosini, Surgery & Cancer
Dr Jessica Rowley, Life Sciences
Ms Foteini Rozakeas, Medicine
Dr Jakob Runge, Grantham Institute
Dr Agnieszka Rutkowska, Chemistry
Dr Noreen Ryan, Public Health
Dr Noureddin Sadawi, Surgery & Cancer
Mr Vincenzo Salerno, Public Health
Ms Ela Sapinska-Elise, Aeronautics
Dr Sina Sareh, Aeronautics
Professor Franco Sassi, Business School
Mrs Adele Savage, Surgery & Cancer
Ms Amiera Sawas, Grantham Institute
Mr Giordano Scarciotti, EEE
Dr Leila Sheldrick, Design Engineering
Mr Jonathan Shepherd, Medicine
Miss Caitriona Sheridan, EEE
Mr Fan Shi, Mechanical Engineering
Miss Melissa Shukuroglou, Public Health
Mr Mohamed Sillah, EYEC
Ms Irene Simmonds, Surgery & Cancer
Mr Robert Simpson, Aeronautics
Miss Joanne Siwoniku, Faculty of Medicine Centre
Miss Natalie Smart, Chemistry
Ms Sarah Stewart, Library
Miss Yunyun Sun, Chemistry
Mr Richard Surgenor, NHLI
Miss Charlotte Sutherell, Chemistry
Mr Nicholas Synan, Estates Division
Mr Martin Taylor, Mathematics
Mr Rowan Taylor, Estates Division
Mr Matt Terrington, Communications and Public Affairs
Mr David Thakor, Medicine
Miss Layelle Thomson, HR
Mr Kalle Timperi, Mathematics
Mrs Laura Tyzack, Advancement
Mr Vijay Vaja, Medicine
Mr Anton Van Pamel, Mechanical Engineering
Dr Nejra Van Zalk, School of Professional Development
Dr Venanzio Vella, Medicine
Mr Daniel Vilar Jorge, Surgery & Cancer
Dr Xue Wan, ESE
Mr Yujiang Wang, Computing
Miss Emma Wardle, Student Recruitment & Outreach
Mrs Judith Webster, Registry
Mr Yoni Weiner, Chemistry
Ms Ana Wheelock Zalaquett, Business School
Miss Emma White, Surgery & Cancer
Mr Gerard White, ICT
Mr Mikey White, Registry
Dr Christopher Wood, Materials
Mr Jingwei Xian, Materials
Ms Yizhou Yu, Surgery & Cancer
Ms Jessie Zhu, Business School

This data is supplied by HR and covers staff joining the College during the period 23 December 2015 – 12 February 2016. This data was correct at the time of going to press. For Moving On, visit the online supplement at **www.imperial.ac.uk/reporter**

✉ *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.

Farewell

moving on

Dr Fernando Abaitua Elustondo, Medicine (5 years)
Mr Erju Abdurahman, Catering Services
Dr Khalil AbuDahab, Public Health
Mr Dickie Acharya, Security Services
Miss Resha Al Rabeh, Medicine
Mr Mark Allen, Security Services (5 years)
Ms Cristina Andrighetti Formaggini, Catering Services (6 years)
Mr Andrea Anfosso, Medicine
Professor Gianni Angelini, NHLI (5 years)
Miss Bonnie Atkinson, Life Sciences (Silwood Park)
Miss Lisa Aufegger, EEE
Dr Ebubekir Avci, Computing
Dr Anja Baresic, Clinical Science
Dr Elena Barquero, Public Health
Professor Facundo Batista, Medicine
Dr Cedric Beaume, Aeronautics
Miss Mariane Bignotto, Estates Division
Dr Rebecca Birch, Medicine
Professor Alex Blakemore, Medicine (14 years)
Mr David Boadu, Catering Services
Dr Olga Bodero, Chemistry
Miss Rebecca Brady, Surgery & Cancer
Mr Thomas Bragg, Climate KIC
Dr Milan Bratko, Physics
Dr John Brazier, Chemistry
Dr Maria Broadbridge, Physics
Dr Dean Brown, Medicine
Mr Mark Bruggemann, Civil and Environmental Engineering
Dr Matthew Cane, Medicine
Dr Carla Canturri Gispert, Aeronautics
Dr Melina Carapeti-Marootian, Medicine
Mr Ivan Carubelli, NHLI (5 years)
Dr Nicola Casali, Medicine
Dr Joshua Chadney, Physics
Dr Robert Chapman, Materials
Dr Zhizhao Che, Chemical Engineering
Dr Ching-Mei Chen, Computing
Mrs Floria Cheng, Surgery & Cancer
Dr Mourad Chennaoui, Mechanical Engineering (6 years)
Ms Sara Chesnick, Registry (5 years)
Dr Young-Pil Choi, Mathematics
Dr Daniel Colquitt, Mathematics
Dr Caroline Copeland, Bioengineering
Dr Edward Costar, Surgery & Cancer
Ms Berengere Decroux, School of Professional Development
Mr Abd Dekkak, NHLI (12 years)
Ms Alison Dexter, Public Health
Dr Stoichko Dimitrov, Chemistry
Mrs Senem Dinc Aldemir, Catering Services
Dr Elisa Dominguez Huttinger, Bioengineering
Mr Jose Dominguez Mateos, Physics
Professor Sir Liam Donaldson, Surgery & Cancer
Mr Jordan Douglas, ICU
Mr Barrett Downing, NHLI
Dr Isabel Duarte Rosa, Life Sciences (Silwood Park)
Dr Cheryll Duncan, Education Office
Dr Andrew Durham, NHLI (9 years)
Mr Jan-Christoph Edelmann, NHLI
Miss Jessie Eerens, Public Health
Dr Ruth Elderfield, Medicine (6 years)
Dr Ahmed El-Laboudi, Medicine
Miss Reah Evans, Medicine
Dr Agnieszka Falinska, Medicine
Miss Mariam Fanous, Medicine
Ms Nasheed Faruqi, Library
Dr Judith Finegold, NHLI
Dr Pedro Fonseca Rodrigues, EEE
Miss Sarah Fort, Registry
Dr Laura Frisk, Materials
Dr Andrea Gaglione, Computing
Mr Dieter Galea, Surgery & Cancer
Dr Fengxia Gao, ESE
Dr Carole Garnier, ESE
Dr Annabelle Gawer, Business School (11 years)
Dr Cigdem Gelegen Van Eijl, Life Sciences (5 years)
Dr Siobhan George, NHLI
Dr Zsolt Gercsi, Physics (6 years)
Mrs Antonia Goodyer, Central Secretariat
Miss Rosalind Goudie, Public Health
Mr Darren Grey, Faculty of Engineering
Mr Paul Grocott, Physics
Ms Lena Gruscheski, NHLI
Mr Chas Guirey, Estates Division
Dr Marc Gunter, Public Health
Dr Mazen Haj Sleiman, Bioengineering
Dr Belinda Hall, Life Sciences
Mr Benjamin Harris, Business School
Miss Rachael Harrison, Materials
Dr Edward Harry, Physics
Ms Raunaque Hasnat, Medicine
Dr Richard Hendricks, Physics (8 years)
Ms Katie Henry, HR
Miss Alejandra Hermelo Portela, Catering Services
Dr Arnau Hervera Abad, Medicine
Dr Pablo Higuera Caubilla, ESE
Dr David Hodson, Medicine
Dr Catriona Houston, Life Sciences (6 years)
Dr Fangjing Hu, EEE
Miss Amira Hussain, Physics
Ms Buthaina Ibrahim, Medicine
Miss Yvette Ighorue, Public Health
Ms Hannah Isherwood, Medicine
Dr Christian Jacobs, ESE
Mr Sakda Janla-or, ICU
Mr Shuai Jiang, Computing
Dr Maria Jimenez Solomon, Chemical Engineering (7 years)
Dr Callum Johnston, NHLI
Miss Stacey Jones, Sport and Leisure
Dr Ola Kamala, Bioengineering
Mr Denis Keane, Medicine
Dr James Keirstead, Civil and Environmental Engineering (9 years)
Miss Skye Kelly-Barrett, NHLI
Mr Hawkeye King, Computing
Ms Ramona Kopton, NHLI
Dr Peyda Korhan, Life Sciences
Mr Luke Koschalka, Public Health
Miss Sina Krokowski, Medicine
Dr Sujata Kundu, Materials
Mrs Joanna Kuska, Sport and Leisure
Dr Mikhail Kustov, Physics
Mr Michael Kyriakides, Surgery & Cancer
Dr Sara Lamas Oliveira Marques, Life Sciences
Miss Lucy Lambe, Library
Miss Heather Lambie, NHLI
Dr Lampros Lamprinos, Computing
Dr Mohamed Latheef, Civil and Environmental Engineering
Dr Anna Lavygina, Computing
Vine Dr Le, Civil and Environmental Engineering (8 years)
Dr Monica Lebron, School of Professional Development (6 years)
Dr Mike Lee, EEE (12 years)
Dr Eoin Leen, Life Sciences
Ms Bernice Leung, Finance
Miss Wen Li, Life Sciences
Mr Jianxun Li, Business School
Dr Nan Lin, Public Health
Dr Jiefei Ma, Computing
Dr Yimeng Ma, Chemistry
Miss Kanta Mahay, Medicine
Dr Alice Marmugi, Medicine
Dr Stephan Martin, Mathematics
Mr William Mason, ICT
Ms Emma Mawdsley, Public Health
Dr Johanna Maziar, Public Health
Mr Francesco Mazzarotto, NHLI
Mr James Mc Govern, Public Health
Dr Felicity McGrath, Faculty of Natural Sciences
Ms Brie McMahon, Public Health
Mrs Carolyne Megan, ICT
Dr Aleksandar Mijatovic, Mathematics (10 years)
Mr Grigorios Mingas, EEE
Dr Justyna Miszkiewicz, Medicine
Ms Kristina Mitasiunaite, Security Services
Dr Marco Mongiello, Business School (8 years)
Dr William Montague, Materials
Dr Raul Munoz Sanchez, Aeronautics
Ms Janani Murallidharan, Mechanical Engineering
Mr Kevin Murray, EEE
Mrs Eleanor Murray, Medicine
Mrs Daiva Naudziuniene, Computing
Mr Adrian Oberc, Faculty of Medicine Centre
Ms Susana Ochoa Rodriguez, Civil and Environmental Engineering (5 years)
Dr Oluwaseun Ojo, NHLI
Dr Marta Oliveira De Freitas, Medicine
Dr Maelig Ollivier, Materials
Dr Dominic Orchard, Computing
Dr Rasha Osman, Computing
Miss Celia Pacheco Moreno, Materials
Mrs Virginie Papadopoulou, Bioengineering
Dr Anastasios Papazafeiropoulos, EEE
Professor Lubos Pastor, Business School
Mr Dean Pateman, Registry
Dr Claire Pean, Life Sciences
Mr John Perry, College Headquarters
Dr Marion Pfeifer, Life Sciences (Silwood Park)
Miss Maria Pipi, Surgery & Cancer
Miss Claudia Pisani, Public Health
Ms Dilkushi Poovendran, Medicine (5 years)
Mr Georgios Pothoulakis, Bioengineering
Dr Spyridon Psarras, Aeronautics
Miss Alima Rahman, NHLI (5 years)
Dr Georgios Raikos, EEE
Dr Tomas Ramirez Reina, Chemical Engineering
Dr Pedro Ramirez Torrealba, EEE
Dr Farhat Rasul, Public Health
Dr Ben Raymond, Life Sciences (Silwood Park)
Dr Gillian Rea, NHLI
Dr Daniel Reed, NHLI
Miss Stephanie Reid, Chemistry
Dr Ivana Rizzuto, Surgery & Cancer
Mrs Liisa Roulinson, NHLI (18 years)
Mr Lee Sadler, Catering Services
Mr Christos Sagonas, Computing
Dr Prabhjot Saini, Chemistry
Dr Karl Sandeman, Physics (6 years)
Miss Marta Sawicka, Medicine
Dr Franziska Schneider, NHLI
Mr Maik Schroder, Medicine
Mrs Srilakshmi Seekolu, Public Health
Mr Taha Shahid, Medicine
Dr Sandra Shefelbine, Bioengineering
Mrs Reena Sheladia, Catering Services
Dr George Shirreff, Public Health
Ms Kathryn Shuford, Public Health
Ms Catherine Simpson, Life Sciences
Dr Karl Smith, Civil and Environmental Engineering
Mr Ian Smith, Health and Safety
Mr Naissen Soobrayen, Faculty of Medicine Centre
Mr Anuj Sood, Computing
Dr David Soto, Medicine (8 years)
Dr Irina Spulber, EEE
Dr Richard Starke, NHLI (8 years)
Mr Nicolai Stawinoga, Computing
Mr Ali Sulaiman, Physics
Mr Melvyn Tamplin, Finance (14 years)
Miss Helen Tamura-Wicks, Physics
Miss Jenny Thomas, Faculty of Natural Sciences (7 years)
Dr Alice Thompson, Mathematics
Dr Florent Tonus, Materials
Dr Maria Toro-Troconis, Faculty of Medicine Centre (9 years)
Dr Matthew Towers, Mathematics
Dr Tommaso Tufarelli, Physics
Mr Albert Verdeny Vilalta, Physics
Professor Pietro Veronesi, Business School
Dr Alessandra Vitale, Chemical Engineering
Dr Charles Vriamont, Chemistry
Dr Wen-Qin Wang, EEE
Dr Xiaofeng Wang, Mechanical Engineering
Miss Michelle Watson-Dotchin, NHLI (5 years)
Mr Tim Weenink, Bioengineering
Ms Xiaoyao Wei, EEE
Dr Paul Westacott, Centre for Environmental Policy
Mr Daniel Wilkinson, Chemistry
Dr Dylan Williams, Public Health
Ms Lingzhi Wu, Surgery & Cancer
Dr Jie Yang, Public Health
Ms Michaela Zajacova, Catering Services
Miss Fatima Zaman, Faculty of Medicine Centre
Dr Jan Zemen, Physics
Dr Jiafei Zhang, Chemical Engineering
Dr Zhiqiang Zhang, EEE
Dr Zed Zulkafli, Civil and Environmental Engineering

Death in service

Mr Steven Spencer, Security Services (12 years)

Retirement

Mr John Barnes, Estates Division (12 years)
Mr Trevor Beek, Physics (50 years)
Emeritus Professor John Darlington, Computing
Professor Julian Dyson, Medicine (10 years)
Ms Elen Jazrawi, NHLI (17 years)
Dr David McPhail, Materials (26 years)
Mr Bob Parish, Business School (3 years)
Professor Stephen Richardson, College Headquarters (37 years)
Mr Ian Wright, Mechanical Engineering (32 years)

moving in. moving on.

This data is supplied by HR and covers staff joining the College during the period 23 December 2015 – 12 February 2016. This data was correct at the time of going to press.

events highlights

FOR COMPLETE DETAILS:
www.imperial.ac.uk/whats-on

February 2016

25 FEB, 17.00

Imperial Fringe: Food of tomorrow

What's for dinner this evening? How about in 50 years' time? Join our researchers for a mouth-watering, interactive journey from farm to fork, to find out about the new science that will change what we eat, how it's produced, and its impact on our health and well-being. The Fringe will include opportunities to Find out how many people planet Earth could support based on your diet, before trying a cake made with new appetite suppressing fibres that should tame any urges you have to go back for seconds.

17 MARCH, 17.30

President's Address and Reception

Join President Alice Gast for her second annual address to the College community. The evening will also provide an opportunity to celebrate the external accolades and achievements of Imperial's staff and alumni. The talk will be followed by a drinks reception in the Queen's Tower Rooms.

take note

Help on hand to quit smoking

As part of the national No Smoking Day on 9 March 2016, the charity Quit will have an advice stand on the Level 1 concourse area of the Sherfield building between 10.00–16.00.

Further information for staff thinking of quitting smoking can be found on the Health and Wellbeing web pages:
bit.ly/imp-quit

22 FEBRUARY, 18.00

How to build interactive and smart systems in seconds

Joachim Horn , founder of SAM Labs, discusses his digital toolkit to create smart fridges, connected doorbells, wearable tech, and even twerk-bots feasible in minutes without the need for electronics or coding.

22 FEBRUARY, 18.30

Artificial Intelligence and Machine Learning in Healthcare

Join an expert panel of speakers to find out why data mining, machine learning and artificial intelligence are becoming the most talk-about topics in digital health.

24 FEBRUARY, 18.45

Imperial at Science Museum Lates: Sexuality

Imperial researchers explore the topic of sexuality at the latest Science Museum Evening Lates.

25 FEBRUARY, 17.30

Data Science Insights

Professor Van Ryzin, Head of Economic Research at Uber speaks about data and surge pricing at the mobile ride hail company.

25 FEBRUARY

Mountains, magmas and mushes

Professor Matthew Jackson (Earth Science and Engineering) discusses new theories on volcano plumbing and its implications for eruption frequency and prediction, and the evolution of the Earth's crust.

01 MARCH, 18.30

Antarctica – hazards and honours in the name of science

Roderick Rhys Jones, Chairman of the British Antarctic Monument Trust discusses his creation of memorials "to those who lost their lives in pursuit of science."

02 MARCH, 17.30

Cool plastics for a greener world

Find out if new smart plastics turn around the reputation of environmentalism's arch enemy, with Professor Natalie Stingelin (Materials).

03 MARCH, 17.30

Could a machine ever argue?

Explore why trust in the advice of machines can only come once they can argue and reason logically, with Professor Francesca Toni (Computing).

09 MARCH, 12.30

Research showcase on FinTech

Discover the range of projects across the College influencing financial technology innovation.

09 MARCH, 16.00–19.00

Department of Mechanical Engineering Research Showcase 2016

Neville Jackson, Chief Technology & Innovation Officer at Ricardo plc discusses the Challenge for the Next Generation of Engineers at this evening of talks and debates.

09 MARCH, 11.45

Postgraduate Open Day

Find out more about what it's like to study a taught or research programme at Imperial and meet with current students and staff.

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

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