

## Facing our future

Celebrating Imperial  
women and pushing the  
College further towards  
gender equality

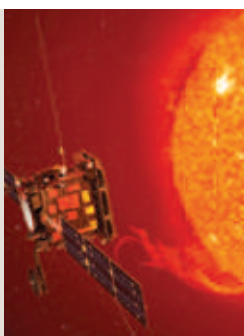
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EDITOR'S CORNER

## Progress check

Many institutions around the world marked **International Women's Day** on Sunday 9 March or, like Imperial, opted for a week of celebration. Arguably, there's a particular resonance for Imperial and other institutions like it that have significantly changed the gender make up of their staff population and are still in the process of moving towards **greater equality**. It's a chance to look back and see what has been achieved and consider what more can be done. That's the main focus of this issue of *Reporter* (centre pages). You'll also regularly find stories of the impact that **Imperial women** make in the course of their work in each issue of *Reporter*. This month read about lead engineer Helen O'Brien who is overseeing an experiment onboard the Solar Orbiter space mission (page 9) and Esther Garcia Tunon Blanca who is unlocking the incredible potential of graphene for the benefit of industry and society (page 5). Hopefully Helen, Esther and the many other role models at Imperial will inspire other women and girls to follow in their path.

ANDREW CZYZEWSKI, EDITOR

♀ *Reporter* is published every three weeks during term time in print and online. Contact Andrew Czyzewski:

✉ [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk)

# Imperial releases first animal research report at special public event

Around 200 people attended a unique event at Imperial on 24 February to launch Imperial's first annual report on animal research.

The 30-page report gives an overview of how animal research is conducted at the College and outlines changes made over the last year to reform our ethical and welfare review process, the governance framework and our approaches to refining, reducing and replacing animals in research (known as the 3Rs).

It contains a look behind the scenes at one of Imperial's animal facilities, an interview with a Home Office inspector, as well as a progress report on how the College has delivered on the action plan it published last year.

“ I am proud to see technicians, vets, scientists and communications staff working together.”

A public event, part of Imperial's Fringe series, was held to support the report's launch, giving visitors the chance to quiz the vets and technicians who care for animals at the College, and to hear from scientists and doctors about how and why animals are used in research.

Researchers demonstrated their approaches to the 3Rs, with visitors to one exhibit able to peer down a microscope to see beating heart cells produced from human stem cells, which are being used as an alternative to animals to study the effects of possible treatments for heart conditions.

In another, scientists discussed how research with amphibian species in the laboratory and in the field is helping with efforts to save frog species around the globe from a deadly, skin-eating fungus.

The Fringe was preceded by a series of talks aimed at



others funding or working in animal research, which was attended by 100 representatives from 30 different organisations.

Provost James Stirling said: “These events and the publication of the animal research

annual report are extremely important milestones for the College. It's pleasing to have so much to say about how we carry out research at Imperial and how we are building on our strengths in animal welfare and the 3Rs to become a world-leader in this area.

“In particular, I am proud to see technicians, vets, scientists and communications staff working together as a community to help us meet our commitment to being more open about animal research.”

— KERRY NOBLE, COMMUNICATIONS AND PUBLIC AFFAIRS

Read the animal research report here: [bit.ly/animalres-report](http://bit.ly/animalres-report)



# Alice Gast outlines Imperial's priorities

Professor Alice Gast delivered her first President's Address to Imperial staff, students, alumni and friends on 3 March – explaining her vision for the College, highlighting its strengths and looking ahead to future threats and opportunities.

Trailing the College's upcoming five-year strategy due to be published in summer 2015, Professor Gast referred to the emerging themes that capture Imperial's vision, goals and aspirations. These include: taking a broad and innovative view of Imperial's educational mission; exploiting the College's London location; building and maintaining better ties with friends and alumni; sharing "the wonder and importance of what we do"; building a supportive, diverse, considerate and highly-motivated community; and securing the financial strength needed to deliver this vision.

Professor Gast referred to emerging challenges to Imperial and the wider world of knowledge and discovery. She urged the community to remain vigilant towards threats to reliable support for research and education, restrictions on the free flow of talent across our borders, and rigidity in a world of changing social contracts and modes of learning.

Praising the "ring fence" protecting UK science funding, Professor Gast warned that reduced government capital funding could limit Imperial's ability to sustain a world-class science, medicine, engineering and business university. She described the upcoming election and spending review as "critical times for the Government to remain an integral partner in our mission to deliver academic excellence and societal benefit."



Professor Gast added that collaboration is key to broadening Imperial's societal impact – and often that means working with rivals and competitors.

She concluded: "As we embark on this era of advocacy, agility, courage and collaboration, I ask that each member of the College community seize this opportunity. I ask everyone to be vocal advocates for what we do, to be agile and courageous with new ideas and to seek out new collaborations. It is our individual and combined efforts that will write the next chapters of Imperial's history."

"It is our individual and combined efforts that will write the next chapters of Imperial's history"



## Gala dinner

Following Professor Gast's Address, nearly 350 guests came together to celebrate the outstanding achievements of staff, students and alumni at the annual Gala Dinner.

Among those attending the event, which was the largest of its kind ever hosted by the College, were staff and alumni who had been recognised with prestigious awards and national honours, students who had made exceptional contributions to College life, and people from across Imperial who had been nominated by their colleagues and peers for going above and beyond in their work.

Lucy Stagg, Digital Media and Communications Officer in the Faculty of Natural Sciences, was nominated to attend the Gala Dinner for her work implementing the new College website design for the Faculty and its departments. Reflecting on the event, she said: "It's been a lovely evening. I've been able to reconnect with quite a few old faces. It's really nice to have your contributions recognised like this."

—ANDREW SCHEUBER AND DEBORAH EVANSON, COMMUNICATIONS

## in brief

### Share your thoughts on the College strategy

All Imperial staff are invited to give feedback on a green paper outlining the College Strategy for 2015 to 2020. Last year the President and Provost began the process of developing the strategy and the green paper's development has been informed by the work of seven workstreams, drawing together staff across Imperial to help shape its content. It articulates ten elements that make Imperial distinct

and sets out aims for realising these elements in the future. It seeks to provide a coherent picture of the College's direction in the next five years and beyond to our community, our supporters and the wider world. Feedback will be taken through a question on each of the ten elements identified in the strategy, alongside a free text box for any broader points staff may wish to include. The consultation closes on Friday 27 March.

Take the Survey: [bit.ly/Imp-strat](http://bit.ly/Imp-strat)



### New Dean for Faculty of Medicine

Imperial has announced Professor Gavin Screatton as Dean of the Faculty of Medicine. He takes up the role on 1 March 2015 in succession to Professor Dermot Kelleher. Professor Screatton is currently Vice Dean (Academic Development) in the Faculty of Medicine. Since joining Imperial in 2004 as the Chair of Medicine, he has served as Campus Dean for Hammersmith, and Head of the Department of Medicine, before becoming Vice Dean in 2013.

“The science community needs to show that additional [state] spending will crowd in more private funding and be beneficial to the country.”



NICK HILLMAN, DIRECTOR OF THE HIGHER EDUCATION POLICY INSTITUTE (HEPI).

Read an interview with Nick: [bit.ly/hillman-interview](http://bit.ly/hillman-interview)

## media mentions



### Ancient black hole had an inexplicable growth spurt

NEW SCIENTIST ▶ 26.02.2015

That sure is a flaming big hole. Astronomers have discovered a black hole with a mass 12 billion times that of the sun, the *New Scientist* reports. It seems to have reached that size when the universe was less than a billion years old, which creates a puzzle. "Everyone thinks of black holes as these great dangerous things that swallow up anything in their vicinity," says Daniel Mortlock (Physics). But that's not the case. "If you try to force-feed it you get a traffic jam on the way in and it gets very dense."

### Climate change could bring dengue to UK

BUSINESS GREEN ▶ 16.02.2015

Rising temperatures in Europe caused by climate change could bring traditionally tropical diseases such as dengue fever and chikungunya to the UK, scientists warn. A research paper by a team of researchers from Imperial, the Cyprus Institute and the Max Planck Institute, reported in *Business Green*, predicted 2.4 billion people could be exposed to the Asian tiger

mosquito by the middle of the century, which can transmit pathogens that spread dengue fever, chikungunya infection, yellow fever and encephalitis.

### Don't freak out: LSD may aid cancer victims

THE SUNDAY TIMES ▶ 15.02.2015

It has been a long, strange trip for British science. After more than 40 years in legal limbo, research into the potential medicinal benefits of psychedelic drugs has resumed at Imperial with the first human trials involving banned hallucinogenic substances in almost half a century. "There is accumulating evidence that psychedelic drugs have therapeutic value," Dr Robin Carhart-Harris (Medicine), the neuroscientist leading the psilocybin study



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told the *Sunday Times*. Researchers have for long argued that restrictions on psychedelic drugs have hampered serious scientific studies that were beginning to show promising results in the 1950s and 1960s. "It is vital that this research starts again," said Professor David Nutt (Medicine), Director of Imperial's neuropsychopharmacological unit. "It was absurd that science had to stop in an attempt to prevent recreational drug use. We've been in the Dark Ages for the past 45 years."

### Engineer who helped build Britain's sub fleet

DAILY TELEGRAPH ▶ 26.02.2015

Sir Noel Davies, who has died aged 81, played a key role in the construction of Britain's Trident nuclear submarine fleet, the *Daily Telegraph* writes. He was educated at Ellesmere College and started work as an apprentice with the Austin motor company at Longbridge before winning a technical scholarship to study Mechanical Engineering at Imperial. As chief executive of Vickers Shipbuilding & Engineering Ltd (VSEL) at Barrow-in-Furness from 1989 to 1995, Davies oversaw the building of the four Vanguard-class submarines armed with Trident missiles.

## awards and honours

### COLLEGE

#### Celebrating excellence in health and safety

The Provost's Awards for Excellence in Health and Safety were awarded for the first time last week. Cristina Andrighetti

Formaggini, from the catering team in Campus Services, was presented with an individual award for implementing measures to comply with the EU's new allergen requirements across the College's Catering Operations. An individual award also went to Laboratory Manager Ken Keating (Bioengineering) for his innovative use of electronic systems for managing health

and safety. A group award was also presented to Jon Dyne, Dave Bowler and Lee Tooley for their work in the Heavy and Mechanical Lifting Group. The group were commended for their delivery of bespoke training and support in this area.

### ENGINEERING

#### Imperial dominates in global chemical engineering awards

The Institution of Chemical Engineers (IChemE) has revealed the winners of its inaugural international medals programme, with Imperial academics from the Department of Chemical Engineering picking up five of 16 awards in total. The medals cover a broad range of categories

including services to IChemE, outstanding papers in IChemE journals and achievements in industry. In the Research category, Professor George Jackson picked up the Guggenheim Medal for research excellence in thermodynamics and complex fluids; Dr Camille Petit the Warner Medal for exceptional promise in sustainable chemical process technology; and Dr Niall MacDowell the Nicklin Medal for exceptional contribution to the process sciences. Awards for services to the IChemE were also awarded to Professor Stephen Richardson, who picked up the Arnold Greene Medal for long-standing engagement with IChemE journals and Dr Paul Fennell for his broad range of outreach activities.



L-R: Director of Safety Surrinder Johal, winners Dave Bowler, Cristina Andrighetti-Formaggini and Ken Keating, and Provost James Stirling

## Caution in quest to find organic compounds on Mars

Scientists have discovered that the mineral jarosite breaks down organic compounds when it is flash-heated, with implications for Mars research.

Jarosite, a type of iron sulphate, is one of several minerals that NASA's Curiosity Mission is searching for. Its presence could indicate ancient habitable environments, which may have once hosted life on the red planet.

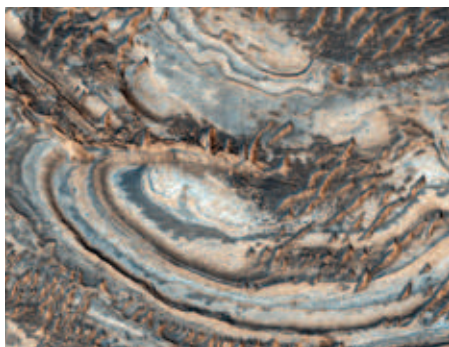
Researchers from Imperial and the Natural History Museum have replicated a technique called flash heating used by Curiosity Rover's on-board instruments to analyse soil samples, in its quest to find organic compounds. They tested a combination of jarosite and organic

compounds and discovered no trace of either from the instrument's readings. If jarosite is present in Curiosity's soil samples researchers may not be able to detect it as it is destroyed by the process.

In an earlier experiment Professor Mark Sephton (Earth Science and Engineering) investigated the mineral perchlorate which also causes problems for flash-heating experiments. He showed that carbon dioxide resulting from the experiment can be used to detect the presence of organic compounds. Professor Sephton said: "The destructive properties of some iron sulphates and perchlorate to organic matter may explain why current and previous missions have so far offered no conclusive evidence of organic matter preserved on Mars' surface."

To make the search for life more effective, the team are now exploring ways of improving the flash heating process. If jarosite is found on Mars, it may be possible for Curiosity's instrument to distinguish a spike in carbon dioxide level indicating that organic material is also present. This work could have important implications for the Curiosity mission and the upcoming ExoMars 2018 Rover mission.

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS



## Study shows how the brain can trigger a deep sleep

Scientists have discovered that switching on one area of the brain chemically can trigger a deep sleep.

Scientists from Imperial found that certain types of sedative drugs work by 'switching on' neurons in a particular area of the brain, called the preoptic hypothalamus. Their work, in mice, showed that it is these neurons that are responsible for shutting down the areas of the brain that are inactive during deep sleep.

Following a period of sleep deprivation, the brain triggers a process that leads to a deep recovery sleep. The researchers found that the process that is triggered by the sedatives is very similar. In mice, when the researchers used a chemical to activate only specific neurons in the preoptic hypothalamus, this produced a recovery sleep in the animals.

The knowledge that one distinct area of the brain triggers this kind of deep sleep paves the way for the development of better targeted sedative drugs and sleeping pills. These new drugs could directly hijack this natural mechanism to work more effectively, with fewer side effects and shorter recovery times.

"Lack of sleep is a really serious problem for many people, such as people suffering from stress or people working irregular shifts, and it affects their physical and mental health," said study co-author Professor Bill Wisden (Life Sciences). "There are many different sleeping pills available but none of them provide rest that is as restorative as natural sleep. We hope that our new research will ultimately lead to new ways of addressing this problem."

—LAURA GALLAGHER, COMMUNICATIONS AND PUBLIC AFFAIRS



Dr Garcia Tunon Blanca demonstrates a model of graphene

## Engineers create graphene components using 3D printing

A team of Imperial engineers have developed a method for printing miniature components from graphene, using a new graphene paste.

Graphene is thin, light, durable, and flexible and it conducts electricity, making it an extremely useful material in many industrial sectors. One of the current challenges for engineers is to develop methods for fabricating components made from graphene, which could pave the way for its wider use in manufacturing.

"Graphene is a carbon, much like diamond or graphite in your pencil, but instead of having a three dimensional structure, it is a two dimensional material with some amazing properties. We are trying to create three dimensional structures and objects made with graphene in order to really explore the potential of this wonder material," says researcher Dr Garcia Tunon Blanca (Materials).

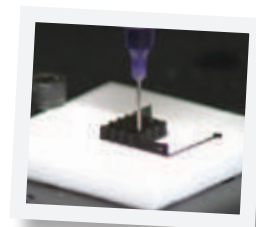
"One of the techniques we're exploring is 3D printing and the challenge for us is to develop graphene paste that can be used in the printing process."

The team has now developed graphene paste formulations containing flakes of chemically modified graphene and small amounts of polymers. They say their pastes could be used to develop a range of new components using 3D printers.

The researchers are working with Imperial Innovations to commercialise the technology and they are currently looking to collaborate with industrial partners, to find new ways of applying their graphene paste product to solve current challenges in manufacturing. For example, one usage might be creating new pressure sensors for applications as diverse as supersensitive 'skin' for robots, new health monitors for patients, membranes to soak up oil spills and special aircraft coating to protect against lightning bolts.

—COLIN SMITH AND MARTIN SAYERS, COMMUNICATIONS AND PUBLIC AFFAIRS

Watch a video of the technique here: [bit.ly/graphene-print](http://bit.ly/graphene-print)



# Foundations for equality

A new exhibition aims to celebrate the contribution that Imperial women have made to life at Imperial and society at large

What might the first women who were at Imperial in the early 20th Century have thought about the current state of gender equality at the College? As trailblazers among just a handful of other female colleagues they would no doubt be delighted to see a much greater number of female Professors and Fellows of the Royal Society – as well women in prominent leadership positions including the offices of President, Chair, Vice Provost and Associate Provost. They may even have had some ideas of their own for further progressing equality.

A new exhibition running at Imperial this week, following International Women's Day on 9 March, aims to celebrate the contribution that these pioneering female scientists and many other Imperial women since have made to life at the College and the impact their work has had, and is having, on society at large. It also looks at some of the schemes and initiatives now in place that aim to support female academics of the future.

"As well as being a celebration it's intended to show people both inside the College and also the outside world what Imperial does to support its women staff. All too often the College is seen as male dominated and this exhibition demonstrates that there are a lot of very talented and wonderful women working at the College," says Professor Dorothy Griffiths OBE, Imperial's first Envoy for Gender Equality.

Dot leads Imperial's Athena SWAN committee, which is committed to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia. The College now holds a Silver institutional award and 13 departments have Athena SWAN awards, ranging from Bronze to Gold.

The College is also pioneering its own in-house initiatives and schemes – such as the Althea-Imperial

Programme, set up to recognise entrepreneurial spirit and leadership skills of female students at the College.

Meanwhile the Julia Higgins Medal and Awards (named in honour of Professor Dame Julia Higgins former Dean of the City and Guilds College and Principal of the Faculty of Engineering) are presented annually to recognise individuals and departments that have made a significant contribution to the support of academic women at the College.

"Certainly, there's much more of a foundation and infrastructure supporting academic women compared with the early Imperial days when those women were effectively on their own. But we still have a long way to go in making sure women feel supported at each stage in their career."

## Catch-up

One important element in supporting career development is through encouraging research aspirations after a period of maternity or adoption leave. Imperial's Elsie Widdowson Fellowships were established in 2000 to do just that. The Fellowship award allows the department to relieve the academic of teaching and admin duties by providing 50% of salary costs for 12 months. Exactly how the money is used is the decision of the Fellowship recipient in consultation with her department. Applications for awards are not restricted to one pregnancy so female researchers may apply each time they take maternity leave. Over 70 Fellowships have been awarded since 2000.

Dr Ana Costa-Pereira, a Senior Lecturer in the Department of Surgery and Cancer, has received an Elsie Widdowson fellowship following the birth of each of her two children. Her research focuses on the signalling between cancer cells, with a view to identifying new targets for therapy. It's a very



Clockwise from top: Dr Ana Costa-Pereira, Karen Makuch, Dame Julia Higgins

“There's evidence to suggest that men get promoted at a faster rate than women and that women are less likely to put themselves in the frame for senior positions.”

Professor Dorothy Griffiths OBE





## Pioneering women

### 1 // MARTHA ANNIE WHITELEY (1866–1956)

Martha was the first woman to hold a position on the teaching staff at the Royal College of Science and first woman Assistant Professor at Imperial (equivalent of Reader) in 1920. At the request of the then Rector, Sir Alfred Keogh, she founded the Imperial College Women's Association.

### 2 // JANET VIDA WATSON (1923-1995)

Janet was the first female graduate of the Geology Department, graduating with first class honours in 1947. She was appointed Senior Lecturer in Geology in 1973 and awarded a personal Chair in 1974, becoming Imperial's third woman professor. She was also the first woman President of the Geological Society of London between 1982-1984 and an acknowledged world expert in Scottish Highland Geology.



### 3 // DAME JANET MARIA VAUGHAN (1899-1993)

Janet was a leader in haematology research, the treatment of anaemia, the importance of blood transfusion and the organisation of blood banks. She initiated the creation of national blood banks in London in 1938 as a young pathologist at the Royal Postgraduate Medical School (which became part of Imperial in 1997). The modified milk bottle for blood collection and storage was named MRC Bottle or "Janet Vaughan". She developed a blood transfusion system in WWII and then studied starvation, notably on the liberation of Belsen Concentration camp, to provide a suitable diet for starved internees.

### 4 // DR ELSIE WIDDOWSON (1906-2000)

Elsie was one of the first women to graduate from Imperial, where she studied Chemistry and received a PhD on the carbohydrate content of apples. She went on to become a pioneering nutritionist and oversaw the government's programme of adding vitamins to the war-time rationed diet during World War II, as well as applying her work to farming practices, veterinary medicine, and nutrition in developing countries. A fellowship scheme for female scientists returning from maternity leave was set up in her honour (see left).

fast-moving field and the money from the Fellowships allowed her to employ research technicians to help in the lab with experiments following her return to work after maternity leave.

"It enabled me to bridge gaps in my research, therefore allowing me to publish papers and remain fully referable and visible in the scientific community, which is incredibly important. Of course I couldn't really go to overseas conferences with two small babies, but colleagues know you are still active in doing research," she says.

Ana is now Group Leader in Cell Signalling and also sits on the committee that oversees Athena SWAN activities for the Department.

Karen Makuch, Lecturer in Environmental Law & Energy Law, applied for and secured her first Elsie Widdowson Fellowship around 6 years ago, closely followed by another fellowship on the birth of her second child. She used the money to cover her teaching and administration obligations allowing her to focus on publishing a new book on Environmental and Energy Law.

"Had it not been for the Fellowship I really think I would have been in a position where I'd have had to decide between baby and job, and I didn't want that," says Karen. "The emphasis is on allowing you to work around your child's needs and your own needs as a new mum. It helps you keep your foot in the career door rather than being completely out of the loop. But it's still really hard."

Karen is now Academic Ambassador for Women for the Faculty of Natural Sciences and a recipient of a Julia Higgins Award 2014 for her College work in this regard. With her deep knowledge of law and policy, she hails the Elsie scheme as 'groundbreaking' in the HE sector, but would ultimately like to see provisions for researchers returning from maternity leave to be written into grants from the research councils.

# Digital designs for College life

Mike Russell joined Imperial in November 2013 as Chief Information Officer (CIO), following nearly 30 years at engineering consultancy Atkins, latterly as Group Director of Business Transformation.

## What enticed you to switch to higher education after so long in the private sector?

I actually had a long association with the College, primarily through a business relationship between Atkins and the Business School. When I was offered the role at Imperial I was both flattered and excited by the opportunity to make a difference and bring a new perspective to the way in which things are done. By far the most enjoyable facet of the work here so far has been the people – the huge capability and intellect of our staff and students and the interesting things that they are doing.



## The role of CIO was a newly created one, can you tell me a little more about what it entails?

Essentially there are two parts to it. I'm responsible for the day-to-day delivery of IT services to the College. But I also facilitate the use of digital technology in meeting the strategic objectives of the College, particularly around the education and research mission. Merely operating the IT effectively is not going to be good enough for the future – there's a huge opportunity for us to leverage digital technology both in delivery of education and the way in which we support research and that requires a transformational mind-set.

## So how are you transforming Imperial's digital tools?

One of the most enlightening aspects of my time at Imperial has been having contact with the students and the clarity with which they describe how they'd like to improve their experience. One of the biggest projects is the replacement of the student information management system. It's not just a technology implementation programme though; we need to get real insight into what is required to improve the student experience and the processes involved.

## And how are you supporting research?

One of the exercises I've undertaken is to channel more resources at the interface with research groups and Departments across College, so we have a better understanding of exactly what it is they are attempting to achieve. One of the jewels in the crown of the College is its High Performance Computing (HPC) facilities. The College is committed to a further £2 million a year investment in order to expand and improve those HPC facilities and our aim is to make sure it is available to as many groups as need it for research purposes.

## What are some of the most difficult challenges you face?

Cybersecurity is a big one. We've got some really valuable digital assets and there's a challenge around handling data and protecting it from misuse. We hold information that's been handed to us in trust by our research and strategic partners so this isn't just about exposure of your own personal data – it's other people's data that we have an obligation to maintain.

“There's a huge opportunity for us to leverage digital technology both in delivery of education and the way in which we support research and that requires a transformational mind-set.”

## On a more personal note Mike, are you a technophile yourself and do you have any favourite gadgets?

I have more computers at home than most, some long obsolete, which is perhaps a sad reflection of a background in ICT but also because of a curiosity about emerging technology. Recently I've become interested in home automation which is all about how technology can make life easier. I'm also quite proud of the fact that my 81-year-old mother is wedded to her iPad, even though I resist the long support calls that are involved with that.

## And finally, both Stephen Hawking and Elon Musk have both said in recent months they fear the rise of AI – what are your thoughts?

I would echo their concerns and we should be cautious about the application of machines that purport to have intelligence and how they might make decisions and what they might do. However, there is a concern that will come up far earlier than AI and that will be loss of privacy. I think we'll discover in the next few years that our notions of privacy will become challenged by data disclosures – either by criminal activity or accident.





# inside\*

## story

### mini profile

## Tina Moloney

Tina Moloney is Head of the Early Years Education Centre which caters for the children of staff and students who are aged six months to five years. She celebrated 30 years of service at Imperial in February.

### What has changed at the Centre?

When I started working at the Day Nursery, as it was then known, we only had the basement and ground floor at 8 Prince's Gardens with 30 children in our care and a handful of staff dealing with all the cleaning, cooking and administration, in addition to our core duties. Now we have 160 children with around 120 on the waiting list and are using six floors at number 8 and two at number 9. I lead a dedicated team of 48 who are qualified from NVQ right up to degree level in early childhood studies.

### You've also witnessed significant changes in work place attitudes?

Thirty years ago it was mostly fathers from the College dropping off their children. But there are far more members of female staff now and I'd like to think we've supported many of them in their career progression when they decided to have children. Some senior members of staff now actively champion our cause, such



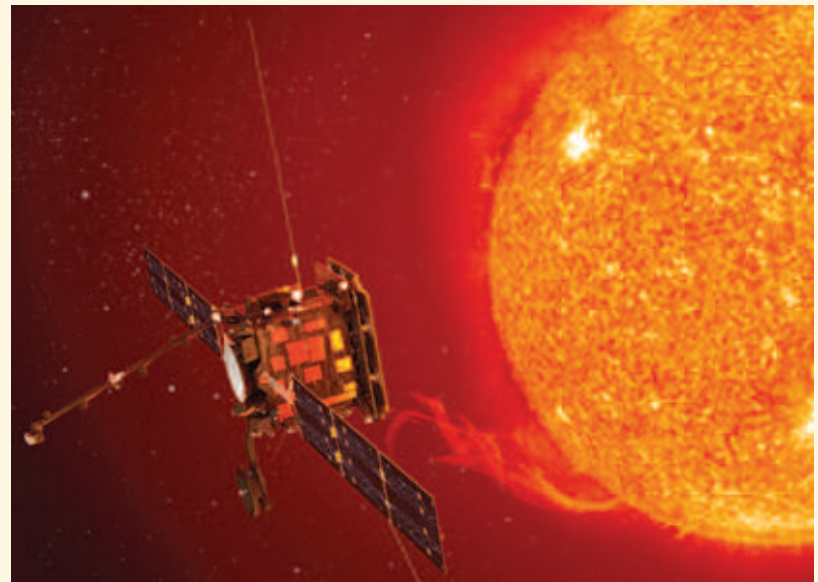
as Professors Joanna Haigh and Maggie Dallman, who themselves have brought their young children to the Centre.

### It's not all been plain sailing though?

No, we've often had to fight our corner and make the case for our existence and the benefits we bring. In around 1990 I changed our name from the Day Nursery to the Early Years Education Centre and I think that raised our profile and made people take us more seriously.

### Any highlights that stand out for you?

A few children that have been through the Centre have since gone on to become students at the College, which is particularly nice. We've consistently been rated as 'Outstanding' by Ofsted and I believe we produce confident children.



## Imperial team gears up for mission to the sun

A NASA rocket is expected to blast off from Cape Canaveral in October 2018, carrying a spacecraft that will fly closer to the sun than ever before with equipment designed at Imperial.

The spacecraft, known as Solar Orbiter, is aiming to answer questions about the heliosphere – a bubble of gas that fills the entire solar system. The gas is made of very hot plasma that comes off the upper atmosphere of the sun, known as the solar wind. The Solar Orbiter mission is hoping to provide new insights into how the sun makes the solar wind and how this wind affects the wider solar system.

On board for the seven year mission will be an instrument known as a magnetometer, designed and built by researchers from the Space and Atmospheric Physics group at Imperial, which will measure the sun's magnetic field. Solar Orbiter researchers need to investigate the magnetic field because it plays a key role in creating the solar wind and in determining the behaviour of the particles as they flow away from the sun.

— LAURA GALLAGHER, COMMUNICATIONS AND PUBLIC AFFAIRS

*Solar Orbiter is a European Space Agency (ESA) mission; the artist's impression of Solar Orbiter is reproduced courtesy of ESA – C. Carreau.*



Helen O'Brien is the lead engineer on the project. The magnetometer is being designed to withstand the huge vibrations of the launch rocket.



The sensor, held here by Principal Investigator Professor Tim Horbury, will be wrapped in specially designed thermal blankets to protect them from the extreme cold that they will experience as a result of being situated behind the spacecraft's heat shield.

**long  
service**

Staff featured in this column have given many years of service to the College. Staff listed celebrate anniversaries during the period 1 March–31 March 2015. The data are supplied by HR and correct at the time of going to press.

### 20 years

- Professor John Polak, Professor of Transport Demand, Civil and Environmental Engineering
- Janice Bailey, IT Support Specialist, ICT
- Professor John Tisch, Professor of Laser Physics, Physics
- Karen Pontifex, Departmental Administrative Assistant, Surgery & Cancer
- Dr Meir Jones, Senior Research Fellow, National Heart & Lung Institute
- Dr Ian Gould, Reader in Computational Chemical Biology, Chemistry
- Ben Whelehan, Senior Library Assistant: Acquisitions and Access, Library Services

### 30 years

- Christopher Green, Endowments & Trusts Accountant, Finance Division,
- Lisa Phillips, Senior HR Manager, Human Resources Division

### SPOTLIGHT

**Christopher Green, Endowments & Trusts Accountant, Finance Division 30 years**



I joined the College as a member of the Cash Office in Finance, and my first job was counting the takings from the various College catering and bar outlets. We had

no personal computers, and reconciliations were often hand written. My next post was overseeing the bank reconciliation, which took in merging the bank accounts of the medical schools at St. Mary's and Charing Cross, and the Royal Postgraduate Medical School at Hammersmith, as well as three changes of finance system. As part of the bank reconciliation we would use different coloured markers on lines of data within pages of computer printout, much to the amusement of some of the IT staff back then.

Sport is important to me, and in my earlier years here there was a group of us who mainly worked in the Sherfield Buildings who would play football on Tuesday evenings in the summer. We therefore used to call ourselves Sherfield Tuesday (a play on Sheffield Wednesday). I am now a member of Group Accounting within Finance, based in the Faculty Building, and I still play football and squash occasionally, and also attend one of the exercise classes in Ethos.



Imperial students pictured above and below are cleaning up Deen City Farm pond in Wimbledon, just one of the projects that took place over the week.

## Giving back: Student Volunteering Week 2015

Student volunteering activities swept across London at the end of February as students from Imperial took part in National Student Volunteering Week.

Student Volunteering Week (SVW), now in its 14th year, is an annual celebration of student volunteering. The week sees students from across the UK come together to celebrate the impact of student volunteers and to try their hands at a variety of volunteer projects.

The week also saw Imperial College Union hold its Great Volunteer Thank You event which gave students a chance to send a message of thanks to all of the student volunteers whose hard work goes into enhancing the student experience here at Imperial. Cleaning up Deen City Farm pond was just one of the projects that took place over the week.



## Welcome

### new starters

Dr Julia Abda, Surgery & Cancer  
 Dr Roberto Agrusta, ESE  
 Dr Gabriel Aughey, Life Sciences  
 Miss Ella Barber, Public Health  
 Dr Francesco Benini, Physics  
 Mr Luis Berrocal Almanza, NHLI  
 Dr Frankie Bolt, Surgery & Cancer  
 Mrs Mathilde Bourgeois, Faculty of Engineering  
 Dr Nicolas Bruneau, Physics  
 Miss Jolene Burger, Estates Division  
 Mr Oscar Bustos Romo, Catering Services  
 Dr Lee Butcher, Surgery & Cancer  
 Dr Lianfang Cai, Chemical Engineering  
 Miss Helen Carter, Business School  
 Dr Michele Chiappi, NHLI  
 Miss Rachel Cocks, Medicine  
 Mr Aran Dasan, Design Engineering  
 Mr Steven Davis, Surgery & Cancer  
 Mr Olly Dean, Faculty of Medicine Centre  
 Mr Jack Devlin, Physics  
 Mr Gionatan Di Consoli, Catering Services  
 Miss Monika Dudek, Sport and Leisure  
 Dr Lydia Durant, Medicine  
 Dr Renata Filipe Soares, Surgery & Cancer  
 Dr Elena Forasacco, Graduate School  
 Mr Enrico Fuschi, Catering Services  
 Dr Dimitra Georgiadou, Physics  
 Dr Bruno Gil Rosa, Computing  
 Mr Franck Gonzalez, Bioengineering  
 Dr Alice Grob, Life Sciences  
 Mr Chas Guirey, Estates Division  
 Dr Satindra Gungah, EEE  
 Mr Ashley Harrison-Barker, Business School  
 Miss Alejandra Hermelo Portela, Catering Services  
 Mr Martin Jaborsky, Catering Services  
 Dr Shareen Jaijee, Clinical Science  
 Dr Kevin Jean, Public Health  
 Dr Jingjing Jia, Chemistry  
 Mr Patrick Jordan, Sport and Leisure  
 Ms Danni Joseph, Faculty of Medicine Centre  
 Mr Ashkan Kavei, ESE  
 Mr Mohammadreza Khalesi, Chemical Engineering  
 Dr Sabah-Salam Khan, Public Health  
 Mr Christopher Kiani, Business School  
 Dr Gwenan Knight, Medicine  
 Dr Helga Laszlo, Computing  
 Mr Chung Lau, Surgery & Cancer  
 Mrs Laimute Liegute, Catering Services  
 Dr Yu Liu, Bioengineering  
 Miss Maayan Lomberg, ESE  
 Mr Joao Martins Gil, Catering Services  
 Ms Pelagia Matalliotaki, Catering Services

Miss Celia Miguel Blanco, Life Sciences  
 Ms Maria Misterek, Surgery & Cancer  
 Miss Catherine Mitchell, College Headquarters  
 Dr William Montague, Materials  
 Dr Caroline Morton, Faculty of Medicine Centre  
 Mr Robert Murray, Physics  
 Dr Onesmus Mwabonje, Centre for Environmental Policy  
 Dr Kausik Nandi, Mechanical Engineering  
 Mr Bernard Ndungu, Public Health  
 Miss Sarah Onida, Surgery & Cancer  
 Mrs Rakhee Parmar, Medicine  
 Miss Yanna Parthenopoulou, Catering Services  
 Mr Mahen Patel, ICT  
 Mrs Alina Pereteau, Catering Services  
 Miss Charlotte Phillips, Medicine  
 Mr Adam Piccolo, Faculty of Medicine Centre  
 Mrs Donna Pile-Grant, Mathematics  
 Dr David Pinato, Surgery & Cancer  
 Miss Josephine Ratcliff, Business School  
 Professor Kosh Ray, Public Health  
 Dr Ilya Reshetouski, Computing  
 Miss Beth Richardson, Faculty of Medicine Centre  
 Mr Marco Ruberti, Physics  
 Mrs Jatinder Sahote, Faculty of Natural Sciences  
 Dr Sofia Sal Bregua, Life Sciences (Silwood Park)  
 Dr Rudolph Schutte, Public Health  
 Ms Judith Secklehner, NHLI  
 Mr John Serna Villaquiran, Accommodation  
 Miss Jennifer Shelton, Public Health  
 Mr Guangyao Si, ESE  
 Mr Themistoklis Sidiropoulos, Physics  
 Mr Robert Simpson, Aeronautics  
 Miss Anastassia Sivena, Chemical Engineering  
 Ms Caroline Smith, Estates Division  
 Dr Namrata Syngal, Public Health  
 Mr Yu Tao, Chemical Engineering  
 Miss Vaishali Thaore, Chemical Engineering  
 Mr Alexis Thompson, ICT  
 Miss Tatiana Trantidou, Chemistry  
 Mr Lee Trenaman, HR  
 Dr Charalampos Triantafyllidis, Chemical Engineering  
 Dr Fu-Min Tseng, Surgery & Cancer  
 Dr Erik van Sebille, Grantham Institute  
 Dr Nuno Vieira Da Silva, ESE  
 Dr Georgios Vourliotakis, Mechanical Engineering  
 Mr James Wilton, Medicine  
 Mr Michael Wood, Medicine  
 Dr Maria-Benedicta Wrench-Edwards, NHLI  
 Ms Lindsay Wright, Faculty of Engineering  
 Mr David Yeo, ICT  
 Mrs Julia Zanghieri, Development

## Farewell

### moving on

Mr Daniel Adams, ICT  
 Dr Carmelo Andujar Fernandez, Life Sciences (Silwood Park)  
 Mr Jon Ashton, Outreach (7 years)  
 Miss Sophie Austin, Clinical Science  
 Ms Lisa Barbaro, NHLI  
 Mrs Mandy-May Blackburn, Accommodation (7 years)  
 Mrs Joy Blackburn, NHLI  
 Dr Michael Bretscher, Public Health  
 Dr Malgorzata Broncel, Chemistry  
 Mrs Claire Brownlow, Registry (5 years)  
 Ms Christine Buicke, Faculty of Medicine Centre  
 Dr Oliver Bujanowski-Duffy, ESE  
 Dr Didac Busquets Font, EEE  
 Mr Paolo Capriotti, Life Sciences  
 Ms Maria Cardama, EYEC (21 years)  
 Dr Amanda Chatten, Physics (16 years)  
 Miss Yi Cheng, Bioengineering  
 Dr Andrew Comerford, Aeronautics  
 Miss Geraldine Coy, Security Services (20 years)  
 Mr Andrew Crook, Faculty of Medicine Centre  
 Mr Subhakanta Das, Public Health  
 Miss Francesca Davenport, Communications and Public Affairs  
 Mr Jerico del Rosario, NHLI (7 years)  
 Dr Zsolt Diveki, Physics  
 Mr Shane Fleming, EEE  
 Dr Tristan Fletcher, Medicine  
 Dr Mathieu Fortier, NHLI  
 Dr Almudena Garcia Sanchez, Chemical Engineering  
 Dr Paolo Giannetti, Medicine (5 years)  
 Dr Elena Goicoechea De Jorge, Medicine (7 years)  
 Dr Yoshinori Gongyo, Mathematics  
 Miss Charlotte Goward, NHLI  
 Mr Christopher Grainger, Business School  
 Mr Simon Harding-Roots, College Headquarters  
 Mr Adam Huffman, Physics  
 Dr Eleni Iacovidou, Centre for Environmental Policy  
 Dr David Jackson, NHLI  
 Dr Nidhi Khurana, Public Health  
 Dr Ben Kingsbury, Chemical Engineering  
 Mr Pete Lally, Medicine  
 Dr Thomas Lanyon-Hogg, Chemistry  
 Mr Andrew Learner, Business School (6 years)  
 Dr Marie Loh, Public Health  
 Miss Alison Mbekeani, Medicine  
 Miss Rachel Mckinlay, Development  
 Mr Martin McMahan, Finance  
 Miss Myra Mohnen, Business School  
 Ms Rosie Morland, Surgery & Cancer  
 Dr Babak Naimi, Life Sciences (Silwood Park)

Dr Salomon Narodden, Clinical Science  
 Ms Deborah Navarro Rosenblatt, Public Health  
 Miss Grace Norman, Registry  
 Mr Timothy Oates, NHLI  
 Mr Jack Paget, Chemistry  
 Professor Malcolm Parker, Surgery & Cancer (15 years)  
 Mr Raj Patel, Computing  
 Dr Dilip Patel, NHLI  
 Ms Sarah Pearce, Faculty of Medicine Centre  
 Professor Jane Plant, ESE (14 years)  
 Dr Stuart Pollitt, Grantham Institute  
 Dr Aleks Ponjavic, Mechanical Engineering  
 Dr Lucio Raimondo, Aeronautics  
 Dr Minttu Ronn, Public Health  
 Mr Christoph Schlegel, Surgery & Cancer  
 Miss Gabrielle Selcoe, Public Health  
 Dr David Sibley, Chemical Engineering  
 Ms Anna Skorecka, Bioengineering  
 Mr David Slough, Security Services (32 years)  
 Mr Oliver Smith, ICT  
 Dr Benjamin Stocker, Life Sciences (Silwood Park)  
 Mr Dominic Swift, Life Sciences (Silwood Park)  
 Miss Marta Szklarz, Medicine  
 Dr Tzern Toh, EEE  
 Dr Neil Treat, Materials  
 Dr Manolis Vasileiadis, Chemical Engineering  
 Dr Sean Warren, Physics  
 Mr James Warren, Campus Services  
 Dr Marguerite Wasowicz, NHLI (13 years)  
 Dr Hilary Whitworth, NHLI  
 Mr Andrew Wilson, Faculty of Medicine Centre  
 Dr Yueping Wu, EEE  
 Mrs Morag Zelisko, Medicine  
 Dr Wenhua Zhou, NHLI  
 Mr Robert Zielinski, Sport and Leisure

This data is supplied by HR and covers staff joining the College during the period 13 February – 6 March 2015. This data was correct at the time of going to press. For Moving On, visit the online supplement at [www.imperial.ac.uk/reporter](http://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](mailto:reporter@imperial.ac.uk)

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

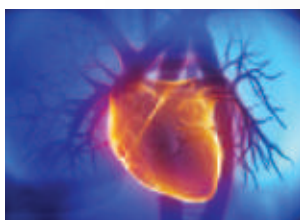


9–13 MARCH

## Women @ Imperial Exhibition

Visit this public exhibition of photographs and archive material celebrating the work of female staff and students at Imperial past and

present. Find out about some of the College's leading female researchers, travel along a timeline of women who have held notable posts at Imperial for the first time, and explore some of the College's schemes to bring about more equal representation of women as students, faculty members, entrepreneurs and leaders.



15 APRIL

## Function follows form: seeing into the heart

Most physiological processes in living cells occur at the nanoscale level, making monitoring these events as they happen very difficult. One

such process is the signalling that controls contraction of cardiomyocytes, the muscle cells of the heart. In her inaugural lecture, Professor Julia Gorelik (NHL) shows how combining imaging techniques is enabling these processes to be monitored, which may help in the development of new drug treatments to prevent heart failure.

## take note



### Bring the kids at Easter

A pilot play scheme will run during the Easter holidays, open to children and grandchildren of College staff and students. Delivered by the College in partnership with Fit for Sport it is aimed at children aged 3-12 years. The scheme is available at a discounted rate and will offer activities on the South Kensington Campus for six days: Monday 30 March–Wednesday 1 April and Wednesday 8 April–Friday 10 April, from 08:30–17:30 daily. The programme includes multi-sports and healthy lifestyle activities as well as arts, crafts and science experiments.

Find out more and register here:  
[bit.ly/easter-play](http://bit.ly/easter-play)

12 MARCH 13.00

### Lunchtime concert

The Schubert Ensemble of London perform Chausson's Piano Quartet in A major.

18 MARCH 12.30

### Public engagement workshop

The final workshop of the term is a drop-in session to discuss your ideas and activities with colleagues and members of Imperial's science communication community.



18 MARCH 18.00

### Black hole generation: the grand challenge

A discussion of the possibility of micro black holes created at massive colliders providing clean energy for the future.

18 MARCH 18.00

### Future cities solutions

A session run by the Entrepreneurship Hub looking at how cities evolve into a sentient, thinking and sustainable platform empowering people by their environment.



19 MARCH 09.30

### Responding to environmental change

A day-long symposium bringing together environmental scientists with leaders from business, policy and academia.

19 MARCH 12.00

### The effects of ageing on subcortical auditory processing

Dr Tim Schoof, UCL, presents this Bioengineering seminar.

19 MARCH 13.00

### Lunchtime concert

Pianist Alvin Moisey performs works by Fauré, Ravel, Debussy and Boulez.

19 MARCH 15.00

### The effects of climate change on water equality

Professor Paolo Vineis (Public Health) and Dr Adrian Butler (Civil and Environmental Engineering) present the Institute of Global Health Innovation's second non-communicable disease forum.



26 MARCH 13.00

### Lunchtime concert

The Primrose Piano Quartet performs Brahms' Piano Quartet in C minor.

27 MARCH 08.30

### Issues relevant to UK monetary policy

Deputy Governor of Monetary Policy at the Bank of England, Ben Broadbent, presents an Imperial College Business School breakfast lecture.

2 APRIL 18.30

### Cyprus: challenges and prospects

Alexander Michaelides, Professor of Finance at Imperial College Business School, discusses the challenges faced by Cyprus's economy in an uncertain European economic environment.



4 APRIL 09.30

### Modelling from structures to systems

A day-long symposium followed by the Jaroslav Stark memorial lecture, given by Professor Rob J de Boer, Utrecht University.

30 APRIL 13.00

### Lunchtime concert

Pianist James Cheung and soprano Raphaela Papadakis perform Brahms' Zigeunerlieder and Britten's folk songs.

## Stay in the loop

✉ Visit [www.imperial.ac.uk/events](http://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](mailto:events@imperial.ac.uk)

