Imperial College London

reporter

Issue 269 ▸ 14 February 2014

Sharing stories of Imperial's community

Sporting legacy

Olympic Park venue to host Imperial basketball as part of exciting new partnership

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Rosetta comes out of her slumber ready for the chase

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EDITOR'S CORNER

More than a game

As you're likely to have clocked from the front cover, this issue has a sports theme. As well as our main feature on the rise of basketball at Imperial (centre pages), there are two great examples of our academic staff using their expertise to analyse sport in the regular media mentions column (page 5). The STEM disciplines have interesting parallels with sport. Professionals in both fields require single-minded dedication and exquisite attention to detail in their pursuit of excellence – which is perhaps why they tend to work well together. Collaboration often involves scientists developing technology for sport. But there are instances of sport being a source of inspiration for bold new ideas and concepts that could have much broader impact — as anyone who has been to the Rio Tinto Sports Innovation Challenge series of exhibitions in recent years will be aware. The latest, on display now at the main entrance is focused on winter sports (page 13). But ideas like a bruising suit for injury detection might conceivably find its way into the clinic.

ANDREW CZYZEWSKI, EDITOR

Reporter *is published every three weeks during term time in print and online.*

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Final week for staff to share their views

The Imperial 2014 Staff Survey is inviting employees' perspectives on the College as a workplace by 19 February.

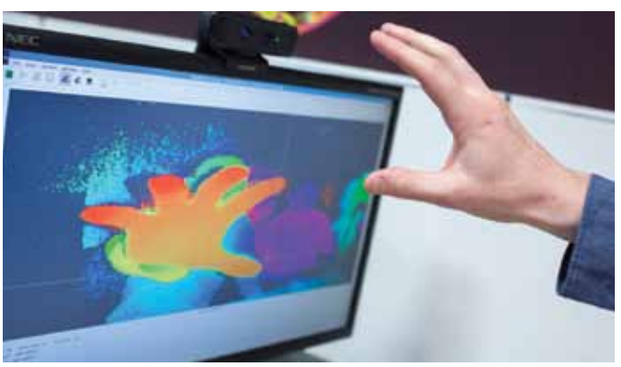
Over 7,000 members of staff have now received email invitations to participate in the Survey, which seeks their views on issues relating to five areas of their experiences here: working life, development and progression opportunities, communications, safety in the workplace and equality.

Staff feedback will be analysed by an independent research company, so that individual staff members' responses remain anonymous. Later in Spring Imperial's Provost, Professor James Stirling, will be holding a series of presentations to share and discuss the College-wide results. The Survey's responses will also feed into action plans, to be implemented both College-wide and by departments with local HR support, to help improve the working environment and practices.

"We want everyone to have the opportunity to have their say and the 2014 Staff Survey will be an important barometer for understanding where we do well and how we can improve. I'd encourage everyone to take a little time out to share their views and help Imperial provide the very highest standard of workplace that our staff deserve," said Professor Stirling.

For every survey completed Imperial will give £1 to the Student Hardship Fund, with the donation increasing to £1.50 if the overall response rate exceeds 65% by the time the Survey closes.

For more infomation about the Staff Survery visit: **bit.ly/10jxool**



Dyson and Imperial to develop next generation robots at new centre

Enabling robots to work in the real world, through improved vision and computer processing power, will be the focus of a new collaboration between Imperial and Dyson.

Currently, robots do not have the ability to understand the ever changing challenges of a real-world environment. This has meant that they have been confined to working in controlled environments such as on assembly lines in automotive plants.

Researchers at the Dyson Robotics Laboratory at Imperial will develop computer vision programs that will enable robots to move beyond these controlled environments and successfully navigate the real world.

Professor Andrew Davison (Computing), Director of the new £5 million centre, said: "The world could be moving towards a new era where robots for the house and business could be used to make our lives more efficient, cost effective and easier. We aim to attract some of the brightest minds to come and work with us at the centre to make this future a reality."

Sir James Dyson added: "My generation believed that the world would be overrun by robots by the year 2014. We have the mechanical and software capabilities, but we still lack understanding – machines that see and think in the way that we do. Mastering this will make our lives easier and lead to previously unthinkable technologies."

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

Huawei and Imperial to open data science innovation lab

Huawei, a leading global ICT solutions provider is to collaborate with Imperial on and jointly-invest in a data science lab.

The Imperial College – Huawei Data Science Innovation Laboratory will bring together experts from across Imperial's faculties and Huawei researchers to harness data science research and develop new applications in fields such as smart cities, energy and healthcare.

The data science lab is the first major corporate partnership within Imperial's new Data Science Institute, which will cultivate multidisciplinary collaborations to develop new big data technologies. Huawei will invest in cutting-edge equipment including next-generation cloud computing servers, a research and innovation fund, and operational costs for the new lab.

The announcement of the lab follows the signing of a Memorandum of Understanding between Huawei and Imperial in July 2013, under which both parties agreed to look at opportunities for collaboration.

William Xu, Chief Executive Officer of Huawei Enterprise Business Group, said: "Investing in innovation is central to Huawei's business strategy and this exciting collaboration will help us stay at the cutting edge of data science developments. Imperial College is a global institution with unrivalled knowledge in this field. By bringing its experts together with our engineers we believe we can create new products and services that will harness the huge potential of big data."

Professor Yike Guo, Director of the Data Science Institute said: "This new Lab venture will show how collaboration between academia and industry can drive innovations in big data to benefit all of our lives. Huawei and Imperial are world-leaders in their fields, with a series of complementary strengths. We look forward to turning our ambitious vision for this collaboration into reality."

—COLIN SMITH AND ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS

Master-plan will help shape estate for future generations

The College is exploring the potential to move some activities of the Chemistry Department from the South Kensington Campus to Imperial West, following an initial appraisal of the College's entire estate.

Space has become an increasing problem for Imperial. "It is widely recognised that the South Kensington Campus has become congested and our growth and development is severely constrained," said Sir Keith O'Nions, President & Rector, in a letter to all staff on 24 January.

With the launch of the vision for Imperial West in March 2013, and the further acquisition of land for this new 25 acre campus, a new phase of master-planning is underway. As part of that ongoing process, the College Cabinet agreed that the Chemistry Building required the most urgent solution after it was identified, along with Huxley and Blackett, as falling short of providing for Imperial's future aspirations.

Sir Keith said, "The master-planning process has clearly shown that refurbishment of the Chemistry Building is not a viable option and it cannot be made suitable for the sort of modern academic use we aspire to, and which our excellent staff deserve."

The Cabinet has agreed to examine the feasibility of transferring some Chemistry activities to Imperial West's Research and Translation Hub, which is due to open in 2016. The balance of interrelated teaching and research activities across campuses will also be considered. The Cabinet has confirmed that there is no wish to move entire departments to Imperial West nor dislocate research from teaching.

"Our Imperial West Campus has presented us with a major opportunity to help relieve our space problems, and start to realise our potential growth into the future," said Sir Keith. "This is a challenging task, and finding a set of compatible solutions will need to be performed with careful analysis and with the engagement and support of our staff."

in brief

Euro IT centre for Imperial West

The College's new Imperial West Campus is to host a European centre for ICT Innovation which will seek to bridge the gap between research and the commercial delivery of innovative products and services. The EIT ICT Labs UK centre, known as the London Node, is one of the first initiatives to be established at Imperial's 25 acre research and translation campus in White City.

Boost for entrepreneurship research

At an event for alumni in New Delhi last month, Sunil Munjal – Joint Managing Director of Hero Motocorp, the world's largest motorcycle and scooter manufacturer – announced support for a new Chair in the Imperial College Business School to focus on entrepreneurship. The new Chair at Imperial will address innovation, entrepreneurship and strategic leadership from the perspective of emerging markets, including India.

Leave your mark

Imperial's final year undergraduates are invited to share their views in the National Student Survey 2014. As part of the annual survey they are being asked to rate a range of elements related to their student experience here at the College. The nationwide survey seeks student views on a range of topics, from academic support and learning resources to assessment and feedback.

"Westminster is a more scary environment than scaling a volcano and definitely more confusing."

DR JAMES HAMMOND (EARTH SCIENCE AND ENGINEERING) AFTER SPENDING A WEEK IN WESTMINSTER AS PART OF A ROYAL SOCIETY PAIRING SCHEME WITH MPS AND CIVIL SERVANTS THAT INVOLVES RECIPROCAL VISITS.

Business School takes teaching global

A new Imperial Global MBA will allow students to gain core business knowledge and skills without having to be physically present in the classroom for the majority of the programme.

Launched by the Business School, the flexible, part-time programme includes a bespoke online learning platform, called The Hub, which will enable students to study and interact with one another and with their tutors during live lectures and via online chat forums.

Professor G. 'Anand' Anandalingam, Dean of the Business School, said: "Online learning has experienced a real surge in popularity. Advancements in technology have allowed people to effectively learn and study without having to set foot in the lecture theatre. Through our innovative software, students will get a cutting-edge online learning experience that will make them feel that they are on campus. They will have the chance to really get to know one another and feel part of Imperial's community, despite being spread across the world."

Through the Hub, students will be able to track their progress in real-time and benchmark their work against other classmates. The Hub will enable academics to group participants into time zones so that they can collaborate on projects and assignments. Students will also have the opportunity to network with alumni and corporate partners through interactive forums.

The programme will combine a mix of online and face-to-face learning. Students will spend a total of three weeks out of the two year programme on campus.

—MAXINE MYERS, COMMUNICATIONS AND PUBLIC AFFAIRS

Applications for Jan 2015 intake are now being accepted. For more information contact **gmba@imperial.ac.uk**

Provost James Stirling signed an understanding with UTM Vice Chancellor Wahid Omar

Malaysian Deputy PM launches low carbon research centre

Developing low emission vehicles of the future will be the focus of a major collaboration launched by the Malaysian Deputy Prime Minister at Imperial.

The Right Honourable Tan Sri Muhyiddin Yassin, Malaysia's Deputy Prime Minister and Education Minister, visited Imperial last month to help launch a low carbon transport research centre: a collaboration between the College and Universiti Teknologi Malaysia (UTM), one of Malaysia's leading universities.

The UTM Centre for Low Carbon Transport will bring together some of UTM and Imperial's world-class researchers as they develop the next generation of low carbon transport technologies.

The researchers will work on a range of areas to make cars more efficient, which will include reducing the size of engines to improve efficiency without sacrificing performance. Teams will look at ways of optimising technologies for advanced hybrid and electric vehicles to improve their range. They will also develop new concepts for energy storage and waste energy recovery technologies to make cars lighter, so that they use less fuel and are more sustainable.

Professor Ricardo Martinez-Botas (Mechanical Engineering) who has championed the establishment of the Centre said: "Vehicles are a major contributor to global warming and energy consumption. Worldwide CO_2 reductions of around 30 per cent of the could be achieved at low cost with technologies such as engine downsizing and light-weighting. The establishment of this new Centre with our partners in Malaysia will help advance our research in this field."

—ANDREW SCHEUBER AND COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

Imperial outlines plan for animal research

The College has published an action plan for world class animal research, reinforcing its commitment to replacing animal models, refining methods to improve welfare, and using fewer animals.

It builds on the strong foundations at Imperial recognised in a recent independent review into animal care and welfare at the College. These include good standards of husbandry and day-to-day care, provided by committed and engaged staff.

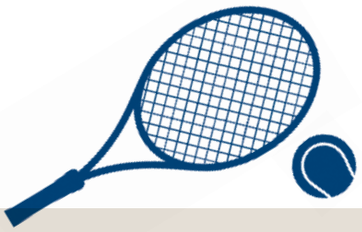
The changes that the College will deliver include recruitment of a Director of Bioservices to provide overall strategic leadership and direction; activities to promote full consideration of replacement, reduction and refinement (the 3Rs), development of stronger links between researchers and animal facility staff; reform of the ethical review processes; and more effective internal and external communication.

"In the past few months we have engaged widely in search of best practice for managing world-leading, complex multi-site animal research facilities. I am grateful to colleagues across the UK for sharing their expert advice and hope that our action plan may also help the broader community in strengthening its work in this area," said Professor Dermot Kelleher, Dean of the Faculty for Medicine and Vice President (Health). "Our aim remains to deliver world class research for the benefit of humans and animals, whilst treating all our animals with full respect and the highest standards of care."

Download the full action plan here: **bit.ly/1lyal3j**

media mentions

—BY MAXINE MYERS, COMMUNICATIONS AND PUBLIC AFFAIRS



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Anyone for tennis stats?

BLOOMBERG ▸ 24.1.2014

The increasing numbers of people who enjoy a flutter on professional tennis games could be given a helping hand by a new predictive model developed by Dr Will Knottenbelt (Computing). Speaking to *Bloomberg* he said his tennis algorithm would have made a 3.8 percent return on bets on 2,173 ATP matches in 2011. Tennis is attractive for modelling because there are only two players in a singles match and statistics are freely available, though Knottenbelt adds: "I'm not sure that any model is going to be able to take every factor into account, because the game has got so many dimensions to it." The models could also be used to help players understand what aspects of their game they need to improve and to choose coaches.

Bringing soldiers closer to loved ones

THE DAILY MIRROR ▸ 26.1.2014

Army personnel serving thousands of miles away can read a story to their children thanks to a ground-breaking iPad video app, reported the *Daily Mirror.* Four students from the College have created Caribu, a storytelling app that can be used by parent and child at the same time. It allows parents who may be separated from their children to read the same story together, making bedtime feel special despite the distance. The makers hope the app will appeal to military personnel deployed in the Middle East and beyond. Ben Mallett, Phillip Linnemann, Si Dhanak and Alvero Sabido met while studying at the Business School.

Diabetes' days are numbered

DAILY EXPRESS ▸ 28.1.2014

Diabetes could be cured 'within a generation' thanks to British-led research, says the *Daily Express*. UK teams are leading efforts against a disease which will hit 6.25 million people by 2035 – 10 per cent of the population – and already costs the NHS £1million an hour. One of Britain's most respected diabetes researchers Dr Nick Oliver (Medicine) said he was confident the insulin-deficiency disease would be wiped out by the time he retires in 25 years' time. He said: "I am reasonably early in my career and there is lots of really exciting work going on behind the scenes. There are lots of avenues that will lead to potential cures for Type 1 and Type 2 diabetes."

The science of the rugby tackle

THE DAILY TELEGRAPH ▸ 31.1.2014

With the Six Nations championship kicking off, *The Daily Telegraph* has sought to understand some of the forces involved in a tackle. Taking data from Opta, Harlequins and the University of Bath, Dr Simon Foster (Physics) calculated that the kinetic energy involved in a tackle by a moving player on a stationary opponent would be enough to power an energy saving lightbulb for around 3 minutes – or equivalent to being hit by a fridge freezer dropped from a height of two metres. "When you're next watching the game and you see the amount of tackles it gives you some idea of the amount or force and energy these players' bodies are going to absorb," Dr Foster said.

awards and honours

MEDICINE

Emiri tribute

Professor the Lord Ara Darzi (Surgery and Cancer) has been awarded the highest honour available in Qatar to foreign nationals. Last month, His Highness the Emir, Sheikh Tamim bin Hamad Al Thani conferred upon Lord Darzi the Sash of Independence in recognition of his continuing contribution to developing the health sector in Qatar. The Sash of Independence is awarded only to senior members of government, to Qatari citizens for outstanding service to the country and to foreigners for exceptional services to the country.

NATURAL SCIENCES AND ENGINEERING

'Top 100 leading UK scientists' revealed

Two Imperial academics have been named in a list of the 100 leading UK practising scientists compiled by the Science Council. Professor Michele Dougherty (Physics) was recognised for her leadership in space science and for her contribution to encourage young women into science. Dr Ahmer Wadee (Civil and Environmental Engineering) was recognised for his research in the field of nonlinear mechanics of structural stability, primarily involving modelling instabilities in metallic and composite material structures.

NATURAL SCIENCES

Wolfson awards provide funding boost

Three Imperial academics have been presented with Wolfson Research Merit Awards in recognition of their outstanding scientific achievement. Professors Miguel Araújo and Jon Lloyd (both Life Sciences) and Dr Pierre Degond (Mathematics) are among 21 recipients across the UK. They will receive 5 years of research funding, conferred jointly by the Wolfson Foundation and the Department for Business, Innovation and Skills.

NATURAL SCIENCES

Student gets quantum distinction

Postgraduate Antony Milne (Physics) has been awarded the Sir Peter Knight Prize, after achieving the highest overall mark during the 2012–2013 MRes year at the Controlled Quantum Dynamics centre for doctoral training. Sponsored by The Taylor and Francis Group, the award is named after Emeritus Professor Sir Peter Knight (Physics) a pioneer in the field of quantum optics and information.

Plastics made to order

A technique developed by chemists at the College could lead to a new generation of custom-designed materials, with properties ideally suited to certain applications and industries.

Plastic packaging could be made from renewable resources

The researchers developed a method of controlling the composition of a range of polymers – the large molecules that are commonly used as plastics and fibres (see box).

The secret lies in understanding and switching on and off the catalyst used to make the polymers. The researchers found that by using this catalyst control method, it is possible to select the monomers that will be added to the chain and therefore control the pattern and composition of the final polymers.

In this study, the scientists worked on producing polyesters and polycarbonates, which are attractive materials as they are partially obtained from renewable resources, such as plants and carbon dioxide. They are widely used in commodity applications such as consumer goods and packaging.

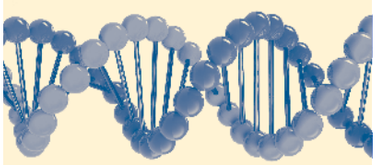
Study lead Charlotte Williams (Chemistry), Professor of Catalysis and Polymer Chemistry, said: "Our research is the first step, but may lead, one day, to scientists being able to engineer polymers with much more desirable properties, such as elasticity or toughness, as well as improve their performance in fields such as drug delivery or regenerative medicine."

Professor Williams' team has demonstrated the method, which uses a zinc-based catalyst, using three different monomers, including carbon dioxide – a notoriously unreactive molecule. This chemistry represents a promising approach to adding value to waste CO_2, including from waste gas emissions. The next step in the process will be to extend the method to greater varieties and mixtures of monomers.

Polymer principles

Polymer molecules comprise thousands of repeat units of smaller molecules called monomers. Polymers are naturally occurring, for example as complex sugars, DNA and protein. The nature and organisation of these monomers within the polymer chain determines the material's properties, such as how strong or stretchy it is, or how much heat it can withstand.

A homopolymer is a polymer which is formed from only one type of monomer whereas a heteropolymer, also called a co-polymer, contains different types of monomer. In nature, cells can control the manufacture of polymers with exquisite precision – for example in building a vast assortment of proteins and enzymes for specific functions using different sequences of amino acids. Synthetic methods used to make bespoke polymers in the lab are considerably less advanced, but researchers are nevertheless making progress.



Emission control

Engineers from the College have designed a new catalytic converter for motor vehicle exhausts that could cut fuel consumption and overall manufacturing costs.

A catalytic converter is the component in a vehicle's exhaust system that eliminates some harmful emissions. The conventional design uses ceramic blocks, honeycombed with microscopic channels that are coated in an expensive metal such as platinum. Emissions travel from the engine to the exhaust system and through the channels, where the precious metal causes a chemical reaction to occur that eliminates the harmful pollutants.

"Catalytic converters are the most important component in a vehicle for controlling exhaust emissions. Yet their design has not changed since they were first developed in the 1940s," says one of the inventors Dr Benjamin Kingsbury (Chemical Engineering).

Dr Kingsbury and collegues have advanced an existing manufacturing process to improve the structure of the microscopic channels, increasing the surface area and enabling the rare metal in the device to be distributed more effectively so that less 80 per cent less metal is used. The increased surface area also makes the catalytic converter's chemical reaction process more efficient and it deteriorates by only four per cent over a distance of 100,000 kilometres, compared with 35 per cent for a standard catalytic converter.

The new design of the device also increases fuel efficiency by around three per cent because it prevents 'back pressure', which is a build-up of gases that can make the engine work harder, affecting its performance. "The prototype we have developed could make cars cheaper to run because they use less fuel. It could potentially help manufacturers to reduce their costs," said Dr Kingsbury, who now aims to develop a production process for mass manufacture with the help of a special funding grant from the Royal Academy of Engineering.

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

> "The prototype we have developed could make cars cheaper to run because they use less fuel."

Catalytic converters are important for controlling exhaust emissions

Gene therapy lights way for inherited blindness

The first clinical trial of a gene therapy for an inherited cause of progressive blindness called choroideremia has shown promising initial results.

The researchers at Oxford University and Imperial found that patients showed improvements in their vision in dim light and two of the first six patients enrolled were able to read more lines on the eye chart.

Choroideremia is a rare inherited cause of blindness that affects around one in 50,000 people. The first signs tend to be seen in boys in late childhood, with the disease slowly progressing until vision is lost. There is currently no cure. It is caused by defects in the CHM gene on the X chromosome, which explains why it is almost always boys that are affected.

Professor Miguel Seabra (National Heart and Lung Institute), whose research at Imperial identified the protein involved in choroideremia, says: "My team has spent 20 years trying to understand choroideraemia and develop a cure, so to finally see the rewards reaching patients is extremely gratifying, both for us and the families who supported our research."

The gene therapy uses a small, safe virus to carry the missing CHM gene into the light-sensing cells in the retina. In an operation similar to cataract surgery, the patient's retina is first detached and then the virus is injected underneath using a very fine needle.

A total of nine patients have now had one eye treated with the gene therapy in operations at the Oxford Eye Hospital. The therapy is given in one eye to allow comparison with progression of the disease in the other eye.

The researchers will now see if vision improvements in patients can been maintained longer than the two years already seen in some.

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS

Gene therapy recipient, Wayne Thompson, comments on the treatment:

"One night in the summer, my wife called me outside as it was a particularly starry evening. As I looked up, I was amazed that I was able to see a few stars. I hadn't seen stars for a long, long time... For a long time I lived with the certainty of losing vision. Now I have uncertainty of whether the trial will work, but it is worth the risk."

Nine patients have now had one eye treated with gene therapy in operations

The research could also help people practising sports or other physical activities

Practice makes perfect ... (when practising in pairs)

When executing fine, nimble tasks, people tend to perform better whilst practising with a partner, according to research that could help people rehabilitating from a stroke.

In the study, volunteers performed a computer-based task where they used a joystick-like device to move a cursor, in an effort to track a randomly moving target on a screen.

Unbeknown to them, another person was performing the same task hidden from view, transmitting their movements through a 'virtual elastic band'.

Most of the participants were unaware of these subtle feedback cues from the hidden partner, yet they subconsciously used the information to apparently enhance their performance. The data show that participants achieved noticeably better results in the task when working with a partner than they did working alone.

Study co-author Professor Etienne Burdet (Bioengineering) said: "They say it takes two to tango and it seems that for physical tasks, practising with a partner really does improve performance. Our study is helping us to understand how touch plays a vital and very subtle role in helping people to transmit information to one another."

The team also found that when practising a task, the improvement in performance was most prominent when the partners were at a similar level and when the individual was practising with another human rather than an automated robot partner.

Robots are increasingly used for rehabilitation and physiotherapy – for example in people recovering from a stroke – but the researchers believe that these robots would be more effective if they could react to patients through touch in the same way that people do.

Atsushi Takagi (Bioengineering), PhD student and co-author of the study, said: "Humans are intensely social creatures and it is no surprise that we've developed non-verbal communication techniques to help us improve the way we carry out tasks."

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

HOOP DREAMS

Basketball is growing in popularity globally and Imperial is aiming to get in on the action with some exciting new developments.

For the uninitiated Englishman, more accustomed to the predictable pace of football and cricket, basketball can seem like something of a whirlwind: slightly dizzying, but absolutely captivating.

Watching Imperial men's first team take on close league rivals King's College first team at Ethos Sports Centre I'm struck by the cohesion of the respective teams, jostling in unison like bees around the court, conscious of one another's position and conspiring to move the ball to the opposition end basket.

This frenetic pace on the court is matched by the expansion of the sport globally. Basketball is growing at a breakneck speed and particularly in South East Asia – with 300 million Chinese citizens playing the sport regularly. Even in Britain – which has never truly embraced the sport as have other European countries – there's been a huge recent rise in participation and spectator numbers. Imperial hopes to mirror that.

"Basketball is a global sport and Imperial is a global university, it's just a perfect fit really," says Neil Mosley, Head of Sport Imperial, who is plotting a course for basketball at the College.

The Basketball Club has around 90 members and there are four teams that compete on a regular basis in the British Universities and Colleges Sport (BUCS) South Eastern Division leagues and cups: the men's first team; men's second (Medics), men's third; and women's team. There are also weekly training sessions running from 4pm to 7pm on a Saturday, which include a new look development session with skills and drills, attracting less experienced players looking to improve.

> "Basketball is a global sport and Imperial is a global University, it's just a perfect fit really."

Perhaps most excitingly, Sport Imperial has a new partnership with the London Lions – the only professional team in the capital – that sees their coaches come over to Ethos and even allows our teams to play occasionally in the Copper Box arena at the Olympic Park (see side box, opposite page).

"Universities are really taking basketball seriously," says Neil. "Many of the top teams in the UK are based in, or have strong links with, universities – namely, Worcester Wolves, Durham Wildcats, Plymouth Raiders and Leicester Riders. So the models are out there, and frankly we need a piece of that as the top sporting university in London."

The players themselves have also been working to increase participation and excitement around the sport. Since changing the format of

the development session they've seen participation grow from a handful of hopefuls every Saturday, to 30 people queuing at the door.

"We want to create an interaction here, really build something up, so that students will return to the club each year after the summer, and if they show a lot of motivation then they'll progress and mabye make the teams," says Club Vice President and first team player Thomas Defferriere (2nd year Materials Science and Engineering).

So what are some of the raw attributes that make a good basketball player? Everyone I speak with talks about the importance of team unity and that's certainly something that was on display when I saw them play King's.

"Some people come in who are very experienced and are great at being able to score, but the ability to buy into the team concept is one of the major things we try to emphasise; when we play games we try to beat the opposition with a 5-strong team rather than 5 individual players," says men's first team Captain Wouter Thijssen (2nd year Chemical Engineering).

Court awareness and vision is something that's also incredibly valuable in the context of team play, perhaps even more so in the women's game, as Hannah Barrett (6th year Medicine), Captain of the team explains: "If somebody naturally knows what's happening on the court, even if they're not technically the best, they tend to be in the right place when you need the pass."

It's clear that the support that the London Lions have been providing since October is starting to pay dividends too. Nick Freer is one of the stand-out players for the Lions professional team and has been coming to the development sessions and some matches. Vince Macaulay, Head Coach and Chief Executive of the Lions, has also lent his extensive tactical knowledge to the teams.

He has managed to drop in on some games of the women's team, who are currently top of their division (BUCS South Eastern 2A). If they hang on in there they will win promotion to the very top division (1A).

"He's been amazing," Captain Hannah says of Vince. "There's been a few times where we've been down by 10 points, yet we've brought it back to win by 5, even 10. You do see the difference, not just in tactics but in bringing the team together and that's something those guys are really good at."

The men's match I came to watch was a real nail-biter, with both teams swapping leading positions throughout the game. But the visitors King's College took it narrowly at 56 vs 59 points. It was clearly a hard defeat to take, because it could have so easily been the other way round. But speaking to coach Nick afterwards, he was hugely encouraged: "To be in the game and with a chance to win against a great team shows how far we've come. They guys are starting to execute some of the plays we've been working on and there's a lot to build on here."

That seems to be a fitting parallel for basketball in general at Imperial.

"We want to create an interaction here, really build something up."

Copper lining

On 28 February the men's first team will take on the medics team as part of the hugely popular annual varsity matches that Sport Imperial runs across a host of sports. While the rugby varsity, hosted at Twickenham, has always been the big draw, spectators are in for a new treat this year with the basketball at the Copper Box Arena (the London Lion's home) at the Olympic Park in Stratford. Tip off is at 16.00 on Friday 28 February 2014 and there will be a London Lions game straight after the Varsity match.

For details visit: **http://www3.imperial.ac.uk/sports/varsity/basketball**

Investing in the future

Russ Cummings became Chief Executive Officer of Imperial Innovations in July last year. *Reporter* spoke to Russ about the company, its links with the College and its future ambitions.

What is Imperial Innovations?

Imperial Innovations helps to found companies based on the science and research coming through from Imperial College, but also from Oxford and Cambridge University and UCL. Innovations invests in and supports these businesses throughout their early growth stages, attracts management teams and co-investors to build the businesses, and ultimately creates new value from innovation. We've established a reputation for incubating successful spinout firms, especially in fields like therapeutics, medical technology, engineering and ICT.

So how do you turn ideas into viable businesses?

In two ways. There is the traditional academic-led invention process, normally associated with tech transfer, where we help a team or individual through the invention disclosure procedure (funding the patent and IP protection); provide market research; and help to develop a proof of concept.

In the second case, we act as the catalyst for the formation of a spin-out company, bring in co-investors or attract entrepreneurial management teams to base their start-ups in our Incubator space. These teams might approach us where there's a market opportunity to create something in a particular field of science and technology, whether it's a drug to treat respiratory disease or software for a mobile payment system. Then we'll plug them into the College and pair them up with leading research teams in that field or with people who can sit on scientific advisory boards. I genuinely believe that more new companies are being formed because we're acting as a catalyst and bridge between the academic world, investment community and management community.

What's in it for the College?

Imperial benefits through being not only at the heart of a thriving spinout ecosystem, but also through revenue sharing when successful companies are sold, as well as the College's 30% shareholding in Innovations itself.

What do you see as the opportunities at Imperial West?

Imperial West is incredibly exciting. The Incubator for early-stage companies that we have at South Kensington is fantastic but running at full capacity. It's great for companies in their first 18–24 months while they get up and running, but at some point we want them to fly the nest and move to bigger premises. The vision for Imperial West would see companies stay as part of the family for longer and we'll have more room and stronger support for spin-outs.

What is your driving passion?

I have two personal missions: firstly, to demonstrate that we can make money out of science, engineering and research in the UK. This is a good place for investors and I want to attract more capital to the higher education sector. Secondly, I think science and engineering is a fantastic career for young people to aspire to. I have two boys who have embraced their studies of science and maths. I want their generation to grow up wanting to become scientists and engineers. I don't just want them to see academic research as the only STEM career path; there is also the opportunity to become scientific entrepreneurs.

As an Imperial graduate, how did you end up back here on Exhibition Road?

I used to live not far from my current Innovations offices as a student of Mechanical Engineering in Weeks Hall between 1983 and 1986. I met my wife here – she lived in Southside – and we have very fond memories of this place. I was sponsored through university by Rolls Royce Motors and, after graduation, started my career in the automotive industry. Essentially, I spent my 20s tinkering with cars and having lots of fun! I then felt I needed more commercial experience, so went into the private equity and venture capital sector working in various roles. In around 2004 I joined the advisory board at Innovations and with the initial public offering in 2006 I was recruited as Chief Investment Officer by Susan Searle (then CEO).

How do you relax outside of work?

I'm not just a petrolhead anymore. I love cycling and keep my jersey in the office. Every year I take a group of staff and management from our portfolio companies to go cycling for a week across France, following part of the Tour de France route.

—ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS

Innovations' history

Widely recognised as Europe's leading university tech transfer company, Imperial Innovations traces its origins back to 1986 when Imperial's tech transfer office was launched. In 2006, the company was floated on the Alternative Investment Market (AIM), and in January 2011 it raised an additional £140 million to invest in intellectual property from three other universities: Cambridge, Oxford and UCL.

inside* story

mini profile

Kate Royle

Dr Kate Royle (Chemical Engineering) is a postdoctoral researcher and splits her time between working in a molecular biology lab producing enzymes in yeast and in the office, combining experimental data with computational modelling. She also occasionally gets involved in public outreach and will be at the Bio-Revolution 'Lates' event at the Science Museum this month.

So what will you be doing at the Lates?

I'll be donning a brightly coloured chef's outfit and feeding midget gems to unsuspecting members of the public! It's all part of 'the icing on the cake' demo which is about the intricate patterns of sugars which coat modern therapeutic drugs. The sugar type and order can alter the drug properties providing the final flourish – much like icing on a cake! To explain this we've got kits of midget gems and connectors so people can build the quintessential pattern and start to look at how eating certain parts can make the drug more effective.

What do people learn from doing these activities?

We're hoping the public will be interested in how scientists are discovering the effects of these sugars and starting to design better drugs with that knowledge. The work we do has societal impact and so it's important to maintain a dialogue with the public. It's also an excuse to eat midget gems. We'll be continuing our sugary propaganda at the Imperial Festival in May.

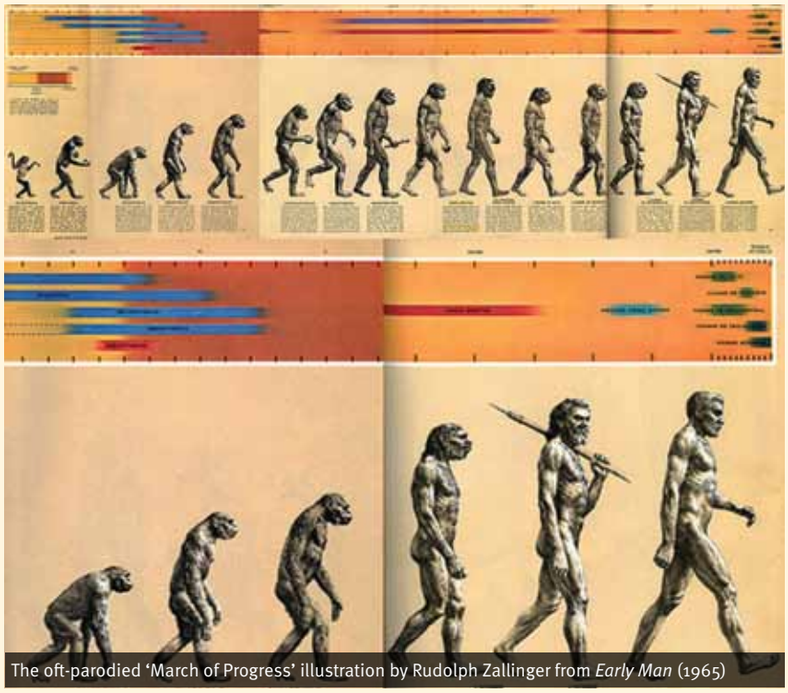
> "The work we do has societal impact and so it's important to maintain a dialogue with the public."

What's the funniest thing someone has said to you whilst doing a public engagement activity?

"The taxpayer actually funds this!?"

—SIMON LEVEY, COMMUNICATIONS AND PUBLIC AFFAIRS

Bio-Revolution is programmed by the Francis Crick Institute and features scientists from its partner institutions. **It will take place on Wednesday 26 February 18.45–22.00**



The oft-parodied 'March of Progress' illustration by Rudolph Zallinger from *Early Man* (1965)

SCIENCE FROM SCRATCH

As explained by Aliyah Kovner, MSc Science Media Production

How well do you really know your family tree?

With the recent buzz around the Higgs Boson and innovative new treatments for cancer, it is easy to see science as a continuous march towards the future. Yet one of the most important breakthroughs of 2013 shed light on our own past and the origins of humanity.

When we think of human evolution, we might conjure up that famous illustration – *The March of Progress* – where an ape starts to walks more and more upright in several stages, eventually resembling a modern human. In reality things were actually much complex than this, with various branches and off-shoots of human-like species springing up – sometimes interbreeding with each other but often dying off altogether.

In December, an international team announced that they had constructed a complete Neanderthal genome using DNA extracted from 130,000 year-old remains in a cave in Siberia. Neanderthals were an ancient branch of humans – a cousin species if you will – that went extinct some 30,000 years ago. Using genetic mutation rates as a sort of calculator, researchers were able to determine that Neanderthals, Denisovians (another ancient species of human) and modern humans diverged from a common ancestor species just under 600,000 years ago, going their separate ways forever.

Or perhaps not. Comparing modern complete human and Neanderthal genomes at certain points suggests that the two species interbred and that traces of Neanderthal genetic code live on today in some humans. However, exchanges between the lineages were highly dependent on location. For example, Oceanic people appear to have between 3–6% Denisovian DNA and non-Africans may have over 2% Neanderthal DNA. As well as providing insights on what it means to be human, the findings paint a more detailed picture of Neanderthal society. Neanderthals show evidence of some surprisingly modern features – such as lupus, depression, pale skin adapted for northern climates, and type II diabetes. Interestingly, the Neanderthal genes that live on most consistently in us are those for keratin, which is a protein in our hair, skin, and nails. We may have been better adapted to life on a changing planet, but Neanderthals had better coiffure.

Student blogger Kasifa on:

blog SPOT

My first MRes lab placement (Frankenstein's dream project!?)

We work on the elusive but exciting field of Transcranial Magnetic Stimulation (TMS), or what we fondly refer to as 'brain zapping'. It is a relatively new and hot neurophysiological technique where we use a magnetic coil to stimulate a particular region of your brain (without cracking open your skull, yes). For our experiments we are able to, in a systematic manner, locate your personal *hotspot* for our muscle of interest, where you receive the stimulus. Using TMS as the core technique, I am investigating upper and lower back muscles in healthy people, which is of relevance since these pathways are altered in patients with lower back pain.

To find out more about experimental neuroscience visit Kasifa's blog at: **bit.ly/1k2Hlix**

School dinners for development

Global leaders met in London on 22 January to discuss how school meal programmes can improve educational outcomes and boost agricultural economies.

The meeting was co-hosted by the All Party Parliamentary Group on Agriculture & Food for Development and Imperial's Partnership for Child Development (PCD) which is working with governments to help them develop home grown school feeding programme (HGSF) and gather evidence for their effectiveness and sustainability. These programs source food from local smallholder farmers thereby supporting local rather than foreign markets.

In 2013, almost $75 billion dollars was invested by the governments of 169 countries into school feeding programmes. It is estimated that for every $1 spent feeding school children, $3 is generated for the local economy.

Keynote speaker Rauf Aregbesola, Governor of Osun state in Nigeria, reported on the success of his state's school meals programme, known as O'Meals, which feeds over 250,000 children every school day. The O'Meals programme provides employment to over 3,000 women and purchases food from over 1000 local farmers.

Speaking at the event, the PCD's Executive Director, Dr Lesley Drake (School of Public Health) said: "Research shows that when properly designed, HGSF programmes can act as a win-win for both schoolchildren and smallholder farmers alike.

"For integrated school feeding programmes to succeed like they have in Osun, governments and development partners alike need to integrate HGSF into their policies, strategies and plans for agriculture and for education."

—FRANCIS PEEL, SCHOOL OF PUBLIC HEALTH

Get involved!

If you've always wanted to get involved in volunteering but never actually got around to doing it – now could be the perfect chance, with this year's Student Volunteering Week (SVW) running from 24 February to 2 March.

Volunteering is an integral part of the student experience and post-university life. Fifty-one per cent of recently employed graduates claim that volunteering helped them to secure employment (according to the NUS). While a recent Deloitte industry-wide survey found that 76% of HR executives agreed that skilled volunteer experience makes a job candidate more desirable.

Imperial College Union has over 3,000 volunteers involved in delivering its services and activities, with Imperial Hub engaging another 350 students in social and environmental action.

This year's SWV activities are coordinated by Imperial Hub's Local Action Committee (LAC) in collaboration with the Union. Maddie Maxwell (Medicine) from LAC explains: "We're looking forward to showcasing the diverse and positive impact that we already have in our local communities and hopefully we can highlight how easy it is to get involved during the week and beyond."

One of Imperial Hub's programmes, Schools Plus, involves 150 students providing some 800 hours of free tuition each term to disadvantaged pupils. One head teacher comments: "Our pupils enjoy working with Imperial students because they are passionate about their subjects. Having young tutors means that pupils can relate to them and we really appreciate their time and efforts".

Another scheme, the Soup Run, provides food, drink and company to local homeless and vulnerable people. Heather Jeffery (Life Sciences), who coordinates the scheme, explains: "The Soup Run gives students the opportunity to do something completely different to their studies. Volunteering in the community is personally rewarding and it makes a difference to the lives of those in need."

Visit the LAC on the Queen's Lawn on Monday 24 February 12:00–14:00 or at their lunchtime stand in the Sherfield Building on 24, 25 or 27 February.

> "Our pupils enjoy working with Imperial students."

A volunteer on the Schools Plus programme

Future science leaders

Imperial is well known for its high-flying, international doctoral researchers — a community that has recently been given a boost, thanks to the support of the Imperial College PhD Scholarship scheme.

The first 50 recipients, who started their programmes in September, gathered at a celebratory reception last month hosted by President & Rector Sir Keith O'Nions.

"I believe that something like 22 nationalities are represented here, which shows how truly global our community of PhD scholars are. We're delighted to have been able to award 50 of these scholarships and this has been largely dependent on the generosity of our alumni and friends of Imperial."

The prestigious scholarships were first announced in November 2012, and are intended to encourage some of the finest minds from across the globe to pursue their studies at Imperial.

The group also heard about the career path of the former head of MI5 and Chair of Imperial's Court and Council, Baroness (Eliza) Manningham-Buller. She explained her unexpected path to leadership and encouraged the students to instead start thinking about their leadership style now.

Jack Hare (Physics)

Jack came to Imperial from a graduate programme at Princeton University in the US.

"I'm studying plasmas, which are very hot ionised gases. We use a machine in the basement of Imperial that's about the size of a house. It's called the Mega Ampere Generator for Plasma Implosion Experiments (MAGPIE), and turns things that we think of as solids, like aluminium, into liquids or even plasmas. Those states normally only occur in stars and the centres of planets, so we're creating things which are truly unique."

Marketa Kubankova (Chemistry)

Marketa studied biomedical engineering at the Czech Technical University in Prague before coming to Imperial.

"My research group are using a group of molecules called molecular rotors. What I'm trying to do is use these molecules to study the proteins and protein folding aggregations that happen during the development of diseases like Alzheimer's, Parkinson's and type 2 diabetes. If we understood better what goes on at the onset of these disorders it could lead to better treatment and prevention."

Staff and students: Get moving!

It might seem like a chore to take the stairs when the Sherfield Building lifts are out of service again or cycle to Campus when the London underground is on strike — but with a new scheme from Sport Imperial you could be earning valuable kudos points and a boost in fitness.

GoFit, which was launched during the College's Healthy Living Week, is designed to get participants of all fitness levels moving more and increasing their activity levels by making simple changes to their daily routine.

Everyday activities such as walking to the station instead of taking the bus, as well as fitness sessions and sports training, will count towards the challenge, which aims to combat lethargy, excess weight and stress across the College community.

Over the next 12 weeks, mixed teams of five to eight participants from across the College will log their movement minutes through the online GoFit platform. Team members will be able to set and track their own personal goals, with their performance contributing to the team total.

Paul Brown (Physics) is a member of staff giving it a go: "I basically got involved because I was asked to join a team. My first weeks target is to clock up 150 minutes of exercise. I swam 30 lengths in the Ethos Pool (25m) which took me about 18 minutes, a jog to the train station in 3mins and I'm trying to use the stairs (levels 1–8) more in the Blackett building. The benefits are that it's always good to try and keep fit and healthy and a good way to meet people who work and study in other areas across College, as the teams have to be a mix of staff and students."

It is hoped that GoFit will motivate staff and students to get involved with One Big Thing – Imperial's annual 5K charity challenge to be held on Friday 16 May 2014.

Wake up and smell the comet

If you struggle to get out of bed in the mornings, spare a thought for the Rosetta spacecraft, which last month woke up after two and a half years hibernating in space.

The European Space Agency spacecraft was launched back in 2004 and is aiming to land on a comet – an unprecedented feat – in November this year. Rosetta has travelled so far away from the sun that its solar panels were not receiving enough energy to keep all its electrical systems going, so it has been asleep for 957 days in order to preserve vital energy for the comet chase ahead.

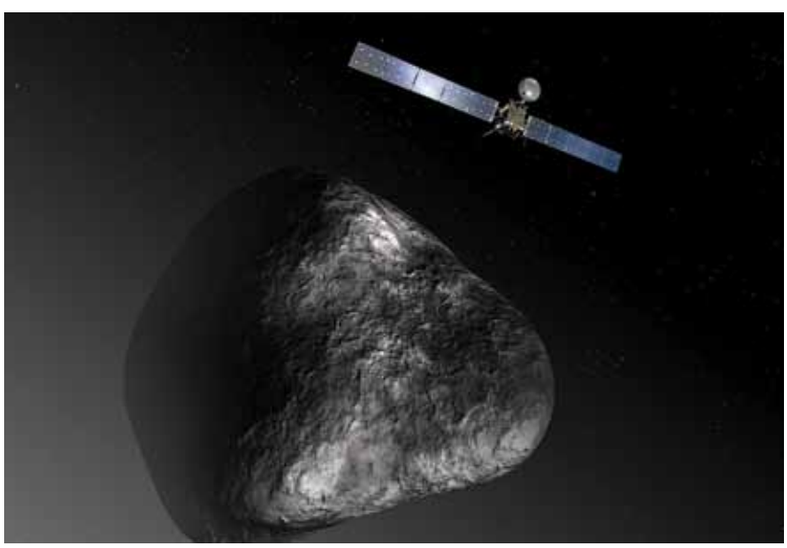
Luckily for the team, Rosetta came around, after a tense 45 minutes into the hour-long window of opportunity for waking it (anyone who uses the snooze function on an alarm clock will no doubt empathise).

Chris Carr (Physics), Senior Research Lecturer, has spearheaded the College's involvement in Rosetta since 1996, leading the design and production of a unit that controls the plasma sensors on the spacecraft.

"It's started to get really quite exciting now," Chris says. "With a project like this that's been going for so many years, I never really thought this day would come, it just seemed so far in the future. We built the instrumentation, launched the satellite and finally we woke it up from its long hibernation. But there's a huge amount of work still to be done in terms of planning the science mission."

Comets can reveal much about the key processes that formed our Solar System and could provide vital clues about how life on earth began. Rosetta's rendezvous with the comet should help tackle big questions such as whether comets brought water to earth.

—GAIL WILSON, COMMUNICATIONS AND DEVELOPMENT



A flexible resin-based spinal support device which becomes rigid after an accident

The future of winter sports

With the Paralympic Winter Games getting underway in Sochi, Russia from 7 March, a new exhibition in the College's Main Entrance this month gave a glimpse of the exciting possibilities for winter sports.

The Rio Tinto Sports Innovation Challenge, now in its fourth year, focussed on developing technologies to improve the performance of winter paralympians, prevent injuries and envisioning new concept sports for disabled and able-bodied winter athletes.

The challenge provides teams, formed of students studying on the MSc Innovation Design Engineering and Global Innovation Design courses, which are run jointly between Imperial and the Royal College of Art, with real world engineering problems to solve.

One the projects one display was 'Nanook Push and Carve' – a prototype ice skating system to support people with hemiplegia (paralysis down one side of their body).

Team designer Koraldo Kajanaku (Mechanical Engineering) explains: "A lot of our inspiration came from a four year old hemiplegic girl we met called Mia. Mia's mum was a physiotherapist and had been helping her ice skate to develop her strength and muscle memory.

"To look at Mia you wouldn't know she suffered from hemiplegia because of the physiotherapy she gained through ice skating. We saw the benefit it had for her and wanted to expand that to give others the same opportunity. You never know, in 2022 it could be Mia, and people using this technology collecting the first Paralympic speed skating medals!"

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

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. The data is supplied by HR and is correct at the time of going to press.

20 years

- Dr Paul David Lickiss, Reader in Organometallic Chemistry, Chemistry
- Professor Jane Alison Mitchell, Professor of Pharmacology in Critical Care Medicine, NHLI
- Ms Susan Virginia Howard, Assistant Director of Admin & Planning, Library
- Dr Martyn Francis Biddiscombe, Medical Physicist, NHLI
- Dr Brian Douglas Robertson, Reader in Systems Microbiology, Medicine
- Miss Mary Margaret Naughton, Day Language Teacher, Humanities

30 years

- Professor David Campbell Stuckey, Professor of Biochemical Engineering, Chemical Engineering
- Dr Simon Peter Walker, Reader, Mechanical Engineering
- Mrs Ann Elizabeth Halford, General Secretary, Computing
- Ms Claire Soulal, Academic Administrator, Mechanical Engineering

Welcome

new starters

Dr Daniele Sgandurra, Computing

Dr Tony Goldstone, Medicine

Mrs Tracy Andrew, Business School

Miss Laura Appleby, Public Health

Miss Katie Archer, Business School

Miss Laura-Jayne Ball, Medicine

Miss Stephanie Brittain, Environmental Policy

Miss Bridget Butler, Human Resources

Mr Liang Chen, Medicine

Mr Pedro Costa del Amo, Medicine

Ms Kirstie Cuthbert, Faculty of Engineering

Mr Jose Dominguez Mateos, Physics

Mr Meirion Hopkins, Life Sciences

Mr Henry Hutton, Aeronautics

Miss Mojitola Idowu, Public Health

Miss Lenne Lillepuu, Life Sciences

Dr Luigi Nardi, Computing

Dr Durga Reddi, Medicine

Mr Jack Reichhold, Imperial College Union

Dr Andrew Telford, Physics

Mr Dean Trigg, Estates Division

Dr Alessia Visconti, Public Health

Miss Claudia Cannon, Mathematics

Dr Susan Ryland, Professional Development

Dr Simon Zhao, Chemical Engineering

Mr Stephen Buranyi, Medicine

Mrs Stella Ajoku, NHLI

Mr Osman Ahmed, Public Health

Dr Isabel Duarte Rosa, Life Sciences

Mr Richard Ferrier, ESE

Mr Nicholas Kaim, Medicine

Mr Michael Long, Surgery and Cancer

Mr Aleks Ponjavic, Mechanical Engineering

Mrs Joanna Soja-Popieluszko, College HQ

Mr Isaac Sugden, Chemical Engineering

Dr Wen-Qin Wang, EEE

Mr Maximilian Wdowski, Bioengineering

Mr Duncan Boak, Surgery and Cancer

Mr Martin Boyle, Professional Development

Mr Ryan Callahan, Surgery and Cancer

Dr Amit Adlakha, Clinical Sciences

Ms Emily Alpert, Environmental Policy

Mr James Arram, Computing

Dr Paulina Bartasun, Life Sciences

Dr Claudia Battistelli, EEE

Dr Giaime Berti, Business School

Dr Ioan Botiz, Materials

Ms Agnieszka Broda, Medicine

Professor David Brooks, Medicine

Dr Bronwyn Cahill, Physics

Dr Nicola Casali, Medicine

Dr Aaron Costall, Mechanical Engineering

Mr Pedro da Rocha Pinto, Computing

Dr Olga Ekkert, Chemistry

Mrs Anastasia Filia, NHLI

Dr Esther Forte Serrano, Chemical Engineering

Miss Karanjit Gill, NHLI

Professor Robert Glen, Surgery and Cancer

Miss Sally Gowers, Computing

Ms Yen Holicka, Medicine

Ms Kelsey Hunter, Climate KIC

Ms Melpomeni Kalofonou, EEE

Dr Haojie Li, Civil and Environmental Engineering

Professor Jorge Lobo, Computing

Dr Laura Lombardero Iturrizaga, Medicine

Ms Rosie Morland, Surgery and Cancer

Mr Bilal Nasim, Business School

Dr Vladyslav Nikolayevskyy, Medicine

Miss Hannah Nissan, Physics

Mr Gian Ntzik, Computing

Mrs Claire O'Kane, Educational Quality

Dr Cher Ooi, Life Sciences

Mrs Nicola O'Sullivan, Public Health

Mrs Esther Perea, EEE

Miss Aikaterini Petropoulou, Medicine

Miss Antoinette Pimblett, Medicine

Miss Azalea Raad, Computing

Miss Laura Roca Alonso, Surgery and Cancer

Dr Dimitris Sarantaridis, Development & Corporate Affairs

Miss Lara Selles Vidal, Life Sciences

Dr Marina Serna Gil, Life Sciences

Dr Nour Shublaq, EEE

Mr Tiago Soares Cogumbreiro Garcia, Computing

Mr Anuj Sood, Computing

Mr Andrew Strangeway, Mathematics

Dr Ananthram Swami, EEE

Dr Filippo Tamanini, Public Health

Dr Alice Thompson, Mathematics

Mr Vladimir Turek, Chemistry

Ms Juliana Vicente Franco, Computing

Dr Huan Wang, EEE

Mr Thomas White, Physics

Mr Andrew Boston, Faculty of Engineering

Ms Markella Boudioni, Public Health

Dr Robert Davies, Materials

Mr Gavin Eves, Faculty of Engineering

Mrs Julie James, Medicine

Miss Anna Monk, Public Health

Dr Karin Muller, Materials

Mr Simon O'Hanlon, Public Health

Dr Maelig Ollivier, Materials

Dr Richard Palermo, Medicine

Dr Sarah Parisot, Computing

Dr Claire Poulet, NHLI

Mr David Pulido-Gomez, Life Sciences

Miss Anusha Seneviratne, NHLI

Dr Louise Sherlock, College HQ

Dr Dev Sooranna, Surgery and Cancer

Miss Emmanuelle Thinon, Chemistry

Dr Tomasz Tyranowski, Mathematics

Miss Patricia Watber, Public Health

Dr Robert Woodward, Chemical Engineering

Ms Lindsey Wu, Public Health

Ms Diane Morgan, Business School

Dr Edward Costar, Surgery and Cancer

Dr Nikolaos Gorgoraptis, Medicine

Dr Akhilesh Jha, NHLI

Dr Kathryn Mansfield, Public Health

Dr Agnieszka Falinska, Medicine

Dr Huseini Kagdi, Medicine

Dr Barbara Wild, Medicine

Farewell

moving on

Ms Karen Aitken (11 years), Library

Miss Aparna Ashok, ESE

Miss Honor Bixby, Public Health

Dr Katie Chapman, Surgery and Cancer

Mr Vin Chauhan (36 years), Surgery and Cancer

Mr Kerry Clough, Development & Corporate Affairs

Ms Melissa Collins, NHLI

Mr John Cooper, Faculty of Medicine

Mr Henry Ford (43 years), Faculty of Medicine

Ms Sabrina Gea-Sorli, NHLI

Mrs Tracey Gregory, Medicine

Dr Natasha Gunawardana, NHLI

Ms Nasrat Harun (6 years), NHLI

Ms Joanne Holloway (13 years), Medicine

Miss Rachel Kelly, Public Health

Dr Stephane Kena-Cohen, Physics

Dr Konstantinos Konstantopoulos, Medicine

Ms Ammara Mahmood, Business School

Dr Paola Mapelli, Surgery and Cancer

Dr Jad Marrouche, Physics

Miss Emilia Ordzieniewicz (5 years), Accommodation

Mr David Pierce, Civil and Environmental Engineering

Dr Alastair Proudfoot, NHLI

Miss Sowmya Purushothaman (5 years), Chemistry

Mr Thomas Rylett, Faculty of Medicine

Dr Jasmina Saric, Surgery and Cancer

Dr Nadine Schur, Public Health

Mrs Sarah Short, Surgery and Cancer

Mr David Suciu, Catering

Mrs Ali Wastnidge (5 years), Security Institute

Mrs Kristie Watkins, Public Health

Mrs Deborah Whymark (29 years), Finance

Mr Taliesin Williams, Surgery and Cancer

This data is supplied by HR and covers staff leaving the College during the period 15 January–6 February. 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.

events highlights

FOR COMPLETE DETAILS:
www.imperial.ac.uk/events

February 2014

20 FEBRUARY ▸ FRINGE

The Arts Experiment 2.0

Science and art collide as Imperial's researchers and student societies team up their talents with ArtsFest to show that good science and creativity go hand in hand. ArtsFest is a weeklong celebration of the arts, music, dance and everything in between that Imperial has to offer. Come to the College Main Entrance after work and stimulate your senses with an evening of hands-on collaborations involving dancing, medicine, music and physics.

Interact with the Imperial Fringe events online: #ImpFringe @ImperialSpark

5 MARCH ▸ PUBLIC TALK

Cosmology in the dark

Is the universe what it seems? Observations suggest that we live in a world that is 95% unknown dark matter and dark energy. This is puzzling enough to physicists, but some think it could be more complicated still, with strange unknown energy fields, or extra dimensions of space. Professor Alan Heavens (Physics) gives his inaugural lecture as Chair in Astrostatistics and Director of the Imperial Centre for Inference and Cosmology.

13 FEBRUARY ▸ WELLBEING

Interfaith Connections

New interfaith programme organised by the Chaplaincy

13 FEBRUARY ▸ PUBLIC TALK

Challenges for UK Energy Policy

UKERC and Energy Futures Lab event with Charles Hendry MP

15 FEBRUARY ▸ SEMINAR

Imperial International Development Conference 2014

Student-led conference on science, technology and youth power

19 FEBRUARY ▸ PUBLIC TALK

Does beauty hold the key?

Rare and fleeting particles called beauty mesons could be key to understanding the nature of dark matter in the universe, according to Professor Ulrik Egede (Physics) in his inaugural lecture

19 FEBRUARY ▸ SEMINAR

Shaping the future of e-learning at Imperial

Discussion with Professor Debra Humphris, Vice-Provost (Education)

20 FEBRUARY ▸ SEMINAR

Industry Touchpoints lunch

Forum to exchange ideas with corporate partnerships

20 FEBRUARY ▸ EXTERNAL

Rare diseases

Symposium with Francis Crick Institute partners at Senate House

20 FEBRUARY ▸ MUSIC

Lunchtime piano recital

Jessica Chan performs works by Bach, Bridge and Poulenc

25 FEBRUARY ▸ SEMINAR

Novel and emerging therapies: Real value or folly?

Healthcare Special Interest Group event

26 FEBRUARY ▸ WELLBEING

Effective resilience strategies for effective people

Workshop on coping with challenging circumstances

26 FEBRUARY ▸ EXTERNAL

Metaphors and science

Panel discussion with Imperial speakers at the LSE Literary Festival 2014

26 FEBRUARY ▸ EXTERNAL

Bio-Revolution

Join researchers from Imperial and other partners of the Francis Crick Institute at Science Museum Lates *(see page 11)*

27 FEBRUARY ▸ SEMINAR

Building Britain's sustainable energy future

Imperial Business Insights with Paul Maher, Siemens Infrastructure & Cities Smart Grid

3 MARCH ▸ LECTURE

Calcium in the heart: from physiology to disease

Physiological Society GL Brown Lecture with Professor David Eisner, University of Manchester

4 MARCH ▸ PUBLIC TALK

Cybersecurity and the modern city – when our infrastructure goes online

Laing O'Rourke Centre for Systems Engineering and Innovation 2nd Annual Distinguished Lecture with Mr Mike StJohn-Green

6 MARCH ▸ SEMINAR

Does crowdfunding work for entrepreneurs and investors?

Entrepreneurship Special Interest Group event

take note

Smart food

Food and drink can now be paid for through your smartphone at catering outlets across the South Kensington Campus and in participating Imperial College Union outlets. The YoYo mobile payment app, available on Android and iPhone, works on a pay-as-you-go basis and accrues loyalty points.

MEET THE READER

Barnaby Mollett (Careers Service), Careers Information Assistant

What are you doing in the picture?
I'm in the careers information room, restocking some of the periodicals. It's an area students can come and use to do their careers research, find out about different occupations and look at previous student interview feedback.

What would you do if you were editor of *Reporter* for a day?
I'd probably introduce a caption competition, to get readers involved in the publication. There are some great photos taken around Imperial, so I'm sure there would be some great captions too! I would also abuse my power as editor, using far too many puns throughout my *Reporter* issue.

Who would be your cover star?
It would have to be Lord Robert Winston – Professor of Science and Society and Emeritus Professor of Fertility Studies here at Imperial. I remember watching 'Child of Our Time' on TV growing up, which he presented. It's pretty inspirational to be able to bump into him on campus.

Want to be the next reader featured in Reporter? Send in a picture of yourself to: ✉ reporter@imperial.ac.uk

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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