

BLUEPRINT

Staff magazine for the University of Oxford | March 2016



TREATING STROKE PATIENTS | VC'S FIRST IMPRESSIONS | PRIMATE ARCHAEOLOGY



NEWS IN BRIEF

◆ A programme to benchmark administrative and support services across the University will be taking place from Trinity term. The UniForum programme will collect data about the administrative and support activities currently being undertaken and how much time is spent on them. This will enable the University to better understand how it resources its administrative services and to benchmark its activities against those of Russell Group peers. A pilot of the programme is currently underway and Oxford will participate in the full programme from May. Details at www.ox.ac.uk/uniform.

◆ The country's first carbon-neutral 'arc' building has welcomed its first visitors at Harcourt Arboretum. Forming the arboretum's new ticket office and gift shop, the eco building has been designed and manufactured by Green Unit, a company set up by two former Oxford students. Made from sustainable materials, its cutting-edge design includes triple glazing and sheep's wool insulation, while heating is provided by an earth tube heat exchanger. Located six miles south-east of the city, Harcourt Arboretum contains one of the finest collections of mature trees in the country. Entrance is free with a University Card.

◆ The annual OxTALENT competition is now open, which celebrates and rewards the innovative use of digital technologies to enhance teaching, learning, research and outreach at the University. Entries are invited from staff and students in a number of categories, including innovative teaching with technology, academic podcasting, and outreach and engagement. The deadline is Friday 6 May. Details at www.bit.ly/oxtalent2016.

◆ From 1 April researchers will be required to deposit journal articles and conference papers in an open access repository within three months of acceptance for publication in order

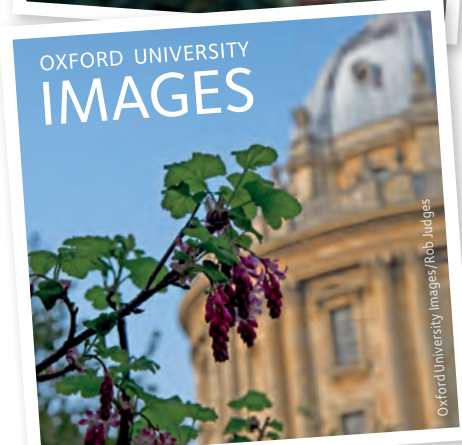
to be eligible for the next Research Excellence Framework. To help with the process, the Bodleian Libraries have launched an 'Act on Acceptance' service for those submitting work to the Oxford University Research Archive (ORA). Details at <http://openaccess.ox.ac.uk>.

◆ Are you looking for a great image of Oxford to illustrate a leaflet, poster or website? Oxford University Images is an online image library comprising over 12,000 images of the collegiate University and the city. New this month is a royalty-free section of the library, which enables members of the University to download a selection of these photos free of charge. Simply register at www.oxforduniversityimages.com using your ox.ac.uk email address and, once logged in, you'll be able to access the free images.

◆ Every year hoax phishing emails trick millions of people into parting with their passwords, credit card details and other personal information. To help you avoid being scammed, never reply to any email asking for your password, PIN or other account details and don't open attachments unless you trust where they have come from. If in doubt, check with your local IT team or the IT Services helpdesk before responding. You can find guidance on how to avoid email scams at www.infosec.ox.ac.uk/want/phishing.

◆ Do you need a new bike to cycle to work? The University offers an interest-free loan for the purchase of a bike and associated safety equipment to all staff paid through the University's main payroll (for appointments of 12 months or more). Monthly repayments are then taken from your salary over the next 12 months. To apply, obtain a written quote from the retailer of your choice and complete the bicycle loan application form at www.admin.ox.ac.uk/estates/ourservices/

◆ A dedicated institute for the study of human rights law is being created at Oxford in a joint initiative between the Faculty of Law and Mansfield College. Called the Bonavero Institute of Human Rights, after Yves and Anne Bonavero whose charitable trust is providing an endowment to fund its director and core staff, the institute will be located in the grounds of Mansfield. The institute, which is expected to begin work in late 2016, will serve as a focal point for human rights law scholarship in Oxford and foster links between research and practice in the field of human rights.



FROM TOP: ARC IN THE WOODS; GET IMAGE CONSCIOUS; ON YER BIKE!



COVER: 'GRACIA DEI' (DAFFODIL) AND 'GYLOFRE' (CARNATION), FROM A TUDOR PICTURE BOOK IN THE BODLEIAN LIBRARY

RESEARCH ROUND-UP

◆ Expat voters may once again play a critical role in who becomes the next President of the United States of America, according to a report by the Rothermere American Institute (RAI). The report notes that, when votes have been tight, expatriate voters have played a decisive role in the outcome of several key political contests in the US, including the 2000 Presidential election. It also finds that an important player in the 2016 election will be Democrats Abroad, the organisation that represents registered Democrat voters among the estimated six million US citizens living in other countries. The RAI became a polling station for Democrats Abroad in the primary vote on 1 March. Professor Jay Sexton, Director of the RAI, said: 'It's not just the primaries where these American expats should be taken seriously. Overseas voting was critical to putting George W Bush into the White House in 2000 and, if things are tight, could be just as important in the 2016 election too.'

◆ A new project run by Oxford and Exeter Universities is using academic research on the Stuarts to create new learning resources for teachers and students in schools. 'The Stuart Successions: Fresh Approaches to the Understanding of Seventeenth-Century History and Literature' is co-led by Dr Paulina Kewes, an associate professor in Oxford's English Faculty. The project responds to the more prominent place Stuart history has been given in the national curriculum for A-Level English Literature. Study days have already been held on monarchy and power in the Stuart age, and on Shakespeare and the Stuarts. The project team aims to create a website called Stuarts Online, which will host short films, articles, primary sources, lesson plans and other resources aimed at secondary school students and teachers as well as the general public.

◆ It has long been observed that some volcanoes erupt with little prior warning. Now scientists have come up with an explanation behind these sudden eruptions that could change the way observers monitor active or dormant volcanoes. It was previously thought that eruptions were triggered by a build-up of pressure caused by the slow accumulation of bubbly, gas-saturated magma beneath volcanoes over tens to hundreds of years. But using the



LONG-DISTANCE MIGRATORY BIRDS MAY BE SMARTER THAN YOUR AVERAGE BIRD

Campi Flegrei volcano near Naples as a case study, new research by a team of scientists – including Professor David Pyle and DPhil student Mike Stock from the Department of Earth Sciences – has shown that some eruptions may be triggered within days to months by the rapid formation of gas bubbles in magma chambers very late in their lifetime.

◆ A study by physicist and cancer researcher Dr David Robert Grimes has found that large-scale conspiracies will very quickly give themselves away. He created an equation to express the probability of a conspiracy being either deliberately exposed by a whistle-blower or inadvertently revealed by a bungler, factoring in the number of conspirators, the length of time, and even the effects of conspirators dying of old age or more nefarious means. This was applied to some commonly repeated science-related conspiracy theories. The results: hoax moon landings would have been revealed in 3 years 8 months; a climate change fraud in 3 years 9 months; a vaccination conspiracy in 3 years 2 months; and a suppressed cancer cure in 3 years 3 months.

◆ Long-distance migratory birds may be smarter than your average bird, according to a paper co-authored by Dr Uri Roll from the School of Geography and the Environment. The researchers caught turtle doves and reed warblers on their way from Africa to the Middle East or Europe. They measured the isotopic signatures on the birds' feathers to estimate flight distance, as well as selectively

colouring brain cells to identify regions with more new neurons. They found birds migrating further had more new neurons in brain regions linked to navigation and orientation. Reed warblers, which fly as individuals at night, also showed an increase in a different brain region to the turtle dove that migrates as a flock, says the study in *Scientific Reports*.



TOP: SUDDEN ERUPTIONS EXPLAINED;
BOTTOM: THE STUARTS SHED NEW LIGHT

► For more information, visit www.ox.ac.uk/news and www.ox.ac.uk/staffnews

PEOPLE AND PRIZES



Brian Catling, Professor of Fine Art at the Ruskin School of Art, has been elected a Royal Academician. A sculptor who also writes poetry and makes installations,

performance and video works, he has recently been writing novels and making small egg tempera portraits of cyclopes.



Dr Aiden Doherty of the British Heart Foundation Centre on Population Approaches for Non-Communicable Disease Prevention has been honoured at the Marie

Sklodowska-Curie Actions (MSCA) 2015 COFUND Awards where he was selected as one of the three best Marie Curie research fellows between 2007 and 2013, out of more than a thousand candidates. Dr Doherty has developed computational methods to extract information from complex and noisy sensor data in very large health studies.



Luciano Floridi, Professor of Philosophy and Ethics of Information and Director of Research at the Oxford Internet Institute, has been appointed as one

of the six members of the EU's new Ethics Advisory Group on Ethical Dimensions of Data Protection.



Judith Freedman, Pinsent Masons Professor of Taxation Law, has been recognised by her inclusion in *International Tax*

Review's Global Tax 50, which names 50 taxation leaders creating an impact around the world in 2015.



Jane Humphries, Professor of Economic History, has received an honorary doctorate from Uppsala University, the oldest university in Sweden. Honorary doctors are crowned with a laurel wreath

and receive a golden ring and a diploma. A cannon is fired as each recipient goes forward to collect his or her degree.



Gero Miesenböck, Waynflete Professor of Physiology and Director of the Centre for Neural Circuits and Behaviour, has won a BBVA Foundation Frontiers of Knowledge Award for the development of

optogenetics. He shares the €400,000 prize with Edward Boyden of MIT and Karl Deisseroth of Stanford University.



Dr Felix Parra Diaz, an associate professor in the Rudolf Peierls Centre for Theoretical Physics, has been awarded the prize for the Best Young Theoretical Physicist by the Royal Physical Society of

Spain and the BBVA Foundation. He researches hot magnetised plasmas, particularly plasmas for nuclear fusion energy.



Henry Snaith, Professor of Physics, has been named the second most influential scientific mind of 2015 by Thomson Reuters, whose research performance data showed that he

authored 24 'hot' papers on perovskite solar cells that were highly cited in 2013–14.

RAS PRIZES

Three Oxford researchers have been awarded 2016 prizes by the Royal Astronomical Society.



Anthony Bell, Professor of Physics, has been awarded the Eddington medal for his work on the acceleration of energetic particles by shock fronts occurring in supernova blast

waves, active galaxies, the solar wind and elsewhere in the universe.



Philip England, Professor of Geology, has been awarded the Gold Medal in Geophysics for his expertise in solid earth geophysics, where he has combined mathematical

insight with strong field experience to 'radically improve understanding of the way the Earth's surface and interior operate'.



Dr Ralph Schoenrich of the Rudolf Peierls Centre for Theoretical Physics wins a Winton Capital Award, a £1,000 award to a promising postdoctoral researcher within five years of their

PhD examination. Dr Schoenrich works to understand the structure and history of our galaxy and has both pioneered new ways to model galactic evolution and invented new techniques for analysing survey data.

NEW PROCTORS AND ASSESSOR

The University's new proctors and assessor for 2016/17 have taken office. **Dr Mark Whitrow**, Fellow of Corpus Christi College, is Senior Proctor and **Dr Elizabeth Gemmill**, Fellow of Kellogg College, is Junior Proctor. The Assessor is **Dr Luke Pitcher**, Fellow of Somerville College.

These three senior officers of the University are elected annually by the colleges. The Proctors ensure that the University operates according to its statutes and are also members of key decision-making committees. They deal with University (as opposed to college) student discipline, complaints about University matters, and the running of University examinations; they also have ceremonial duties. The Assessor is responsible particularly for student welfare and finance.

VIEWFINDER FOUND

THIS FINNISH GRANITE BOULDER (P20), ENTITLED 'FLAYED STONE IV', WAS COMMISSIONED IN 1999 BY NUFFIELD COLLEGE FROM THE SCULPTOR PETER RANDALL-PAGE. IT LIES IN THE COLLEGE'S UPPER QUAD AND WAS COMMISSIONED AS A CONSEQUENCE OF THE COLLEGE'S DETERMINATION SINCE ITS CONSTRUCTION BEGAN IN THE 1950S TO ACQUIRE AN OUTSTANDING COLLECTION OF CONTEMPORARY ART. RANDALL-PAGE, WHO HAS A CONSIDERABLE REPUTATION FOR SCULPTURES BASED ON SEEDS, FRUIT AND OTHER VEGETABLES, HAS UNDERTAKEN MANY MAJOR PUBLIC AND PRIVATE COMMISSIONS IN THE UK AND ABROAD. IN 2015 HE WAS ELECTED AS A ROYAL ACADEMICIAN IN THE CATEGORY OF SCULPTURE.

ARRIVALS BOARD

SPALDING PROFESSOR OF EASTERN RELIGIONS AND ETHICS



Diwakar Acharya, Associate Professor in the Graduate School of Letters at Kyoto University,

Japan, has been appointed to this post in the Faculty of Oriental Studies with effect from 1 April. He also becomes a Fellow of All Souls College.

Professor Acharya's research concerns the religious and philosophical traditions of South Asia. He studies ancient and medieval texts, inscriptions and other historical documents significant to the cultural history of the Indian subcontinent and is also interested in the critical examination of rites, rituals and customs of the Indian religions. He is a keen reader of various genres of Sanskrit literature, starting from the Vedas.

DIRECTOR, OXFORD MARTIN SCHOOL



Achim Steiner, Executive Director of the United Nations Environment Programme (UNEP) and Under-Secretary-

General of the United Nations, will take up this post on 1 September.

Before joining the UN, he was Director General of the International Union for Conservation of Nature and has also served as Secretary General of the World Commission on Dams and as Chief Technical Advisor of the Mekong River Commission. He has worked both at grassroots level and at the highest levels of international policy-making to address the interface between environmental sustainability, social equity and economic development.

Mr Steiner also serves on a number of advisory councils and boards including as the International Vice-Chair of the China Council for International Cooperation on Environment and Development.

NOTICEBOARD



◆ **Dr Jane Sherwood**, currently Director of Graduate Admissions and Funding, is to become Director of the Language Centre and Oxford Learning Institute when Dr Robert Vanderplank and Dr Stephen Goss retire as Directors in September. Her appointment to this overarching role is for an initial two-year period, focused primarily on the Language Centre, with an oversight role for the Oxford Learning Institute. During this time there will be a review of the Language Centre, with full consultation on its operation and future place within the University. Dr Sherwood is also a Hugh Price Fellow of Jesus College, where she has served as Senior Tutor, and was previously Deputy Head of Planning in the Planning and Resource Allocation Section.



◆ **Gary Tideswell**, currently Director of Wellbeing, Safety and Health at the University of Leeds, will become Oxford's new Director of Occupational Health and Safety on 1 April. He will work with senior staff across the University on all occupational health and safety issues and will provide leadership and management for both the Safety Office and the Occupational Health Service.



HOW TO DEVELOP YOUR CAREER — AN ONLINE GUIDE

A new website aimed at guiding professional and administrative staff through their own professional and personal development has recently been launched by the University. As few jobs remain the same and often require new skills over time, remaining efficient and confident at work means that development is essential for everyone throughout their career.

Whether you already have a long-term career plan and want to find ways to realise your goals, or want to explore your options or develop new skills in your current role, the Guide to Staff Development website is packed with advice on taking ownership of advancing your career – with support from your line manager. It encourages you to plan how to develop new skills and experience whilst doing your current job.

'We've tried to make staff aware that opportunities to progress can be found around them all the time,' says Vanessa Howe, Head of Recruitment and Employee

Development. 'Everything from sharing ideas with others and acting on feedback received to seeking out new challenges to stretch your abilities – all have a part to play in the process. Personal development is not just about signing up to go on a training course!'

The site suggests a number of different routes to help you progress at work, including looking into secondment opportunities, making the most of your personal development plan, investigating other job vacancies within the University, and preparing to apply for a position that interests you.

You'll also find tips on developing leadership skills and how to bring out the best in others, plus information about training providers and useful links to help you find out more.

To find out how you might advance your own career development, visit staffdev.ox.ac.uk.



Dr Susana Carvalho has always been fond of animals, but was not allowed to keep a pet as a child in her family's apartment in Portugal. As an adult she has more than made up for this: her research regularly takes her to Africa to observe the behaviour of chimpanzees and other primates in the wild. Susana, who is an associate professor in palaeoanthropology based at St Hugh's College, is a pioneer and one of the founders of the field of primate archaeology.

Although scholars had looked at the tools used by non-humans and excavated relevant sites before, Susana's work is different in that she both observes the behaviour of chimpanzees and uses her data with archaeological methods to gain new insights into the evolution of humans and technologies – put simply, the tools our earliest ancestors chose or made.

Chimpanzees may not have their own toolbox, she explains, but they have over 20 different types of tool. They use stones for cracking nuts, cushions of leaves to sit on when the jungle floor is wet, sticks to dip into ant trails that they can eat, pestle-like tools for pounding the crown top of palm to make an edible pulp, and sponges made of leaves to drink water from tree holes.

Susana's academic direction began in archaeology as an undergraduate at Oporto University, Portugal. 'Films like *Indiana Jones* were quite inspiring for my generation at the time,' she laughs. 'I was interested in unravelling the past.' After leaving university, she worked as a municipal archaeologist in Portugal, throwing herself into working on excavations, exhibitions and outreach activities, but realised she was becoming more interested in the humans themselves than the material culture they left behind.

The turning point was a Master's in Human

Evolution at the University of Coimbra, Portugal. In 2006, during six months of field studies, she observed a community of chimpanzees in the Republic of Guinea, West Africa, use stone tools to crack nuts. She watched how they selected tools and discarded them and suddenly knew why she had been put on this earth. It seemed logical to her that studying primates in Africa using stone tools like our ancestors had done could teach us about early human behaviour and she reasoned that, like humans, they would leave evidence of their tool-making. The fact that they used similar technologies could even lead to mistakes. Her work has flagged up the possibility that records described by today's archaeologists as early human sites might not be human at all. For instance, stones used by chimpanzees for cracking nuts often break into pieces and resemble flakes, the stone-age tools once used by our ancestors.

'Chimpanzees are not time machines, but they are good models'

'I'm very interested in the origins of technology – how and when and why technology emerges and then evolves and continues to evolve,' Susana says. She studies primates in Africa as models to understand the evolution of human behaviour, but cautions: 'Chimpanzees are not time machines, but they are good models with the options that we have.'

She came to the UK to take a PhD in Biological Anthropology at the University of Cambridge and her interdisciplinary approach has given her a wider view which can challenge basic archaeological assumptions such as the theory that technology started 2.6 million years ago, with some ascribing the first tools to *Homo habilis*, otherwise known as 'handy man'. Her observations convinced her otherwise. 'Through watching chimpanzees, I knew tool-making did not require a big brain,' she says.

In 2007–8 she started carrying out excavations in geological deposits older than 2.6 million years at Koobi Fora in the Rift Valley in East Africa, a place where many hominins (early humans and their immediate ancestors) once lived. Her theory was proved correct last year by another group of researchers working in the same region, who found primitive hammers, anvils and other stone tools thought to date back 3.3 million years.

She also questions whether cognitive development in early humans should be measured by the distance over which they carried tools, suggesting these findings may be 'biased'. Chimpanzees also transport tools, but they may drop them over shorter distances because they have other resources readily available, she says.

'When I started out there was a lot of resistance, with colleagues looking at me as if I was not entirely sane,' she comments. Now, she has many students keen to learn about this new field of research that can provide important insights into human evolutionary history.

More about Dr Carvalho's research at www.anthro.ox.ac.uk/about-us/staff/dr-susana-carvalho

WHAT'S ON

EXHIBITIONS

Kurt Jackson: bees (and the odd wasp) in my bonnet

Until 29 September

Oxford University Museum of Natural History

www.oum.ox.ac.uk/visiting/current.htm

Exhibition of paintings, sculpture and items from the museum's collections exploring the diverse world of the bee.



Pure Land: Images of immortals in Chinese art

Until 2 October

Ashmolean Museum

www.ashmolean.org/exhibitions

During China's war with Japan in the 1940s, many artists journeyed to Dunhuang, home of the famous cave temples. This display shows rare examples of their paintings, textiles and porcelain.

Bodleian Treasures: 24 pairs

Until 19 February 2017

Weston Library

www.bodleian.ox.ac.uk/weston

Display of much-loved items from the Bodleian's Treasure Gallery, exhibited in pairs to reveal their connection.

CONCERTS

Something of the night

Wednesday 27 April, 8pm

Holywell Music Room

www.oxfordmaymusic.co.uk

The opening concert of the Oxford May Music 2016 festival features music by Boccherini, Borodin and Chopin.

The Oxford Gargoyles concert:

18th birthday bash

Saturday 14 May, 8pm

Holywell Music Room

Tickets £10 / £5 concessions

www.music.ox.ac.uk/about/facilities/holywell-music-room/concert-listings

Jazz standards, intricate harmony arrangements and funkifications of pop classics.

CONFERENCES

UAS Conference

Tuesday 12 April, 9am–5pm

Examination Schools

www.admin.ox.ac.uk/uasconference

Training and information event for administrative staff across the collegiate University.

LECTURES AND TALKS

Wytham Woods: the woods come to town

Saturday 23 April, from 12.45pm

Oxford University Museum of Natural History

www.facebook.com/WythamWoods

An afternoon of lectures, covering the past, present and future of Wytham Woods.

Who is at home in globalisation?

Wednesday 27 April, 5.30pm

Andrew Wiles Building, Mathematical Institute

www.ox.ac.uk/news-and-events/race-and-curriculum

Homi Bhabha, Anne F Rothenberg Professor of the Humanities and Director of the Humanities Center at Harvard University, delivers the second Race and the Curriculum in Oxford Lecture.

Everyday death in Shakespeare's England

Wednesday 4 May, 1pm

Weston Library

www.bodleian.ox.ac.uk/bodley/whats-on

Steven Gunn, Professor of Early Modern History, discusses how coroners' inquest reports into accidental deaths reveal the hazards of everyday life in the 1500s.

FAMILY FRIENDLY

Einstein's Easter trail

Saturday 26 March until Sunday 10 April

Museum of the History of Science

www.mhs.ox.ac.uk/events

Challenge yourself to Einstein's Easter mystery trail. Drop-in event for the over-7s.

Wytham Woods badger watch

Tuesday 3, Thursday 5 and Friday 6 May, 6.30–9.15pm

Meet in Wytham Woods car park

www.facebook.com/WythamWoods

Wrap up warm and spend an evening watching Wytham's badgers at work, rest and play.

Art Weeks: noisy collage

Wednesday 6 April and Thursday 7 April, 1–4pm

Ashmolean Museum

www.ashmolean.org/events/Families

Join artist Francesca Shakespeare to create collages of Oxford and animate with sound.

SPECIAL EVENTS

Warhol late

Thursdays 24 March and 7 April, 6–8.30pm

Ashmolean Museum

Tickets £10 / £9 concessions

www.ashmolean.org/events/SpecialEvents

Alongside the Warhol exhibition, enjoy after-hours live music, pop-up films and silent discos, all taking inspiration from his artwork.

SPORTING EVENTS

The Cancer Research UK Boat Races

Sunday 27 March, 3.10pm and 4.10pm

www.theboatraces.org

The 71st women's race and 162nd men's race between crews from the Universities of Oxford and Cambridge. The 4.5 mile course stretches from Putney to Mortlake.



SAVING LIVES — AT A STROKE

Oxford researchers are striving to minimise death and disability via a range of creative new treatments, reports *Tom Calver*



Stroke is a major cause of death and the leading cause of disability in the UK, affecting more than 150,000 people each year and killing a third of them. Alongside the personal impact on sufferers and their families, the annual economic impact to the UK is calculated to be more than £7bn. Little wonder that a national stroke strategy has been developed to reduce the impact of the condition.

Yet the £60m strategy benefits fewer than 12 in every 100 stroke victims. Most strokes are ischaemic, meaning they are caused by clots blocking blood flow to the brain. The current strategy focuses on dissolving clots using a drug called rtPA. However, rtPA treatment is ineffective more than five hours after a stroke, so timing and geography rule out most patients.

Improving access to effective treatment could therefore save lives, prevent disability and reduce costs. Achieving that is the aim of the Acute Stroke Programme at Oxford, one of two large-scale programmes focused on the condition.

Dr Brad Sutherland is part of Oxford's Laboratory of Cerebral Ischaemia. 'We look at ways of protecting the brain from damage after stroke,' he explains. 'When a stroke occurs there is a core area of dead cells, and a penumbra around that of tissue that is being damaged but could be recovered. Without action, the core expands over time into that penumbra, increasing the damaged area and potentially affecting a greater range of the patient's abilities. An injection of rtPA will restore blood flow, stop the core expanding, and limit the damage.'

The team works on so-called 'neuro-protective agents' that can limit or slow down cell damage directly, and runs studies to identify potential areas or processes within the brain that may be good targets for new drugs. They also look for ways to monitor and assess stroke patients – for example, techniques to understand the size and spread of the penumbra. These can be used to appropriately

select patients for treatments that are delivered as quickly as possible to maximise the number of lives saved and minimise the level of disability caused.

A recent study by the team found that combining rtPA with other treatments, such as surgery to remove clots, could reduce stroke-related disability by around 18% and stroke deaths by 4% (around 2,000 lives each year).

'The £60m national stroke strategy benefits fewer than 12 in every 100 stroke victims'

Professor Alastair Buchan runs the Acute Stroke Programme. He explains: 'We found potential for using a device like a stent-retriever that opens the blood vessel and allows for removal of clots. Alternatively, there is intra-arterial thrombolysis, in which a small catheter is inserted as close as possible to the site of the blockage to deliver clot-dissolving drugs as effectively as possible.'

'Developments in CT scanning technology mean that selecting patients who would benefit from these treatments could be done using CT scanners rather than the time-consuming and expensive MRIs currently used. These developments might eventually enable us to use the new treatments to intervene in more than just 12 out of 100 cases.'

Elsewhere, the Acute Vascular Imaging Centre (AVIC) is embedded within the John Radcliffe Hospital, allowing applied clinical research and patient treatment to be carried out together. It is a purpose-designed centre containing 'high-dependency' bays for patients, with facilities for full medical support. At its core is an interventional angiography suite, where patients' blood vessels can be x-rayed to spot blockages and clot-busting treatments

can be carried out. This is next to a powerful MRI scanner, linked by a rapid transfer system that allows staff to move patients from the angiography suite to MRI and back again. Dr James Kennedy and Dr George Harston lead the AVIC clinical stroke research team. They currently use MRI to investigate new techniques to assess the penumbra of damage in stroke patients and improve selection for clot-busting therapy.

Research is also based on meticulous analysis of clinical data. Professor Peter Rothwell leads the Centre for Prevention of Stroke and Dementia, whose research aims to ultimately improve the prevention of stroke and vascular dementia in routine clinical practice. One of its projects, the Oxford Vascular Study, tracks serious strokes and heart attacks in Oxfordshire – a population of 200,000 people. This large-scale study enables the researchers to identify patterns and trends, and find genes that may increase the risk of the disease.

Across Oxford, in various teams, researchers and medics make up one of the world's leading centres for stroke research. Together, they are working to bring an end to stroke's devastating effects.

RECOVERY

Not every stroke can be prevented, and – depending on the severity and location of a stroke – even partial recovery can be a long process. At Oxford's Centre for Functional MRI, Professor Heidi Johansen-Berg's team is looking at whether applying an electric current to areas of the brain – known as transcranial direct current stimulation – can help people regain more of their motor skills, the ability to use hands, arms, feet and legs.

In trials, the team found that stimulation using a constant, low current delivered via electrodes on the scalp, carried out during a nine-day course of hand and arm training, boosted improvement in those receiving the treatment. The next step will be larger-scale trials.

▶ Read more at www.imd.ox.ac.uk/laboratory-of-cerebral-ischaemia and www.avic.ox.ac.uk



JULIET SEMPLE, SENIOR RESEARCH RADIOGRAPHER AT THE ACUTE VASCULAR IMAGING CENTRE, EXPLAINS THE CENTRE'S MRI FACILITIES TO MEMBERS OF THE PUBLIC AT AN OPEN DAY

THE SOUND OF MUSIC

A research project on historically informed performance will reinvigorate the way 19th-century music is performed, learns *Matt Pickles*

Many *Blueprint* readers will have heard the music of 19th-century composers such as Beethoven, Berlioz and Brahms performed in the Sheldonian Theatre or a London concert hall. But they might not realise how different the compositions would have sounded when they were first performed – not primarily, as is often supposed, because of the instruments that would have been used at the time, but rather because of how 19th-century musicians approached musical decision-making and musical dialogue with one another.

‘Transforming Nineteenth-Century Historically Informed Performance’ (HIP) is a new five-year research project in the Faculty of Music, funded by the Arts and Humanities Research Council. It brings together leading performers and academics to investigate the differences between modern and contemporary performance styles, and to seek to change the way professional performance of 19th-century compositions is approached, particularly by ‘period’ instrument orchestras.

‘For decades “period” orchestras have been producing performances and recordings of 19th-century repertoire that don’t really demonstrate the characteristics of 19th-century style – many aspects of that style are fundamentally at odds with the habits and expectations of modern-day performers and audiences, conservatoire training and methods of performance preparation,’ says Claire Holden, the project’s Principal Investigator, who is also a professional violinist with the Orchestra of the Age of Enlightenment (OAE).

‘As a result, “period” ensembles are finding it more and more difficult to maintain a distinct identity in a marketplace where they are increasingly in direct competition with “modern” orchestras – often playing the same repertoire with the same conductors and soloists in a similar style. The aim of this project is to engage performers and audiences in a reinvigoration of the ways in which 19th-century music is performed.’

Co-investigator Eric Clarke, Heather Professor of Music, explains that a key difference between modern and contemporary performance concerns the flexibility of rhythm and tempo. ‘In the last century, orchestral performance has developed a much more homogeneous and clean sound, with an almost obsessional focus on playing together in tight synchrony,’ he says. ‘But historical evidence suggests that in the 19th century there was a much more varied approach with greater independence between the parts and a real sense of separate instrumental voices.’

This practice-led project has two partner organisations, the OAE and the Royal Academy of Music, and brings together a variety of approaches including historical research into 19th-century pre-performance practices, empirical investigation of rehearsal methods, performance studies, the study of performance creativity, and the dynamics of leadership and collaboration.

‘Historical evidence suggests that there was a much more varied approach, with greater independence between the parts and a real sense of separate instrumental voices’

‘HIP research is at an exciting crossroads. Existing scholarship has struggled to impact the professional sphere, remaining largely focused on the analysis of treatises and the performance styles of a handful of famous soloists,’ says Claire Holden. ‘A new generation of scholars is starting to emerge and challenge the status quo. Our project, with its unique interdisciplinary approach and innovative research methodology, will be at the forefront of this new wave of historical performance research.’

The research and its dissemination will be targeted at professional and student performers, industry professionals and audiences, as well as academics, creating a real opportunity to effect change and open minds to radical new interpretations of 19th-century repertoire. As well as providing new insights into 19th-century pre-performance and performance practices, the project aims to change the way ‘period’ ensembles perform today, and to change audiences’ expectations of the way 19th-century works are performed.

‘We will be leading and observing regular workshops, rehearsal sessions and performances – videoing the sessions and interviewing the performers to get a sense of how different approaches change the dynamics of pre-performance and performance,’ says Professor Clarke.

He adds: ‘Our project is based on historical evidence, but this emphatically does not mean

that we think there is a “right” way to play this music. The last thing that we want to do is to promote a new orthodoxy. We want to work towards a way of playing this music that reflects what we know, or can find out, about 19th-century style, and use that knowledge not for prescriptive ends but to open up a wide variety of radical performance and pre-performance practices.’



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OXFORD PHILOMUSICA REHEARSE IN THE SHELDONIAN

A FINGER ON THE PULSE

Professor Louise Richardson talks to *Matt Pickles* about how she is approaching her new role as Oxford's Vice-Chancellor

When starting a new job, one's first task is usually to attend a series of induction meetings. For most people, these might last one or two weeks. But imagine the task facing Professor Louise Richardson, who took up the role of Vice-Chancellor in January. She tells *Blueprint* that she is relishing the challenge.

'There are so many wonderful people here, from students to staff to academics, and it has been absolutely fascinating engaging with them,' she says. 'People have been extraordinarily warm, welcoming and helpful as I navigate this complicated place. It is going to take me a long time to get around to all the colleges, departments and administrative units but I certainly intend to do all of that in my first year.'

Professor Richardson is trying to meet more staff more quickly by holding open office hours, where any member of staff can visit her in her office in Wellington Square. 'I do encourage people to come and talk to me because it's a way for me to keep my finger on the pulse of the institution,' she says.

Open office hours are being held three times a term. Members of staff or students can request a 15-minute appointment on a first-come, first-served basis and can raise any topic.

Even in the short time she has had to meet staff and students, it has become clear to Professor Richardson that the reality of life at Oxford is very different from some of the public perceptions of the institution. 'There is this idea of Oxford as a place for toffs which I think is completely unwarranted and not consistent with the people I'm meeting or the attitudes I'm encountering here at all,' she says. 'This is a very meritocratic institution. I think we really have work to do to change that perception so that it matches the reality that I have encountered.'

'I do encourage people to come and talk to me because it's a way for me to keep my finger on the pulse of the institution'

Professor Richardson says one of her key aims is to tackle these myths. She worries that criticisms by politicians and the media of Oxford's record in admitting students from deprived or ethnic minority backgrounds may put off these very students from applying. She believes staff can play a vital role in bridging this gap between perception and reality.

'Our members of staff are essential ambassadors for the institution and they can be enormously helpful in educating people outside the University about the reality of the place,' she says. 'They are so often in the front line so they play an absolutely pivotal role in changing attitudes towards Oxford.'

'When someone anticipates finding a standoffish, remote person representing the University and instead encounters a warm, friendly and interested person, it really helps to chip away at the elitist image of Oxford.'

Another priority for Professor Richardson is to work more closely with the community in Oxford. In her first week on the job she met many of the city's civic leaders and plans to work with them to engage with more of the city's residents. The first item on the agenda is housing. 'I am acutely conscious of the difficulty and expense of housing in Oxford, both for our own staff and the broader community,' she says. 'We hope to develop plans to alleviate this housing crisis.'

Professor Richardson says the University does provide valuable cultural activities for the community through museums, exhibitions, lectures, and the many student volunteers in the Hub (a student-led volunteer group). But she says there is more we can do. 'I spent my first two Sundays wandering around Oxford with a map and umbrella trying to get to know the place, and I noticed that although it is very beautiful, the architecture does seem very closed and forbidding,' she says. 'There are these beautiful quads hidden behind iron gates and stone walls and it can send out the wrong message.'

Professor Richardson points to the Weston Library, which opened last year, as a model to follow in the future. 'The Weston Library is a wonderful building with a glass entrance, a cafe and exhibition space that invites people inside, and I see it as a metaphor of how we are changing. We are much more open to the community now than we have been historically.'

Professor Richardson says something she has noticed in many universities is that people are very careful not to spend too much money, but they can be profligate with their time. 'My most precious resource is my time and I think the same is true for most people who come to work and study here,' she says. 'There is often a tendency to want to consult more widely on a decision or add another committee, because of the wonderful democratic nature of this institution. I think if we were more transparent and flexible about how we operate, and we communicated better, we could free up time for staff to do their best work.'

Another way Professor Richardson hopes to free up staff time is by speeding up the University's IT system. 'My job is to create an environment in which staff and students can really do their best work and that means we have to improve our IT infrastructure,' she says. 'We have terrific staff and leadership in IT but there are practical constraints about the speed of the systems, which I think is just a matter of resources. I want to see us incorporate new technologies more into what we do, and to be creative in how we use these technologies to improve our infrastructure.'

If you notice your computer starting up more quickly on a Monday morning in the future, you may have our new Vice-Chancellor to thank.



► For more information on open office hours with the Vice-Chancellor, visit: www.ox.ac.uk/vc-openoffice.



A PROFESSIONAL PARTNERSHIP

Stuart Gillespie takes a look at how the Oxford Education Deanery is working with local teachers

DR KATHARINE BURN (BELOW), DIRECTOR OF THE DEANERY, WORKS WITH TEACHERS AT LOCAL SCHOOLS SUCH AS MATTHEW ARNOLD (PICTURED RIGHT)

For Eluned Harries, assistant headteacher at Matthew Arnold School in Botley, west Oxford, it's about developing next practice as well as best practice. Ms Harries is her school's Research Champion – a role designed to foster close collaboration between local schools and the Oxford Education Deanery, part of Oxford University.

Formally established in 2013 the Deanery grew out of the existing teacher education partnership between the University's Department of Education and secondary schools in Oxfordshire. Since the formation of the Deanery, that partnership has grown to encompass research and professional development, in addition to the longstanding teacher training programme.

'Back in the 1980s the local authority made a huge commitment to working with Oxford University through the pioneering teacher education programme,' says Dr Katharine Burn, the Deanery's Director. 'What we have now is a fully realised and integrated version of that initial partnership, in which we can share our world-class research with the community, as well as harnessing the knowledge and experience of practitioners from across the county.'



The Deanery works with a pool of 30 local schools on three strands of activity: initial teacher education, continuing professional development, and research. Initial training is provided through the Postgraduate Certificate in Education, while continuing development takes the form of – among other initiatives – an induction programme for newly qualified teachers, subject teacher networks, and an Enhanced Master's in Learning and Teaching.

'We want our teachers to be at the cutting-edge of their profession, helping develop next practice as well as best practice'

Ms Harries has a hand in all three Deanery strands, supervising a group of seven Oxford University-based interns and coordinating the city of Oxford teachers enrolled in the enhanced master's programme. She says of her role as Research Champion: 'At Matthew Arnold we believe it's essential for our teachers to be research-engaged because it helps develop a culture of professional learning and allows teachers to heighten their professional capacities. We want them to become reflective practitioners and, in this respect, the process of carrying out the research is often as important as the outcomes.'

She adds: 'In my role as Research Champion I aim to act as a bridge between research and practice, helping teachers interrogate their own work and evaluate external research. We're professionals, so we sift and sort, establishing what makes the most difference to us in our classrooms and in the wider school contexts. We want our teachers to be at the cutting-

edge of their profession, helping develop next practice as well as best practice.'

Matthew Arnold School recently took part in a research project led by Professor Harry Daniels, exploring the ways in which local schools collaborate with each other to develop their methods in support of vulnerable students. One of Matthew Arnold's teachers, meanwhile, is currently researching how best to use peer observation in schools as part of the enhanced master's course.

Other recent and ongoing pieces of research involving Deanery collaboration with local schools include one project which examined how young people in schools across the city anticipate and plan their futures – including thoughts of going to university – and another looking at how to assess English fluency in non-native speakers in ways that will ease their transition from primary to secondary school.

Dr Burn, a Fellow of St Cross College who taught history in Oxford schools for ten years, adds: 'Our vision is clear: we want to help improve educational outcomes in the county by encouraging and facilitating local teachers – at all stages of their careers – to develop as professionals. Teacher retention is an issue in the education system, and we hope the excitement of being involved with the University, of being involved with cutting-edge research, will go some way to addressing this locally.'

'As for the future, we have plans to expand the Research Champion programme, and we are also increasingly thinking about primary schools. Much of the research carried out in Oxford's Department of Education is focused on the early years, and we have just submitted a funding application with a view to developing a partnership model with local primary schools.'

► More about the Deanery and its activities at www.educationdeanery.ox.ac.uk



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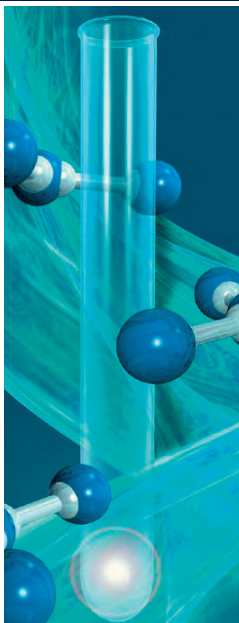
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WHY AM I HERE?

STEPHEN PEARSON

Head of Building Services

What do you do?

I manage a team of mechanical, electrical and control engineers who ensure the building services – heating, cooling, ventilation and electrical systems – operate in an efficient and effective manner throughout the University estate. Between us, we deliver about £12m of maintenance services using the Direct Labour Organisation and various contract engineering service providers. We provide engineering support to the Capital Projects team in Estates Services, helping to ensure that we deliver successful engineering services as part of new buildings and refurbishment projects. We also work closely with the Sustainability team, engineering systems to reduce the University's £14m energy bill.

What do you most enjoy about it?

I've always been fortunate enough to have a very varied job in all the organisations I've worked in, but the variety of my current role takes some beating. In the morning I could be working on a project to deliver a state-of-the-art physics laboratory and in the afternoon taking a look at a problem with lighting in the 15th-century Bodleian Library. There is also a constant stream of major projects, most of them unique and exciting.

Are there particular challenges in looking after the University's older buildings?

From a Building Services perspective, the older buildings are generally the easy ones! They tend to have very simple systems and our Buildings and Conservation team is extremely knowledgeable and helpful in supporting us when replacing the engineering systems in historic buildings.

The newer buildings are far more complicated. In order to reduce energy consumption they have complex systems for delivering heating and cooling, such as ground source heat pumps. They tend to be bristling with sensors which are connected to extremely complex control systems. New science buildings generally require much more stable environmental conditions than the buildings they replace. Working with teams of consultants, we help develop better ways of achieving this.

Which recent projects have you enjoyed?

The Blavatnik School of Government has probably been the most exciting and rewarding project I have ever worked on. The control systems are more complex than most laboratories but are required to maintain comfortable conditions in extremes of weather. The end result is a building that performs very well but makes people stop and stare.

Any interesting statistics?

Estates Services looks after 378 buildings covering about 640,000 m². Within these buildings are about 700,000 sockets and 400,000 light fittings. There are 720 boilers across the estate and these burn 90 million kWh of gas annually.

Talking of interesting statistics, tell us about your sporting past

I rowed for Great Britain including two senior world championships – Tasmania in 1990 and Vienna in 1991. I used to row for Nottinghamshire County Rowing Association and while I was there I was coached by Sean Bowden, the current Oxford coach. Despite that, I still managed to win the Wyfold challenge cup at Henley Royal Regatta.

In 1994 I won the Commonwealth Games in Canada and retired (or at least I had 20 years off). I started rowing again for Wallingford a few years ago. It isn't quite so serious these days: we go out most weekends and try to avoid being run over by the Oxford University crews.

What was your favourite rowing moment?

Winning at Henley Royal Regatta – there is no other event in the world like Henley. I've won both the Temple and the Wyfold challenge cups.

So how did you become an engineer?

I studied Engineering at Imperial College and was fortunate to be sponsored by Courtaulds Engineering who design food, pharmaceutical and fine chemical plants. I moved jobs about 20 years ago to British Biotech, a pharmaceutical company in Oxford, and have worked for various pharmaceutical companies over the years. I joined Estates Services five years ago.

What's the most unexpected thing you've found yourself doing?

In my first week at work here, I sat in a chair that used to belong to Napoleon.

What's your favourite object?

When I first joined the University I had a significant involvement with the Ashmolean to try to make the environmental conditions in the new galleries as stable as possible. Whenever I visited the museum I always made a point of going past 'the Messiah' – a Stradivarius violin with an interesting history.

Finally, who would you most like to sit next to on a long-haul flight?

Daley Thompson – when I was a teenager starting out in sport he was my inspiration.



Blueprint is published bimonthly for the staff of the University of Oxford by the Public Affairs Directorate

Editor: Sally Croft

Designers: Laëtitia Velia/Katy Dawkins

Picture research: Janet Avison

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VIEWFINDER

WHERE'S THIS GORGEOUS GRANITE? ANSWER ON P4.



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