

Thinking robotics

How robots can help us understand the human mind **CENTRE PAGES**



STREETS AHEAD
Exhibition Road
regeneration
project enters
phase two
PAGE 3



ONE WORLD
Imperial
researchers
tackle tropical
disease abroad
PAGE 10



**SCIENCE FROM
SCRATCH**
What is a
champagne
supernova?
PAGE 11



EDITOR'S CORNER

Reporter's new look

Jam-packed with your stories, pictures and insights, *Reporter* hits the stands every three weeks—capturing the heart of **Imperial's community**. Over the last year the team behind *Reporter* has been out and about, discovering **what you like** and what you don't like with the aim of making the publication more reader-friendly. In this issue you'll see the updated design, and, in response to your feedback, we now have clear sections to help you find your favourite stories—News Update, Science Roundup, Feature Focus and a new section, **Inside Story**. The last of these offers you a place to tell the community about your role at the College, courses you've been on, books you've read, staff outings, charity events and cultural traditions you follow. We hope you enjoy the new *Reporter*. Your story ideas, views and opinions help to make *Reporter* what it is, so please continue to **keep in touch**.

EMILY ROSS, EDITOR
REPORTER@IMPERIAL.AC.UK

🕒 *Reporter* is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter. The next publication day is 21 May. We welcome contributions from across the College. Please contact Emily Ross: ✉ reporter@imperial.ac.uk ☎ +44 (0)20 7594 6715

The benefits of volunteering

New research undertaken by the Imperial Volunteer Centre (IVC) shows that volunteering can enhance skills, such as team working, problem solving and communication skills, which can help improve people's employability and self-confidence.

Over 450 students currently take part in community projects through IVC. Projects range from providing computer coaching for older people to helping organise sporting activities for children, and offering support to migrants and refugees experiencing distress or mental ill-health.

The IVC was awarded a

College teaching and development grant to measure the impact of volunteering on students. An online survey was developed and over 200 volunteers took part.

Of the participants in the survey, 81 per cent said that their confidence in their own abilities increased as a result of volunteering and 96 per cent agreed that volunteering through the IVC had improved their experience at university through meeting people from different backgrounds and being part of the local community.

In addition, everyone who



(L-R) Students Denise Chan and Syahidah Sahrom lent a hand at the Natural History Museum Wildlife Garden last April.

took part in the survey said they would recommend volunteering to their friends.

—NAOMI WESTON, COMMUNICATIONS

🔗 Both students and staff can get involved in volunteering projects. For more information visit: www.imperial.ac.uk/volunteering

Postgraduates win npower's energy challenge



(L-R): Course director Professor Sandro Macchietto with competition winners Gaurav Monga, Alan Whitaker, Andy Hadland and Philipp Gruenewald.

Imperial students on the MSc course in Sustainable Energy Futures have won first prize in a national competition for a proposal that could help a major energy company and its customers to combat climate change.

The postgraduates won the npower Energy Challenge competition at Wembley Stadium last month. They beat seven other teams from universities, including Oxford and Cambridge, to take home £10,000 in prize money.

The team, consisting of Alan Whitaker, Andy Hadland, Gaurav Monga and Philipp Gruenewald, won the competition for a proposal that showed how the energy company could get customers to

enter into new energy efficiency agreements and make a profit in the process.

Philipp Gruenewald said the scheme would see customers signing new long-term contracts with npower, who would, in return, agree to install products such as loft and wall insulation, along with new heating systems to make homes more energy efficient.

Customers would be encouraged to make further energy savings through a points-based customer loyalty incentive scheme.

Npower says it could save a million tonnes of CO₂ being emitted each year if this scheme were implemented into just 270,000 homes.

—COLIN SMITH, COMMUNICATIONS

charity cycle

17–23 August

Edinburgh → London

British Universities and Colleges Sport (BUCS) and the international humanitarian organisation Right to Play are offering 200 staff and students from UK universities the chance to take part in a 411-mile bike ride to raise money for children living with disease, poverty and war across Asia, Africa and the Middle East.



For more information visit: www.imperial.ac.uk/sports/news/edinburghtolondoncycle

Journey to Antarctica



A recent expedition to an icy wilderness has left students from Imperial with memories of penguins and collapsing ice sheets—and a desire to do more to combat climate change.

Postgraduate Jeff Marlow and second year undergraduates David Whittleston (both Earth Science and Engineering) and Chin Cheong (Medicine) returned this month from a 12-day trip exploring Antarctica. The group beat 1,700 other applicants from around the world to take part in the trip, which was sponsored by BP.

The expedition gave students the opportunity to learn from conservationists and climate change experts about the remote continent, which is one of the last unspoilt places on Earth, and which is made up almost entirely of ice.

The journey to Antarctica included 33 hours of aeroplane journeys and a hazardous two-day trip on a research ship called the Academic Ioffee. Jeff describes his first impressions:


“Arriving in Antarctica was like stepping off onto another planet. In some parts it was as if we were the only people who had ever been there. I am still processing what we saw.”

The team took part in a number of excursions whilst on the continent. On one trip, the team watched a large glacier collapse into the ocean. David

Whittleston says: “We were watching it from a fair distance, yet the glacier still looked huge. The chunks of ice falling into the sea were massive and the noise they made as they crumbled into the water was deafening.”

Coming face to face with the effects of climate change has had a massive impact on the students’ perspective, as David says: “The wilderness of Antarctica and the chance to be around so many inspiring people made me want to do so much more to fight climate change.”

—COLIN SMITH, COMMUNICATIONS

 To read more and to see a slideshow of the students’ experiences, visit: www3.imperial.ac.uk/news/antarctica



Whales and seals are the most abundantly found animals in Antarctica, but numbers are slowly reducing due to increasing temperatures at the South Pole.



‘Naked Street’ funding

The Royal Borough of Kensington and Chelsea and Westminster City Council have announced £18.8 million in funding for the second phase of the Exhibition Road project.

The aim of the project is to transform Exhibition Road—where the South Kensington Campus is located—into one of the most important public spaces in London and a major new cultural venue for the 2012 Olympics.

The repaving of Exhibition Road as a single surface will extend from South Kensington station up to the junction of Exhibition Road and Cromwell Road, then will continue north to the junction with Kensington Gore at the entrance to Hyde Park.

Commenting on the announcement last month, Nigel Buck, Director of Property Management (Estates), said: “We are pleased that funding for the Exhibition

Road project has been finalised. Imperial has always supported proposals to improve the accessibility of Exhibition Road for its staff, students and visitors. The proposals to create a much wider pedestrian pathway on the west side of the road will complement the new Exhibition Road Building that is proposed for the corner of Exhibition Road and Imperial College Road [see *Reporter* 202 for more on the SEQ project]. The schemes will transform that portion of our campus into a modern and visual statement.”

The Exhibition Road project will be delivered in two stages. Stage one began in February 2009 to unravel the gyratory system around South Kensington station, while stage two, which will deliver the major streetscape improvements, will start in October 2009.

 www.rbkc.gov.uk/exhibitionroad

in brief

First Lady comes to Charing Cross

US First Lady Michelle Obama and Prime Minister’s wife Sarah Brown visited Maggie’s Cancer Caring Centre,



based at Imperial College Healthcare NHS Trust, to mark the Centre’s first anniversary on 1 April. Mrs Brown, who is a patron of Maggie’s, showed Mrs Obama around the centre, which is situated on the Charing


Cross Hospital site. Maggie’s is a place of refuge where anyone affected by cancer can find emotional and practical support. Mrs Obama said: “Community jewels like this should always be celebrated. I was impressed with the Centre’s warm and caring environment and enjoyed meeting the people who work and get services here.”

Woolas visits Imperial

New visa arrangements for international students were put under the microscope last month when Immigration Minister Phil Woolas visited the College to hear the opinions of staff and students. Emphasising the importance of overseas students to Imperial, Professor Mary Ritter, Pro-Rector for Postgraduate and International Affairs, told Mr Woolas: “We feel very fortunate that so many motivated, well qualified people from around the world want to pursue their studies here.”

Student welfare conference

Raising awareness of student welfare issues was the aim of a new symposium held at the College on 22 April. ‘Student Welfare: Looking Forward’ featured talks on personal tutoring, the effects of dyslexia, the student counselling service and the role of hall wardens.

 For a full write-up see the next issue of Reporter (21 May).

“The economic crisis is leading to huge opportunities for science, and there is an unprecedented interest in what science and innovation can do for the world in tackling the global crisis”

—LORD DRAYSON, MINISTER OF SCIENCE, ADDRESSING IMPERIAL STAFF AND STUDENTS AT A Q&A SESSION ON THE SOUTH KENSINGTON CAMPUS ON 25 MARCH

Imperial College Healthcare

Paediatrics goes paperless

A new electronic patient records system called CareVue has been introduced in the children's intensive care unit at St Mary's.

The £350,000 system aims to reduce prescribing errors and free up clinicians on the wards from administrative duties to spend more time with patients and their families.



Dr David Inwald, consultant paediatrician, said: "Going paperless is much more efficient and means that information is held on every patient in a central database—accessible to everyone involved in their care.

"This is particularly useful during handover periods as, rather than having to fill in the notes by hand, all clinicians can now see exactly what treatment a patient has received, at what time and from whom."

CareVue works via a computer station at the end of the 10 beds on the ward. It contains the patient's personal information and charts the exact details of their care.

Bowel cancer awareness

The Trust marked bowel cancer awareness month with a series of health promotion stands across the hospitals.



More than 36,500 people are diagnosed with bowel cancer in the UK every year.

The colorectal multi-disciplinary team joined forces with national charity Bowel Cancer UK to host stalls at Charing Cross, Hammersmith and St Mary's.

Bowel cancer is the third most common type of cancer in the UK. Lack of awareness of the symptoms is a problem and contributes to late diagnosis

of a disease that is curable if treated in the early stages.

New charity formed to support AHSC

The two former charitable trusts of Hammersmith and St Mary's hospitals have merged to become Imperial College Healthcare Charity. The organisation, which came into being on 1 April, will manage and raise funds for the Trust's five hospitals, with a focus on excellence and innovation in four key areas:

- supporting the AHSC as a leader in clinical care, research and education
- improving the health of local communities
- improving the skills of the Trust's staff to deliver first class patient care
- developing fundraising

Jane Miles, Chief Executive of the new charity, said: "This is a significant milestone in creating a new dynamic charity. Our vision is to support the AHSC to achieve great science, excellent care and a healthier community."

—IMPERIAL COLLEGE HEALTHCARE NHS TRUST PRESS OFFICE

Car of the future

Last month, in a joint project between Imperial and the Royal College of Art, car manufacturer Ford asked postgraduates to design features for cars of the future.

Students from the two institutions who are studying for a Master's degree in Industrial

Design and Engineering (IDE), collaborated with Ford to come up with new features that meet the future needs of consumers.

IDE joint course convenor, Professor Peter Childs (Mechanical Engineering), explained that over the course of a month, students were taught the processes used in the car industry to design a new car. He commented: "Evolving customer tastes and requirements mean that as soon as car manufacturers release a new car they start to think about how they can improve the next model. Thanks to Ford's patronage, our students get the chance to come up with new ideas for vehicle designs that they could one day see released onto the market."



Damian Palin, MSc/MA student on the IDE course, working on one of the Ford cars

As part of the project, Ford donated two cars to the institutions for students to analyse and use for their new designs. Throughout the project, designers from the company's advanced product group visited students to get progress reports on their work.

The students worked on the project in a laboratory in the Mechanical Engineering Building that faces Exhibition Road. The space has large windows at ground level that look out onto the street, which made it an ideal opportunity for students to showcase their work to passers by.

—COLIN SMITH, COMMUNICATIONS

Watch a video of the students working on the project: www.imperial.ac.uk/news/newcar

Joint PhD programmes with NTU



Rector (L) and Dr Su Guanng, NTU President, signed a Memorandum of Understanding at NTU

Imperial and Nanyang Technological University (NTU), Singapore, signed an agreement on 6 April that will enable the two universities to offer joint PhD programmes in engineering and science.

The NTU-Imperial College London joint PhD degree programme will commence with PhD programmes in bioengineering, and chemical and biomolecular engineering. It will subsequently be extended to PhDs for all engineering and science disciplines. Successful PhD candidates will be jointly issued a PhD degree under the seal of Imperial College London and the seal of NTU.

The programme is expected to be highly competitive as it offers participants the opportunity to be exposed to the research environments in two highly advanced universities in Singapore and UK. The synergistic combination of research resources, such as world class talent and cutting edge research facilities, is expected to draw the best students and staff to the programme.

The Joint PhD Programme is a four-year programme with students spending two years at each institution. The tentative date for the initial intake under the Joint PhD programme is January 2010.

—HISHAM HAMBARI, NANYANG TECHNOLOGICAL UNIVERSITY

media mentions

—ABIGAIL SMITH, COMMUNICATIONS



✉ **JOIN OUR MAILING LIST** for regular news, information and website alerts: www.imperial.ac.uk/media/jointsignon

THE ENGINEER ▶ 23.3.2009

Developing countries keen to be green

The rapid industrialisation of China and India is often held up as an obstacle to the battle against climate change, but both countries have a strong appetite for the development of low carbon technologies, according to *The Engineer*. Professor Nigel Brandon (Earth Science and Engineering), a leader of the UK's drive for international



collaborations in the energy sector, comments: "China is very conscious that it is going to suffer the impact of climate change. Its water supply is very sensitive to aspects of glacial melting. They know that they are at risk of being one of the countries impacted at an early stage, not so much from rising sea waters but from rainfall and access to water."

BBC NEWS ONLINE ▶ 31.3.2009

Positive signs for polypill

The concept of a cheap five-in-one polypill for everyone over 55 to tackle high blood pressure and cholesterol has come a step closer following trials suggesting that the pill is safe and well-tolerated by users, reports the BBC. Further research will now be led by Professor Simon Thom (National Heart and Lung Institute) to establish whether the polypill actually reduces mortality. However Professor Thom advises that the new drug would have to be taken as part of, and not instead of, a healthy lifestyle. He says: "Mounting evidence shows the polypill does exactly what it should but no more, whereas exercise has wide reaching effects on health and wellbeing. So a polypill is an addition rather than a replacement for lifestyle interventions."

THE IRISH TIMES ▶ 6.4.2009

Small firms recess less

Small companies are more likely to be our recession saviours than their larger counterparts, Professor Erikko Autio (Business School) told *The Irish Times* prior to delivering the inaugural InterTradelreland Innovation Lecture this month, because they tend to be more resilient. "During downturns large firms lead job destruction. They react more quickly to changes in the market and put a greater emphasis on cost-cutting," he explains. "When economic momentum picks up, large firms catch up, as they have the resources to hire and poach the best talent."



NEW SCIENTIST ▶ 7.4.2009

Search begins for the coolest objects in space

Two specialised space telescopes due to be launched next month will give astrophysicists a better picture of objects in the universe that cannot be seen with traditional telescopes since they are too cold to radiate visible light. Writing in *New Scientist*, Professor Michael Rowan-Robinson (Physics) says that the Planck telescope and the Herschel Space Observatory will scan the skies at infrared and microwave wavelengths longer than those of visible light, allowing them to detect faint traces of heat from these dark, chilly objects. "There will no doubt be an element of surprise in what emerges," he concludes. "After all, this is an entirely new wavelength band."

For more on this story see *Science Roundup*, page 7.



awards and honours

ENGINEERING

Professor Spalding wins top Russian award in energy



Professor Brian Spalding is the 2009 Global Energy International Award Laureate. Professor Spalding

received this award for his outstanding achievements in the field of fluid mechanics, which is the study of how liquids and gases move and the forces that impact on them. The award will be presented to Professor Spalding this June, by the Global Energy Award Committee. Professor Spalding, who

retired from Imperial in 1988, is one of only 17 laureates to receive this prestigious Russian accolade.

COMMERCIAL SERVICES

Imperial chefs win gold

Chefs from Imperial cooked up a storm at the University Caterers Organisation (TUCO) Chefs' Challenge 2009, winning the gold award for their four-course creation. The team was made up of Steve Robertson, Executive



Sous Chef, Martin Stafford, Senior Sous Chef, and newest member of the team, Andrew Crook. The annual cooking competition saw 12 teams of university chefs competing against each other to produce a meal in under two hours.

COMMERCIAL SERVICES

Imperial caterer wins top award



Jane Neary, Head of Catering and Conferencing, has been named University Caterer of the Year. Jane won top prize in the university/college category at the annual Cost Sector Catering

Awards on 16 April at London's Hilton Metropole, attended by more than 800 people.

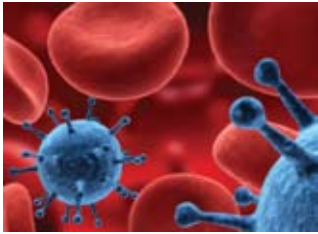
BUILDING PROJECTS

Client of the Year



Imperial was one of five employers shortlisted in the 'Client of the Year' category at the 2009 Buildings Awards dinner on 2 April. The College was recognised for 'collaborative working, continuous improvement and interest in its suppliers'. It was also noted for its 'willingness to embrace quality design' and becoming the first university to sign up to the WRAP 'reducing waste to landfill' initiative.

Potential new HIV drug



A potential treatment for HIV may one day help people who are not responding to antiretroviral therapy, suggests new research published in *The Journal of Immunology*

on 31 March. Imperial scientists looking at monkeys with the simian form of HIV were able to reduce the virus levels in the blood to undetectable levels, by treating the monkeys with a molecule called D-1mT alongside antiretroviral therapy (ART).

Simian immunodeficiency virus (SIV) is very similar to human immunodeficiency virus (HIV) and it is used to study the condition in animal models. In both HIV and SIV, the level of virus in the blood, or 'viral load', is important because when it is high, the disease progresses and depletes the patient's immune system. This eventually leads to the onset of acquired immune deficiency syndrome (AIDS).

Currently, the 'gold standard' treatment for HIV, highly active antiretroviral therapy (HAART), is not effective for around one in ten patients, partly because some develop resistance to the drugs.

"if we can slow replication down we can reduce the impact of the disease on the patient's life"

Dr Adriano Boasso (Investigative Science), the lead author of the study, said: "Our early findings suggest that D-1mT could be used alongside antiretroviral therapy to stop the virus from replicating. The disease can only progress if the virus is replicating,

so if we can slow replication down we can reduce the impact of the disease on the patient's life. We still need to figure out how D-1mT is working, then we can think about developing this as a potential treatment for HIV."

—LUCY GOODCHILD, COMMUNICATIONS

Researchers design new nano-sensors

Imperial scientists have designed tiny new sensor structures that could be used in novel security devices to detect poisons and explosives, or in highly sensitive medical sensors, according to research published in *Nano Letters* (8 April).

The new 'nanosensors' are based on a fundamental science discovery made by UK, Belgian and US research groups. They could be tailor-made to instantly detect the presence of particular molecules—for example, poisons or explosives in transport screening situations, or proteins in patients' blood samples—with high sensitivity.

The research was led by Imperial physicists and funded by the Engineering and Physical Sciences Research Council. The team showed that by putting together

two specific 'nanostructures' made of gold or silver they could make an early prototype device which, once optimised, should exhibit a highly sensitive ability to detect particular chemicals in the immediate surroundings.

The nanostructures are each about 500 times smaller than the width of a human hair. One is shaped like a flat circular disk while the other has a hole in the middle, like a doughnut.

The lead researcher on the project, Professor Stefan Maier (Physics), who is an Associate of Imperial's Institute for Security Science and Technology, explained:



When the sensors are paired up they scatter some colours within white light much more than others

"Pairing up these structures has a unique effect on the way they scatter light—an effect which could be very useful if, as our computer simulations suggest, it is extremely sensitive to changes in surrounding environment. With further testing we hope to show that it is possible to harness this property to make a highly sensitive nanosensor."

—DANIELLE REEVES, COMMUNICATIONS

The healing power of music

Patients who have lost part of their visual awareness following a stroke can show an improved ability to see when they are listening to music they like, according to a study conducted by Imperial researchers.

Every year, an estimated 150,000 people in the UK have a stroke. Up to 60 per cent of stroke patients have impaired visual awareness of the outside world as a result, where they have trouble interacting with certain objects in the visual world.



The researchers behind the study, from Imperial, the University of Birmingham and other institutions, looked at three patients who had lost awareness of half of their field of vision as a result of a stroke. The patients completed tasks under three conditions: while listening to their preferred music, while listening to music they did not like and in silence. All three patients could identify coloured shapes and red lights in their depleted side of vision much more accurately while they were

"Music appears to improve awareness because of its positive emotional effect on the patient"

listening to their preferred music, compared with listening to music they did not like or silence.

Dr David Soto (Neurosciences and Mental Health), the lead author of the study,

said: "Our findings suggest that we should think more carefully about the individual emotional factors in patients with visual neglect and in other neurological patients following a stroke. Music appears to improve awareness because of its positive emotional effect on the patient, so similar beneficial effects may also be gained by making the patient happy in other ways. This is something we are keen to investigate further."

—LUCY GOODCHILD, COMMUNICATIONS

HIV diagnosis and monitoring

A new device that will enable people living with HIV to monitor their own health and the effectiveness of their treatments will be developed thanks to a £2 million grant announced on 6 April.

Researchers from the London Centre for Nanotechnology (LCN), a joint venture between Imperial and UCL, and their research partners have been awarded the Nanotechnology for Healthcare grant from the Engineering and Physical Sciences Research Council's Grand Challenge Competition.

“This project combines technology from semiconductor processing with modern biology to produce a unique piece of kit”

The research will bring biomedical engineers, physicists, chemists, virologists and clinicians together to create the hand-held device, which will analyse a finger-prick of blood.

The device will give those infected by HIV a way to monitor the virus without having to visit a doctor so often. It will act as an early warning system to tell patients to seek medical help if the virus is resisting anti-retroviral treatments. It could also be of real benefit to doctors in developing countries who urgently need rapid and affordable ways to diagnose and monitor their patients.

The device uses nanoscopic mechanical sensors, called ‘microcantilever arrays’, to measure HIV and other protein markers that indicate a rise in the level of the virus and the body’s response to it. Dr Yeong-Ah Soh (Materials), who is developing the fabrication methods needed to make the microcantilever arrays, said: “This project combines technology from semiconductor processing with modern biology to produce a unique piece of kit for tracking how HIV develops in individual patients, and helping them to keep a close eye on their own health.”

—COLIN SMITH, COMMUNICATIONS



Transforming our view of the universe

Physicists from Imperial are preparing for the launch of two new multi-million Euro space telescopes that could transform our view of how planets, stars and galaxies are born, and give new insights into what the universe was like shortly after the Big Bang.

European Space Agency (ESA) space telescopes Herschel and Planck are due to be launched together into space on an Ariane V rocket from



French Guiana on 14 May.

Scientists from Imperial’s Astrophysics research group have been involved with the two missions since they were first proposed 20 years ago. Dr Dave Clements (Physics) and his colleagues,

for example, have helped with the design of the SPIRE instrument on Herschel, which will take far infrared pictures of the sky.

Herschel is the largest astronomical telescope ever to be put into space. It has a 3.5 metre wide ceramic mirror to capture long wavelength light from some of the coldest objects in space, providing scientists with a new way of looking at the universe.

Planck will look at even longer wavelength radiation than Herschel. This radiation, known as the cosmic microwave background, is a relic or echo of the Big Bang itself. Planck will measure the temperature variations across this microwave background, giving astronomers an unprecedented view of the universe when it was extremely young: just 380,000 years old.

Professor Andrew Jaffe (Physics) explains: “Planck will create the most detailed ever maps of microwave background radiation, and the ripples in it, that relate to cosmic activity in the aftermath of the Big Bang.”

—DANIELLE REEVES, COMMUNICATIONS

To watch videos about the two space telescopes, visit: www3.imperial.ac.uk/news/esa

Alzheimer study shows brain activity changes

Young adults with a genetic variant that raises their risk of developing Alzheimer’s Disease (AD) show changes in their brain activity decades before any symptoms might arise, according to a new brain imaging study by scientists from Imperial and the University of Oxford. The results may support the idea that the brain’s memory function may gradually wear itself out in those who go on to develop Alzheimer’s.

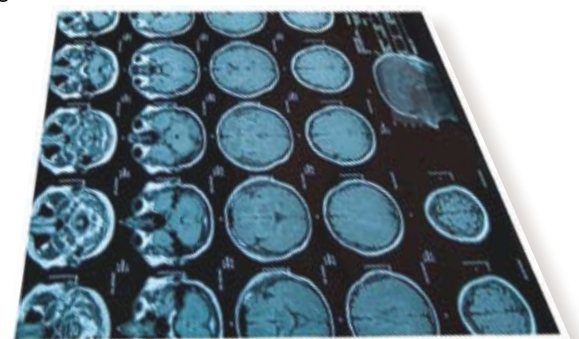
The research, published in the journal *Proceedings of the National Academy of Sciences* on 6 April, provides clues as to why certain people develop AD and it may be a step towards a diagnostic test that identifies individuals at risk. The degenerative condition is the most common cause of dementia and it affects around 417,000 people in the UK.

The APOE4 genetic variant is found in about a quarter of the population. Not everyone who carries the variant will go on to develop AD, but people who inherit one copy of APOE4 have up to four times the normal risk of developing the late-onset variety of the disease. People who have two copies have around 10 times the normal risk.

The researchers behind today’s study stress that most carriers of APOE4 will not go on to develop Alzheimer’s and carriers should not be alarmed by the study’s findings.

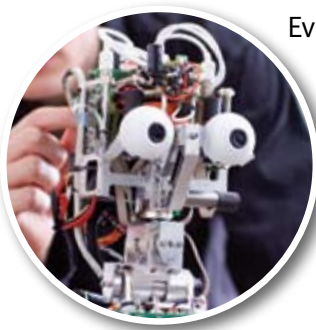
Differences in the region of the brain involved in memory, known as the hippocampus, have previously been shown in middle-aged and elderly healthy carriers of APOE4. However, the new study is the first to show hyperactivity in the hippocampus of healthy young carriers.

—LAURA GALLAGHER, COMMUNICATIONS





Thinking robotics



Even in rest position, slumped forward on a workshop bench and surrounded by balls of wire, mechanical joints and soldering irons,

Imperial's first humanoid robot manages to draw you in with its large googly eyes. *Reporter* meets the iCub and finds out how Imperial researchers in the Departments of Computing and Electrical and Electronic Engineering plan to use it to unravel some of the mysteries of human cognition.



Murray Shanahan has cultivated a passion for robots since his youth, when he was fascinated by the Daleks from *Dr Who* and was an avid fan of Dr Susan Calvin, the fictional robpsychologist from Isaac Asimov's robot novels. "For as long as I can remember, I've wanted to know what was going on inside robots' bodies," he says.

Twenty-eight years after completing his computer science degree at Imperial and pursuing a career in cognition and neuroscience, he is embarking upon his biggest research challenge yet—to achieve human-like cognition in a new humanoid robot called the iCub. The robot was acquired through a competition held by the European Commission's RobotCub project, which built and gave away six iCubs to European universities to further the study of cognition.

Murray, Imperial's Professor of Cognitive Robotics, explains what he wants the iCub to do: "I want to develop a robot that can do any number of tasks autonomously and intelligently." Such a

development would help capture his holy grail: to understand cognition, which is the process of knowing, that includes awareness, perception, reasoning and judgement. He says: "I find it incredible that humans are able to perform such a wide range of tasks, for example, having the ingenuity to create and use something like an iPod or learning how to drive a car—I want to know what makes our extraordinary capacity possible."

Modelling

Murray's research group in the Department of Computing is attacking the challenge through modelling how neurons in the brain communicate with each other by emitting little spikes of electrical energy. "We believe that there is something important in the timing of those spikes which will be the key to understanding human cognition," he says.

Achieving this level of complex modelling is a major challenge for the researchers. Neuron modelling typically requires several weeks or months of computer time to solve its problems. However,

“I find it incredible that humans are able to perform such a wide range of tasks—for example having the ingenuity to create and use something like an iPod or learning how to drive a car”

a successfully functioning iCub needs to move in real time and respond instantly.

Despite its human-like appearance, the iCub can't support its own weight at the moment. Moving its mechanical head, arms, fingers, eyes and legs in a human-like manner uses existing control algorithms. For the research project to be successful, the whole process of computer modelling needs to be massively accelerated.

Murray has received funding from the Engineering and Physical Sciences Research Council to support the project for the next three years. This has enabled him to take on Dr Andreas Fidjeland, who is working on hardware acceleration, Dustin Connor, who is responsible for programming the spiking processes, and Alex Bouganis, a postdoctoral researcher, who will take on the computational modelling of the spiking neurons to make the robot's joints and eyes move.

The spiking behaviour of the neurons is also fundamental to the work of Murray's chief collaborator on the iCub, Dr Yiannis Demiris of the Department of Electrical and Electronic Engineering.

Imitation

Yiannis explains that your brain's neurons fire when you observe something and also when you do the action yourself. "We want to model this brain

“We hope our work with the iCub will lead to the creation of robots which can be bought in the same way as a computer but instead of being programmed via a keyboard, can learn tasks from their owners visually”

mechanism and connect it to the iCub. By doing this we hope to learn some important truths about the process of learning.”

Unlike Murray's work, which aims to develop a robot which can think by itself, Yiannis' research focuses on how robots can be programmed. Yiannis' group is equipping the iCub with the ability to understand human actions, so it can learn how to perform tasks by observing a human. Yiannis explains: "We hope our work with the iCub will lead to the creation of robots which can be bought in the same way as a computer but instead of being programmed via a keyboard, can learn tasks from their owners visually, store these actions and then imitate them on demand.”

Yiannis' group has already conducted research into novel ways of programming robots, through demonstration and imitation, in robots called Peoplebots. They can imitate actions by using cameras that track movements in the same way that a digital camera viewfinder searches for a face in a scene. Peoplebots can already follow human arm movements to work out how the arms interact with the objects in their

environment. Now the group plans to transfer these capabilities into the iCub, and with its increased range of movements, particularly in the hands, to experiment with a wider range of human actions such as learning to use tools. Ultimately, says Yiannis, iCub will be able to learn from, and interact with, humans in more natural ways than the Peoplebots.

PhD student Yan Wu is working with Yiannis on developing biologically inspired computational models of learning and will be teaching the iCub tasks, such as how to put a battery into a phone and how to take it out. In the future, the research will be expanded to teach the robot how to collaborate with humans who are unable to carry out tasks alone.

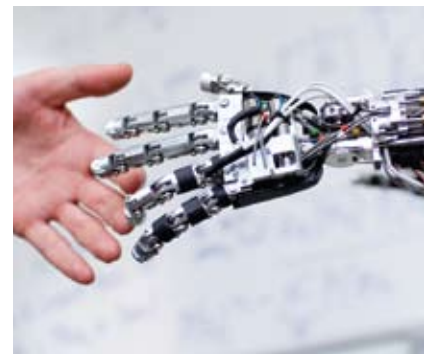
For all the researchers on the project, working with robotics is much more demanding than working with computer simulations as, instead of moving elements around a screen, they have to write code that moves an entire arm in three dimensions. "It really makes you appreciate just how complicated and magnificent the human body is," says Yiannis.

Murray is under no illusion about how long it will take to achieve his so-called 'holy grail' of cognition with the iCub, describing it as the beginning of a couple of lifetimes of work.

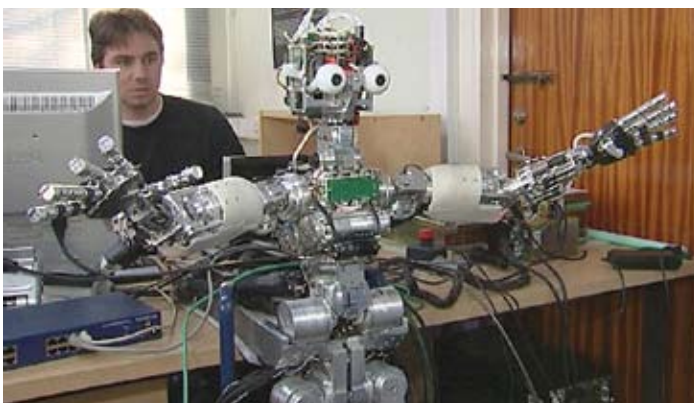
The ambitious scale of the project means that, for Yiannis, there isn't one single end goal, but a gradual process. He says: "While simpler actions such as reach and grasp will be quicker to achieve, more complicated object handling, such as learning to operate tools, will require better methods and will take us more than the next two to three years.”

—EMILY ROSS, COMMUNICATIONS

To watch a video of Murray Shanahan talking about his work with iCub, visit: www3.imperial.ac.uk/news/icub



iCub is an open source project; this means that any software or code developed by the researchers will be accessible for anyone to use. Professor Murray Shanahan (pictured top) hopes that the iCub, modelled on a three-and-a-half year old toddler, will help him learn more about how humans use cognition to interact with their world.



Research Assistant Alexandros Bouganis enters control algorithms into a computer to enable the iCub to move its mechanical joints.



Tackling tropical disease

It is hard to believe that when Professor Geoff Pasvol, Director of Imperial's Wellcome Centre for Clinical Tropical Medicine, first started at the College in 1990, global health appeared to be a low priority for both the world and the College.

Catalysed by political forums such as the G8, support by charitable foundations and increasing international travel, the problems of tuberculosis, HIV infection, malaria and other neglected tropical diseases are today at the forefront of public consciousness and an important part of the College's research interests.

The media has only recently brought the reality of tropical diseases to the attention of the public. Geoff explains: "We are all part of a global village and now, more than ever before, we have a responsibility to alleviate suffering if and where we can."

Geoff describes when he first encountered tropical medicine. "In 1974 after arriving in the UK from South Africa, I was just about to work on a 'cure' for leukaemia



at the University of Oxford, when the Professor there asked me if I was interested in going to The Gambia for a short project. When I arrived in West Africa, I saw deprivation and suffering on an unimaginable scale. So I gave up pursuing leukaemia, and for the next seven years tackled research on malaria."

In 1995 Geoff set up Imperial's Wellcome Centre for Clinical Tropical Medicine to encourage and facilitate research in this field. The Centre has flourished ever since—it has Fellows working in South Africa, Peru, Kenya and India on projects relating mainly to tuberculosis but also to HIV infection, malaria and other neglected tropical diseases.

The nature of the research has changed over the years. Initially projects were largely molecular and immunological, but the work is now more practical, relating to disease diagnosis, management and control. Fellows collaborate closely with colleagues at universities, hospitals and community clinics overseas and are generally housed in the host's buildings. Geoff explains the significance: "Integrating our staff with clinicians and scientists

“Integrating our staff with clinicians and scientists abroad is the model on which we base our collaborations”



abroad is the model on which we base our collaborations—it gives us access to vital knowledge of the local communities, engenders good supportive working relations and has a strong communal training function."

The challenges when working under difficult conditions are great, but, believing that "you have to be optimistic to work in this field", Geoff is hopeful. "Fellows from the Centre have pioneered new affordable methods to diagnose drug-resistant TB in Peru and have devised simple innovations to reduce transmission using natural ventilation and UV irradiation. There are now new affordable and effective drugs to treat malaria, and HIV infection has been transformed by the roll-out of antiretroviral drugs in developing countries."

As for the future, the good news is that the Centre's funding has been renewed until 2013 by a grant from the Wellcome Trust. The challenges ahead are exciting and the Centre for Clinical Tropical Medicine looks forward to working closely with the new Institute of Global Health at Imperial.

—EMILY ROSS, COMMUNICATIONS

To watch videos of Fellows of the Wellcome Centre for Clinical Tropical Medicine talking about their overseas work, visit: www3.imperial.ac.uk/news/wellcomefunding

Healthcare in action



Dr Beate Kampmann, Wellcome Trust Intermediate Fellow in Clinical Science, shares her experiences of working for the Centre in Cape Town.

What is your role?

I work in partnership with the Institute of Infectious Diseases and the Red Cross Children's Hospital in Cape Town, South Africa. The focus of our work is the immune responses to TB in children both in the UK and in the African setting. We have also worked with children co-infected with HIV, which poses additional challenges.

What motivates you?

My main motivation is to improve our understanding of tuberculosis in children in order to come up with better diagnostic and preventative methods for a disease that kills over half a million children each year. I have witnessed the devastating impact of TB and HIV through both my clinical and my scientific work and I feel strongly that paediatricians have a particular research contribution to make.

inside

story

The race for zero emissions

Reducing emissions 100 per cent

Reporter finds out how a team of Imperial students is converting a sports car into an electric car to help Swiss school teacher Louis Palmer on his quest to convince the world to leave petrol pumps and gas guzzlers behind.

"I would like to tell you something about the first ever tour of a vehicle that went around the world without petrol: it was a solar car," says Louis Palmer, a Swiss teacher and adventurer, speaking to a packed lecture theatre at Imperial this March. Fulfilling an ambition he'd dreamed up when he was 14, Louis developed a solar car and used it to travel around the world. His chic blue Solartaxi got most of its energy from the solar panels placed on its roof.



The Zero Emissions Race: six competitors from all four corners of the globe will race their zero emissions cars on a route extending 40,000 kilometres across six continents.

Zero emissions race

In the next stage of his mission, Louis has organised the Zero Emissions Race which involves six zero emission vehicles racing 40,000 kilometres across six continents in 80 days. A team of Imperial students has volunteered to design and equip his car for the race. The team is made up of nine students—mainly undergraduates from the Departments of Mechanical Engineering and Electrical and Electronic Engineering, but also some sustainable development Master's students from the Energy Futures Lab. It is an unofficial splinter from the Racing Green group—they work independently and call themselves Racing Green Endurance.

The group were given an SR3 sports car (pictured above) by their sponsor Radical Sportscars and they aim to convert it from internal combustion engine into an all-electric before the race starts in Copenhagen at the United Nations Framework Convention on Climate Change summit this December. The challenge is not just fitting the car with electric equipment and batteries but also in turning a car designed for race-tracks into a road-ready vehicle that fits all the road safety standards. The students do this in their free time and will be spending their summer vacation fitting the car with electrical parts and redesigning it for the Zero Race.

—MICO TATALOVIC, MSC SCIENCE COMMUNICATION

mini profile

Mark Shuttleworth

Multi-linguist Mark Shuttleworth, Head of the Translation Group (Humanities), speaks to *Reporter* about world travel, humour and translation.

What do you do at Imperial?

In addition to being a lecturer my work involves untangling metaphors within scientific texts in different languages. I also teach students to work with translation technology—the computer tools translators use to translate for you or help you to translate more quickly, accurately and consistently.

What languages do you speak?

I am fluent in Russian and German, and I also have knowledge of French, Italian, Polish, and bits of other languages including Bulgarian, Spanish, and Portuguese!

What's the most interesting place your work has taken you to?

In my year abroad at university I spent time in Poland and Russia, before the end of communist rule. Somewhat uniquely for a British person of my age I experienced rationing, while in Poland.



During that time some books were still banned but people read them anyway. They'd read them on the train even, just wrapped in newspaper!

Does humour translate?

It's interesting, English lends itself well to punning and word-play because you can't automatically tell the nature of a word in a sentence, whether it's a verb or a noun and so on. A lot of humour rests on the ambiguity of that—it just couldn't work that way in Russian for instance.

What are you most excited about at the moment?

There's a lot going on within the Translation Group at the moment—research has really taken off over the last couple of years. We're now offering a new course module on subtitling, plus the MSc in Translation will be available for students wishing to work in Arabic from next year onwards.

—JOHN-PAUL JONES, COMMUNICATIONS

www.imperial.ac.uk/humanities/translationgroup



► SCIENCE FROM SCRATCH

As explained by Colin Stuart,
MSc Science Communication

Supernova



'Supernova' is an example of a scientific word that has moved into common language. You might hear of a pop star's career going supernova, and Oasis even

sang about a champagne one. But the word stems from astronomy—a supernova is the universe's firework display. The force of the light streaming outwards from the centre of a star is balanced by gravity trying to pull it inwards. It is this balance that keeps the stars stable for billions of years. Eventually the star runs out of fuel and stops creating new light. With nothing to balance it any more, gravity wins and the star collapses. If the star is at least eight times bigger than our Sun it will then explode with spectacular effect—a supernova. This explosion is so energetic that it can shine as brightly as a billion stars and can sometimes be seen in the daytime from Earth.

Is there a phrase you would like us to explain? ✉ Email the editor: reporter@imperial.ac.uk

IMPERIAL STUDENTS SHARE THEIR EXPERIENCES OF LIFE AT THE COLLEGE ON THE STUDENT BLOGGERS WEBSITE.

Student blogger Anas on the exam season:

blog
SPOT

“Exactly 30 days from today will come a day when a bunch of grad students from Imperial will hold their hands high, some in celebration and others in prayer. This day, which will signify the end of long nights soaked in caffeine and unproductive drowsy mornings. This day of jubilation and relief is only a month away. Yet, this period of 30 days seems like an eternity. And before that beautiful day will come seven days of tribulation. The question, therefore, is will we survive this ordeal to see that lovely day?? *sigh*”



www.imperial.ac.uk/campus_life/studentblogs

Imperial's recipe for success

Three Imperial chefs recently won gold in the University Caterers Organisation Chefs' Challenge 2009 (see Awards and Honours, page 5), with a four course meal comprising pan-fried foie gras, smoked pancetta and baby pea risotto with seared scallops, fillet of monkfish with wild mushrooms and chocolate fondant.

One of the winners, Steve Robertson, Executive Sous Chef at Imperial (pictured right), shares his favourite cooking tips: “If you're new to cooking, a few tricks of the trade can help make it easier and more fun. Even if you're an experienced cook, you can always learn new tips. Here are some suggestions that might have you saying, ‘Why didn't I think of that?’”

“Instead of buying chips, peel and cut a sweet potato into slices, cover lightly in oil and put in the oven. They make a great substitute for chips, and are a lot healthier and cheaper.

“If you come across a recipe and it has an ingredient you don't have, don't be afraid to improvise. For instance, I've used crème fraîche instead of soured cream in a cheesecake, and yoghurt instead of cream in a curry.”



Steve's stir-frying tips

- Cut vegetables into same-size pieces so they'll all take the same time to cook.
- Add vegetables that take the longest to cook first—dense vegetables such as broccoli and carrots, for example. Next, add softer vegetables such as peppers and onions. Add garlic last.

—NAOMI WESTON, COMMUNICATIONS

▶ TIME OUT

Yacht club

“The loveliest thing is getting away from land, turning off the engine and letting the sails take over,” says Professor Jan Cilliers (Earth Science and Engineering), a keen sailor and member of Imperial's Yacht Club. “It's so quiet.”

The sailing bug bit Jan when a stint working in Australia offered the chance to take a yacht out around the Whitsunday Islands off the coast of Queensland. But in order to charter one he had to have the appropriate training. “I needed a day skipper qualification,” he says, “and fortunately the Club runs excellent courses that support the training, like radio use and

navigation. It was really fun and handy.”

With a membership that includes beginners and serious sailors, the Yacht Club offers training for every level, including a ‘competent crew’ course which teaches basic skills such as steering and handling sails. Sailing weekends usually take place on the Solent, near the Isle of Wight and Portsmouth, and range from racing for the energetic, to cruising for those who prefer a more relaxed pace. The Club also organises longer excursions to places like Oban and the Scilly Isles.

Jan doesn't get a lot of time to join these outings—“academic and student schedules are quite different”—but he appreciates the facilities and advice the Club offers. “The Club has got great gear if you need to borrow anything. The members are terrific people and it's nice to know they are there to talk to if I need it.”



Jan Cilliers, pictured left, enjoys the facilities that Yacht club offers, including the training courses run regularly at Port Solent.

Despite time constraints he plans to pursue his passion for sailing, with future trips due to take him to Croatia and the Majorcan coast. “Sailing allows you to go to amazing places,” he says. “It makes you realise there is so much ocean to cover and so much more to experience.”

—ABIGAIL SMITH, COMMUNICATIONS

The facts

- **Meeting times:** Mondays, 18.00 in the Union on South Kensington Campus, for socialising and booking trips.
- **Society size:** 50
- **Website:** www.imperial.ac.uk/union/acc/yacht

Medical art exhibition

This painting by fourth year medical student Priya Garg is a response to examining and taking a medical history from a torture victim. “When I presented the case to the consultant he believed, rightly or wrongly, that the circumstances of the injury were not important,” says Priya. “Whereas I felt it was vital to see illness in the context of the patient narrative.” The painting is part of an exhibition exploring creative approaches to medicine by students who are members of the Medical Humanities Society.

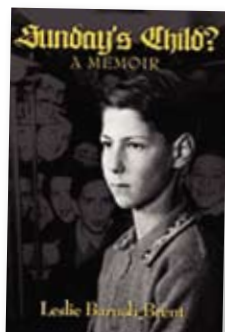


📍 The exhibition, curated by Mindy Lee, runs from 13 to 28 May in the Blyth Gallery on level 5 of the Sherfield Building on the South Kensington Campus. The official opening is on 12 May at 19.30. www.medhum.blogspot.com

Book signing with Professor Brent

Emeritus Professor Leslie Baruch Brent signed copies of his autobiography *Sunday's Child? A Memoir* (Bank House Books, 2009) at a book launch on 1 April at St Mary's Campus.

Over 100 guests were present, including Nigel Palmer, who worked in the Library on the St Mary's Campus between 1972 and 2002. He gives an overview of Leslie Brent's life story: “Leslie Brent was Professor of Immunology at St Mary's from 1969 until his retirement in 1990. Born in Köslin, Germany (now Koszalin in Poland) in 1925, Leslie came to England in 1938 in the first ‘Kindertransport’, the evacuation of Jewish children in flight from Nazi persecution. A recording by the BBC of an interview with him aged 13 in



Dovercourt reception centre—in perfect English—has survived and was played during the evening.

After spending his school days in Kent, Leslie served in the British army and then studied zoology at the University of Birmingham, where his ability was noted by his tutor, Professor Peter Medawar. When Professor Medawar was appointed to the chair of zoology at University College London in 1951, Leslie joined him as a postgraduate student. This was the start of a long and fruitful research enterprise which led to the discovery of immunological tolerance and graft-versus-host disease (GVHD).

While at St Mary's, Leslie set up one of the first clinical immunology laboratories in the UK which later found itself in the front line of the fight to understand the AIDS virus and its epidemic.”

course review



By course attendee Danielle Wilson, Clinical Trials Coordinator (Neurosciences and Mental Health)

Introduction to management at Imperial

What were the aims and structure of the course?

It is a two-day course, spread over a two-week period, which has been designed to equip new managers with key skills and knowledge to enable them and their staff to be more effective in their roles.

Why did you choose to go onto the course?

I was offered the chance to supervise a new member of our study team and felt my management skills could be improved.

How was it useful?

It was useful to meet other people working at Imperial who were also new to their management roles.

How has it impacted on your management style?

All attendees on the course completed a personality indicator. This was to enable us to identify our own personality type which, in theory, can help us to understand and work with other people more effectively. I have attempted to use this indicator to forge better working relationships.

📍 For more information on this course visit: www.imperial.ac.uk/staffdevelopment/management/workshops/leadership_action

Knowledge sharing at HE conference



Ben Chisnall (Planning) describes his experience of the annual three-day Association of University Administrators conference recently held in Exeter—an event bringing together and sharing the professional skills, knowledge and expertise of university administrative staff across the country.

“On 6 April, 11 of Imperial's staff travelled to the AUA conference. The number of working groups, presentations and keynote talks on offer meant that everyone was attending different sessions, covering a huge range of topics from admissions processes to speed-reading techniques. I took the opportunity to learn about strategic planning in US universities, the funding councils' role in nurturing sustainable research, and the pressure on institutions to succeed in a changing HE environment. On the professional side, I was able to hone my strategy development and change

management skills in separate workshops.

“After that, the conference's main activity began: networking. Our networking took us into the city centre on the first night, where we sampled the historic surroundings and tried to gain an understanding of the ‘student experience’ at Exeter. The formal dinner on the second evening saw an impressive student band setting the atmosphere for a night of dancing and fun amongst the Imperial contingent.”

📍 For more information on the AUA: www.aua.ac.uk

obituaries

PROFESSOR ALFRED RUPERT HALL AND DR MARIE BOAS HALL



Rupert and Marie Hall inspect a sword before using it to cut a cake at their retirement party in 1980

Professor Rupert Hall died on 5 February 2009, aged 88, and his wife, Dr Marie Hall, died on 23 February 2009, aged 89.

Judith Field, whose doctoral research was supervised by Professor Hall, writes: “The Halls came to Imperial in 1963, when the then Rector, Sir Patrick Linstead, invited

Rupert to found the Department of the History of Science and Technology and become its first Professor. Marie was also offered a Senior Lectureship in the Department and was later promoted to Reader. This Department was later incorporated into the Department of Humanities.

At this time, many arts courses were being set up for scientists and history of science was seen as bringing science students into contact with arts disciplines. Rupert’s first degree was in History (Cambridge, 1946) and Marie’s in Chemistry (Radcliffe College, 1940).

Both the Halls had distinguished research and publication records. Together, they published the correspondence of Henry Oldenburg, the first Secretary of the Royal Society (13 vols, 1965–86).

Rupert and Marie were elected Fellows of the British Academy in 1978 and 1994 respectively, and in 1981 they jointly received the Sarton Medal (the highest award of the History of Science Society). Rupert Hall was President of the British Society for the History of Science 1966–68 and he served as College Orator from 1975–77.

As teachers, the Halls were inspiring, painstaking, approachable and kind. These characteristics, and their research activity, continued after their retirement in 1980.”



RATILAL SHAH

Ratilal Shah, Foreign Payments Clerk (Finance), died on 14 January 2009 during a pilgrimage to India. Rob Kemp, Accounts Payable Manager, who worked closely with Ratilal pays tribute: “Rati started at the College in 2000 as an

Invoice Payments Clerk and moved on to foreign payments a couple of years later, utilising his experience in the sector. Rati was a quiet, understated man with a dry sense of humour. He was an incredibly dependable person who always paid great attention to detail and built up good relationships with individuals from all departments. More than anything, Rati was a family man—he had a son and daughter and he enjoyed visiting his four grandchildren here in London and in Kenya. Rati was a dedicated Jain and was very involved with the Oshwal Centre near Potters Bar. He was really excited about this pilgrimage to Shamashakir in India which he had been planning for a couple of years. The whole team was devastated by Rati’s sudden death—we all miss him very much.”

long
service

Reporter shares the stories of staff who have given many years of service to the College. Staff featured celebrate anniversaries during the period of 1 April–1 June. Data is supplied by HR and is correct at the time of going to press.

—WENDY RAESIDE, COMMUNICATIONS

20 years

- Tamis Barden, Admissions Assistant Administrator (Registry)
- Graziela De Nadai-Sowrey, Group Administrator (Physics)
- Dr Robert Dickinson, Lecturer (SORA)
- Dr Janice Main, Reader (Medicine)
- Elizabeth Smith, Head of Subscriptions Management (Library Services)
- Jennifer Smith, Chief Biomedical Scientist (Medicine)
- Jayne Webb, Hall Manager (Student Residences)

30 years

- Norma Hikel, Postgraduate Secretary (Materials)
- Christine Larbie, Technician (Medicine)

SPOTLIGHT



Brian Willey, Research Technician, Physics 30 years

When Brian Willey joined Imperial in 1979, it was partly because of the lure of sunnier climes. Brian had the choice of moving to Scunthorpe with his existing employer or working in Tenerife for Imperial. “It didn’t take too long to decide on Tenerife!” he says. After five years out there maintaining a telescope for the Astronomy Group he moved into the Physics main workshop on the South Kensington Campus. In 1986, he joined the Quantum Optics and Laser Science Group as a research technician, building equipment such as vacuum chambers, ion traps and optical mounts for use with lasers. He is now based in the recently refurbished instrumentation workshop, which he says “is probably the best equipped in any UK university”. Outside work, Brian has an unusual interest—Siberian husky racing. “I used to be serious about it and was in the top 10 at the Aviemore Championships,” says Brian, “but now it’s just for fun.”

Long-serving staff recognised

Vin Chauhan (SORA) attended the dinner held on 23 March for people who had been at the College for 35–50 years in 2008. He says: “The champagne reception and dinner was a fantastic acknowledgement of our long service, and I was really touched to know our hard work is appreciated.”



A DEDICATED BUNCH

594

The number of staff members who have worked at the College for at least 20 years ▶ This figure represents nine per cent of our total staff, and if you combine the number of years our long serving staff have worked at the College, they add up to a total of more than 16,500 years’ experience!

—EMMA CASELEY, HUMAN RESOURCES

Data is correct at the time of going to press. If your department has some statistics you’d like to share with the rest of the College, please forward them to: reporter@imperial.ac.uk

Welcome new starters

Dr Laura Alcazar Fuoli, Investigative Science

Dr Roxana Alexandrescu, EPHPC

Dr Ataollah Amini, Molecular Biosciences

Miss Lucy Anderson, Biology

Ms Myat Arrowsmith, EPHPC

Mr Richard Baker, ESE

Ms Eteri Bakhsoliani, NHLI

Mr Thomas Browne, Security Services

Dr Annalisa Bruno, Chemistry

Mr Matthieu Bultelle, Bioengineering

Dr Matthew Caley, SORA

Mr Manuel Castro, EEE

Mr Michaeloudes Charalambos, NHLI

Mrs Paula Coles, Library Services

Ms Alexandra Collins, CEP

Miss Charlotte Combs, Investigative Science

Mr Damian Crawford, NHLI

Ms Deborah Crich, Research Services

Dr Justin Davies, NHLI

Mr Vashist Deelchand, SORA

Mr Pierre-Malo Denielou, Computing

Miss Farhia Dirie, Library Services

Miss Kate Dudley, Business School

Dr Paul Edison, Neurosciences and Mental Health

Dr Ursula Ellinghaus, Medicine

Dr Oliver Gaemperli, Clinical Sciences

Dr Gianluigi Galizia, Neurosciences and Mental Health

Dr David Gamez, EEE

Dr Richard Ghail, Civil and Environmental Engineering

Dr Fabian Gonzalez Jara, NHLI

Mr Ben Gooden, Biology

Dr Wendy Harrison, EPHPC

Ms Lorian Hartgroves, Investigative Science

Miss Sonia Hinze, Faculty of Medicine

Dr Emma Holder, NHLI

Dr David Jackson, NHLI

Dr Anamika Jithoo, NHLI

Dr Andrew Jones, NHLI

Dr Nicholas Jones, Materials

Dr Asimina Kazakidi, NHLI

Mr Alan Kennedy, Kennedy Institute

Dr Laurent Lamy, Physics

Dr Joan-Andreu Lazaro-Cami, Mathematics

Dr Judy Leung, NHLI

Dr Vincenzo Libri, Investigative Science

Mr Matthew Lilley, Physics

Mr Qiang Liu, Computing

Dr David Low, Neurosciences and Mental Health

Mr Carlos Macias-Romero, Physics

Miss Claire McConnell, Physics

Miss Carol McDonald, Investigative Science

Mrs Antoinette McNulty, Neurosciences and Mental Health

Miss Aronrag Meeyai, EPHPC

Dr Janet Midega, Cell and Molecular Biology

Miss Joanne Milton, SORA

Miss Anisha Mistry, Neurosciences and Mental Health

Dr Jeremy Mitchell, Physics

Miss Michela Moraldo, NHLI

Mrs Edna Murphy, Faculty of Medicine

Dr Vanash Patel, SORA

Dr Ole Peters, Grantham Institute

Mrs Denise Phillips, Faculty of Medicine

Mrs Virginia Picot, ICT

Mr Gowsihan Poologasundarampillai, Materials

Ms Susanne Raum, CEP

Dr Ben Rhodes, Medicine

Ms Nicola Ruivo, Investigative Science

Dr Emmanuelle Savarit, SORA

Dr Keith Smith, Business School

Dr Daniel Stuckey, Clinical Sciences

Dr Blake Suttle, Biology

Dr Barbara Szomolay, Mathematics

Mr Anne ter Wal, Business School

Mr Jon Tucker, Business School

Dr Geertje van der Heijden, Biology

Mr Liliang Wang, Mechanical Engineering

Miss Amy Whiddett, Business School

Mrs Hannah White-Overton, Faculty of Engineering

Dr Thomas Wyss, SORA

Farewell moving on

Dr Tariq Ali, Energy and Environment Office (16 years)

Dr Peter Anderson, SORA

Dr Arun Arora, Biomedical Engineering

Dr Robert Atwood, Materials

Dr Piers Baker, International Office

Dr Amirthe Balasubramaniam, Neurosciences and Mental Health

Miss Rebecca Bath, Library Services

Mr Themistoklis Bourdenas, Computing

Mr Robert Brackley, Biology

Mrs Emma Burn, Investigative Science

Dr Claudine Chen, Physics

Mr Chen Chen, Cell and Molecular Biology

Ms Sarah Collington, NHLI

Mr Brian Cooper, Security Services

Mr Andrew Copley, NHLI

Mr Sarvanen Curpen, Investigative Science

Miss Suzi Dowd, Chemistry (18 years)

Dr Joanne Dronney, NHLI

Mr Tony Duggan, Development and Corporate Affairs

Dr Veronique Duke, Investigative Science

Professor Peter Ellaway, Neurosciences and Mental Health

Dr James Elliott, Medicine

Dr Rachele Fermani, Physics

Dr Richard Francis, SORA

Professor Subrata Ghosh, Medicine (7 years)

Dr Victor Gomez Roman, Investigative Science

Miss Sophia Gordon, Catering Services

Mr Scott Gregan, Kennedy Institute (5 years)

Dr Shahir Hamdulay, NHLI

Dr Penny Hancock, Biology (6 years)

Ms Donna Harris, NHLI

Miss Jessica Hidalgo, Business School

Dr Nicholas Hine, Materials

Dr Ansgar Hubner, Chemistry

Miss Louise Hull, SORA

Dr Robert Ikin, CEP

Dr Aleksandar Ivetic, NHLI

Dr Magdalena Jarosz, Chemistry

Dr Lars Jarup, EPHPC (11 years)

Mrs Monika Kabat, Catering Services

Mrs Eva Kassab, SORA

Miss Chiley Kasuba, Students' Union

Dr Steven Kealey, Chemistry

Dr Ali Khanban, Computing

Mr David Killock, NHLI

Dr Mauritius Kleijnen, Molecular Biosciences

Dr Alexandra Knight, Investigative Science

Mr Walter Lucchesi, Neurosciences and Mental Health

Dr Radmila Maksimovic, Neurosciences and Mental Health

Mr Mardit Matian-Konarak, ESE

Dr Ewan McGhee, Physics

Dr Nikolaos Mitianoudis, EEE (5 years)

Dr Eichichi Mizohata, Molecular Biosciences

Mr Omar Moalin, Estates

Miss Meena Mohamedhossen, NHLI

Mr Allan Morris, Estates

Dr Alison Mortlock, SORA

Dr Lisa Mullen, Cell and Molecular Biology

Ms Analeise Murahidy, Biology (5 years)

Dr Ryo Murakami, Chemical Engineering

Miss Famida Nadiadi, Medicine (23 years)

Dr Mihaela Negru, Chemistry

Miss Anthea Ng, EPHPC

Dr Gulay Oke, EEE

Ms Marysia Bessa, Faculty of Natural Sciences

Ms Magdalena Olejnik, EYEC

Mr Markos Papadonikolakis, EEE

Mr David Price, Bioengineering (11 years)

Mr Anthony Ranson, Estates Division (7 years)

Dr Paul Robb, Materials

Dr Alexis Rohou, Molecular Biosciences

Dr Giovanni Russello, Computing

Mr Timm Schlegelmilch, Cell and Molecular Biology

Dr Pete Sedcole, EEE

Mr Tim Seears, Physics (5 years)

Dr Gitanjali Seevaratnam, Chemical Engineering

Ms Sarah Shubinsky, CEP

Mr Harminder Singh, Development and Corporate Affairs

Dr Nidhi Sofat, Kennedy Institute

Dr George Somerville, Civil and Environmental Engineering (15 years)

Mr Christopher Staines, Faculty of Medicine (14 years)

Dr Fleur Strasser, Civil and Environmental Engineering

Mrs Julie Sudhakar, Life Sciences (5 years)

Miss Clare Symonds, NHLI

Dr Robby Tan, EEE

Ms Orla Teahan, SORA (5 years)

Ms Laura Thomas, EPHPC

Dr Anders Tjulin, Physics

Mr Lianheng Tong, Materials

Mr Pedro Torres, Computing

Dr Loukia Tsaprouni, NHLI (6 years)

Dr Jeremy Turner, Investigative Science

Miss Christina Turner, Chemistry

Dr Judith Van Holten, Kennedy Institute

Dr Quang Vu, Computing

Mr Robert Waterhouse, Cell and Molecular Biology

Dr Laura Willis, NHLI

Dr Felix Woodhead, NHLI

Dr Ming Yu, Medicine

retirements

Mr Chek-Min Ong, SORA

Miss Jennifer Smith, Division of Medicine (18 years)

This data is supplied by HR and covers the period 15 March–11 April. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (*) indicates where an individual will continue to play an active role in College life.

✉ Please send your images and/or brief 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.

Speak out

Story ideas?

We welcome contributions from across the College. The next publication day is 21 May. *Reporter* is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter

Contact Emily Ross: ✉ reporter@imperial.ac.uk
☎ +44 (0)20 7594 6715



12 MAY ▶ LECTURE

Building bridges between genes, brains and language

Dr Simon Fisher, Reader in Molecular Neuroscience at the Wellcome Trust Centre for Human Genetics, University of Oxford, presents a lecture on how language-related genes influence

brain development. In 2002 he discovered that mutation in a regulatory gene, called FOXP2, causes an inherited speech and language disorder. In 2002 Simon was awarded a Royal Society Research Fellowship and he set up his own laboratory where he carries out ground-breaking research into molecular mechanisms that underlie human speech and language.



26 MAY ▶ ATHENA LECTURE

Insights and vistas in hyperbolic geometry

Professor Caroline Series, Professor of Mathematics, University of Warwick • The Athena Lecture celebrates the achievements of women in science, technology and medicine. It is

given annually by a prominent female scientist. Professor Series will describe some of the unusual features of hyperbolic geometry which lead to graphics as striking for their aesthetic appeal as for their mathematical content. Professor Series is also a founding member of European Women in Mathematics, an organisation which aims to support and encourage women mathematicians.

5 MAY ▶ LECTURE

Cancer and inflammation—pathways and targets in common?

Professor Fran Balkwill, Institute of Cancer, Barts and the London School of Medicine and Dentistry



13 MAY ▶ LECTURE

Mature biological membrane structure WLTM new neutron methods

Professor Jeremy H. Lakey, Professor of Structural Biochemistry, Newcastle University

13 MAY ▶ LECTURE

Can science make you happy?

Professor Robert Winston, Chair of Science and Society and Emeritus Professor of Fertility Studies, Imperial College London

14 MAY ▶ MUSIC AND ART

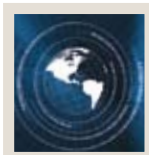
Lunchtime concert

Andrew Zolinsky (piano)

15 MAY ▶ INAUGURAL LECTURE

Longitude

Professor Alessandro Astolfi, Professor of Non-Linear Control Theory, Imperial College London



19 MAY ▶ LECTURE

Personal genome sequencing: a new era for healthcare

Dr David Bentley, Illumina Ltd

20 MAY ▶ LECTURE

Institute for Mathematical Sciences workshop

Complexity and networks—ecology

20 MAY ▶ INAUGURAL LECTURE

Arterial disease: location, location, location

Professor Peter D. Weinberg, Professor of Cardiovascular Mechanics, Imperial College London

21 MAY ▶ MUSIC AND ART

Lunchtime concert

Doric String Quartet



26 MAY ▶ ATHENA LECTURE

Insights and vistas in hyperbolic geometry

Professor Caroline Series, Professor of Mathematics, University of Warwick

27 MAY ▶ INAUGURAL LECTURE

Not so random walk through fluid dynamics

Professor Sergei I. Chernyshenko, Chair in Aerodynamics, Imperial College London

take note

Main Dining Hall closed until October

Work to transform the Main Dining Hall (MDH) on the South Kensington Campus has begun. The MDH will be closed until the new restaurant, planned to be an international food court, opens in October. The fast food outlet in the Junior Common Room will also be closed during the summer term. Throughout the summer other outlets on the South Kensington Campus will be open as normal, and weather permitting, *al fresco* dining options will be available during term time on the Queen's Lawn terrace.

Help Catering Services decide what will be on sale in the new food court by joining an online poll: www.imperial.ac.uk/eatinganddrinking



VOLUNTEERING

Biodiversity monitors

Project ID: 2046
 Organisation: Natural History Museum
 Location: SW7 (nearest tube South Kensington)

Volunteers are needed to help the Natural History Museum Wildlife Garden to monitor the plants and animals that colonise the garden and the environmental changes affecting them. The garden has been developed into different areas which represent a range of British habitats including woodland, meadow and ponds. Volunteers will need to conduct various sampling techniques and should have a knowledge of the species they are monitoring, as identification training cannot be provided for complete beginners.



For more information

To take part in a scheme or to hear more about volunteering in general, contact Petronela Sasurova

020 7594 8141
volunteering@imperial.ac.uk

For full details of over 250 volunteering opportunities please visit: www.imperial.ac.uk/volunteering

Subscribe to the weekly newsletter by emailing volunteering@imperial.ac.uk

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