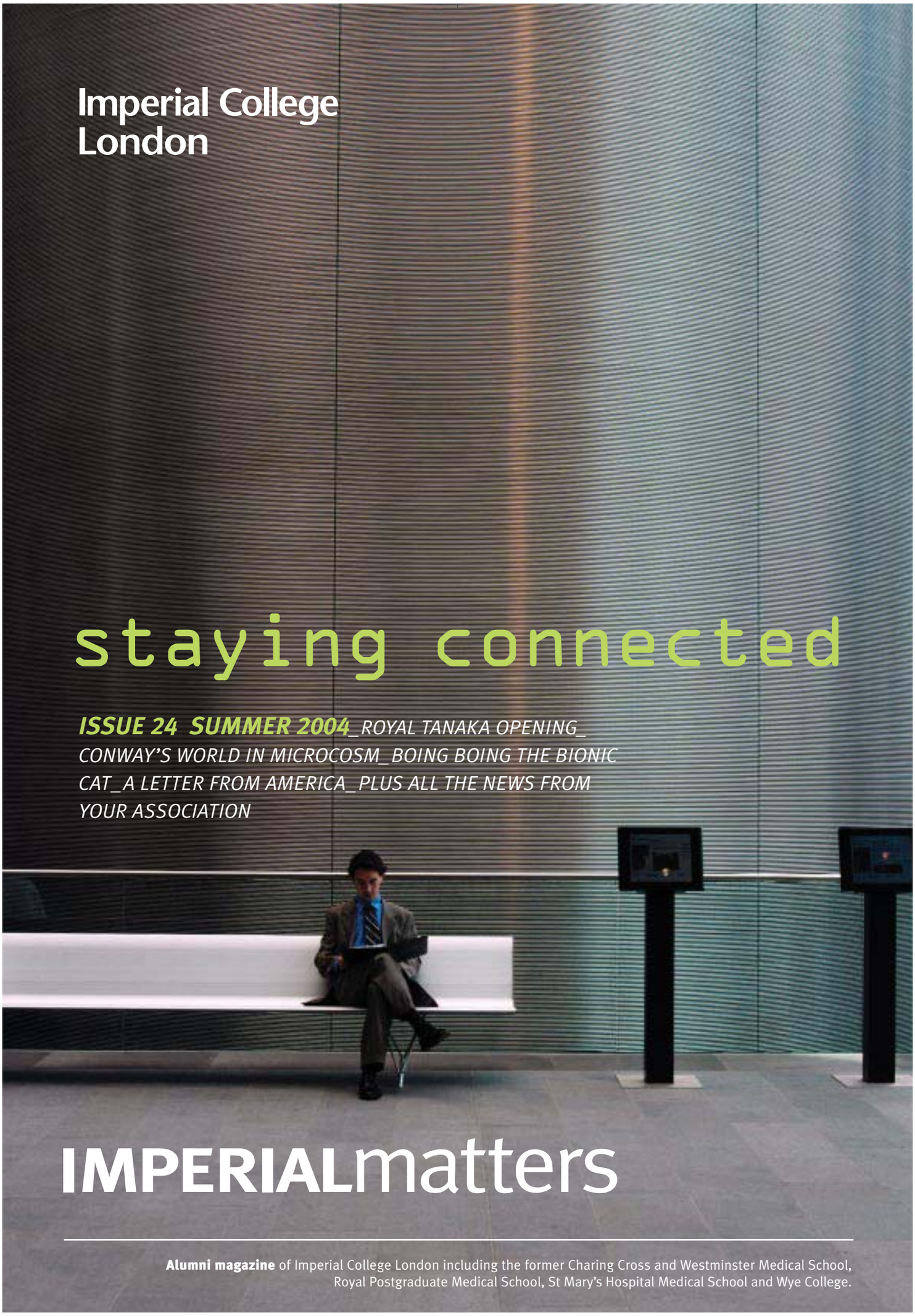

Imperial College London

staying connected

ISSUE 24 SUMMER 2004 *_ROYAL TANAKA OPENING_ CONWAY'S WORLD IN MICROCOSM_BOING BOING THE BIONIC CAT_A LETTER FROM AMERICA_PLUS ALL THE NEWS FROM YOUR ASSOCIATION*

IMPERIALmatters

Alumni magazine of Imperial College London including the former Charing Cross and Westminster Medical School, Royal Postgraduate Medical School, St Mary's Hospital Medical School and Wye College.

ISSUE 24 SUMMER 2004

in this issue ...

IMPERIALmatters

DESIGNED AND PRODUCED BY IMPERIAL COLLEGE COMMUNICATIONS FOR THE OFFICE OF ALUMNI AND DEVELOPMENT

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editorial

NIGEL YOUNG

DEAR ALUMNUS

Welcome to issue 24 of *Imperial Matters*.

As always, there is a rich mix of news, features and information about what we're doing and where we're going. Some of you will find enclosed with this issue a readership survey which I would encourage you to complete and return. It is also available to everyone online at **www.imperial.ac.uk/alumni/survey2004**. Your feedback is vital for the future development of your magazine.

You will read about some new initiatives – the Institute of Mathematical Sciences on page 5 for instance – where we will be tackling some of the big problems in science, engineering and medicine. The Institute of Biomedical Engineering, featured on page 18, will develop technologies to revolutionise healthcare in the future.

On our Charing Cross campus we will establish an international, multidisciplinary centre for brain and musculo-skeletal repair, due to open in 2007. There will be a particular focus on disorders related to a condition which affects us all – ageing.

The point about these research initiatives is that it is universities like ours that actually drive innovation in industry. We do this in a number of ways. First we produce highly qualified graduates attuned to the needs of industry. Second, we generate intellectual property, and third, we conduct multidisciplinary research that extends or removes existing borders between research disciplines. That is what happens when you bring the brightest and the best together and give them the facilities they need to push the boundaries of knowledge forward.

In this issue we celebrate the official opening of our new main College entrance and Tanaka Business School (pages 10-12). As many of you who watched the event live via the Internet know, Her Majesty The Queen, accompanied by HRH The Duke of York, visited us on 24 June – a rare honour indeed.

It is entirely fitting that our Business School forms part of the portal to Imperial. Business and management are an important component of almost every course we offer. That is what sets our Business School apart from others in the world: the fact that it is fully integrated into the College – it truly understands and promotes the 'science of business'. Our students and staff also understand 'the business of science' and continue to win international entrepreneurship prizes.

We pay tribute on page 33 to our staff and alumni who have achieved honours and prizes for their exceptional contribution to society globally. Many congratulations to them.

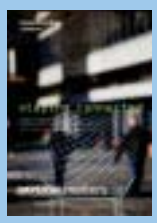
Finally, we thank all our donors in the second issue of **building the connection**, also enclosed. Nineteenth century philanthropists played a vital role in the development of Imperial College. Two centuries later 21st philanthropy is continuing that great tradition.

letters

Imperial Matters welcomes letters for publication, by post or email. We reserve the right to edit them for length. Unless you request otherwise, letters may also appear on the Imperial College alumni website as a part of the online edition of *Imperial Matters*.

Hot topics

In the Winter 2003 issue of *Imperial Matters*, the Rector draws attention in his Editorial to the heated debate over top-up fees. As he says, it will run and run, and is certainly not over yet. It is a matter on which all in the university sector should have an opinion. But finance is only one subject where debate at the interface between politicians, the general public, and academia must take place. Science, engineering and medicine provide many other examples. Sadly, these debates are often ill-informed and lacking in numeracy, judging by what is reported in the media.



The main point of this letter is to suggest that past and present members of the College represent a formidable body of informed opinion, and it might be helpful to students to have access to it in some way.

I imagine that discussions take place from time to time in the College on topics of current interest involving staff and students on, say, the environment, nuclear power, transport, MMR, the role of the regulator, and so on. It would be most interesting to have an account of any of these discussions in *Imperial Matters*, and perhaps alumni might be invited to contribute as well.

J A CATTERALL (MATERIALS 1949, PHD 1952)

The student experience

I was very disappointed at how the media portrayed the recent exchange between Richard Sykes and Les Ebdon. How can you separate teaching quality from research excellence?

Teaching is not about 'pleasing' students but rather providing them with cutting edge knowledge that will serve them well in an increasingly competitive job market. I find that the distinction between 'teaching quality' and 'research excellence' misguides and confuses prospective students as to how they should be planning their education and lives.

EMMANUEL POTHOS (PHYSICS 1995)

Please send your letters to:
Imperial Matters
Office of Alumni and Development
Imperial College London
South Kensington campus
London SW7 2AZ

or by email to matters@imperial.ac.uk

Interactive alumni services

'Interactive alumni services make it very easy to find and contact my old classmates and over time, as more people register, I can see these building into a fundamental tool for networking. Imperial alumni are unique in that we live and work all over the world. Through the interactive services, we can ensure we take advantage of our link to Imperial College wherever we are. I highly recommend registering: sign up now and, most importantly, tell your friends.' MATT HUBBARD, BIOCHEMISTRY 1999

Visit www.imperial.ac.uk/alumni/tellafriend to discover how easy it is to forward information about the interactive services to your friends.

This is a range of web services available to all alumni of Imperial College London. Launched to some alumni groups in the April alumni e-bulletin, we already have over 3,500 registered users taking advantage of the services on offer:

- **find a classmate: find your old College friends**
- **career networking: contact other Imperial alumni for career advice**
- **manage your record: update your contact details and mailing preferences online**
- **access additional resources: Tanaka Business School provide their alumni with additional resources for careers and networking**

It's easy to register. Just visit **www.imperial.ac.uk/alumni/form** and provide us with your email address and we will send you an invitation to set up your secure password protected account.

CONTACT OTHER ALUMNI

Interactive alumni services provide you with two search facilities for finding and contacting other alumni:

The **find a classmate search** is designed to allow you to find the friends you knew when you studied at Imperial. If your search is successful you will be able to contact them by email via the website.

You can search on:

- **name**
- **years of study at Imperial**
- **faculty or department**

Similarly, the **career networking facility** allows you to contact alumni who may be able to give you advice on changing careers, interview tips or general information about a particular profession.

You can search on:

- **company name**
- **job title**
- **location**

You can also use the searches to enable other alumni to contact you by completing your own individual 'find a classmate' and 'career networking' profiles.

OTHER FEATURES AND BENEFITS

Interactive alumni services also enable you to instantly update your contact details and mailing preferences online.

Additionally, as a registered user, you will receive the monthly alumni e-bulletin, which will keep you up to date with developments and additions to this exciting new area of the alumni website, as well as with events and news from the College.

ADDITIONAL RESOURCES FOR TANAKA BUSINESS SCHOOL ALUMNI

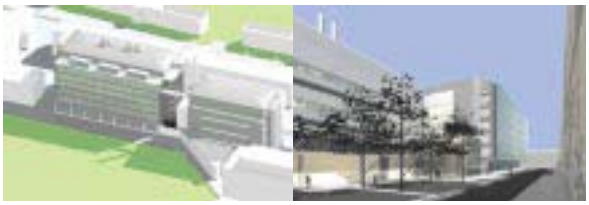
If you are an alumnus of the Business School additional resources are available to you via the Business School Alumni Network. Amongst these extra services are career advice and job search facilities provided by external companies and recruiters.

MAKE THESE SERVICES A SUCCESS

The more of you who register for the interactive services, the more meaningful and useful the networking opportunities become. By registering and telling your friends and colleagues about the services you can help to make them a real success.

www.imperial.ac.uk/alumni/tellafriend

£76m centre for clinical imaging



A unique research collaboration in medical imaging between Imperial and GlaxoSmithKline (GSK) forms part of a £60 million research development on the former Burlington Danes school site adjoining Hammersmith Hospital.

GSK will contribute £28 million towards a new clinical imaging centre, where research will focus on cancer, stroke, neurological diseases such as Parkinson's and multiple sclerosis, and psychiatric diseases. GSK and Imperial have also entered into a 10-year research agreement for medical imaging.

The GSK centre will use and advance the latest technologies in magnetic resonance imaging (MRI) and positron emission tomography (PET) with a further £16 million investment. Imaging technology such as PET provides scientists with a 'window' to look at the real-time chemical processes in human organs such as the brain, the heart and lungs, revealing the immediate changes that medicines can make. Imaging data can help speed up drug discovery and development by providing information about what is happening at a molecular level in the body.

Sir Richard Sykes, Rector, remarked: "The collaboration brings together the research heritage, skills and expertise of a diverse group of scientists with a huge investment in new technology.

"With the increased financial pressures on all academic institutions and the recent recommendations of the Lambert review on university-industry interaction this investment is particularly timely, and will further strengthen Imperial's ability to conduct world class science."

The development site will also include affordable housing for more than 300 health workers, provided by the Charity Trustees for Hammersmith Hospitals' partner, Thames Valley Housing Association. Around 200 new jobs will also be created in the centre.

Daughter unveils Skempton memorial

NEVILLE MILES

In a memorial to Sir Alec Skempton, recognised as one of the most important engineers of the 20th century, the civil engineering building has been renamed the Skempton Building.

The memorial was unveiled in the building's main entrance by Sir Alec's daughter, Judith Niechcial, who said her father would have protested modestly initially, but would secretly have been very pleased and deeply honoured.

"This building was a product of the massive expansion of university building in the early 1960s," she told guests who attended the event on 30 March. "Skem was very involved both in the decision to retain and strengthen the tower of the Imperial Institute, which was demolished to make way for this building, and the planning of the internal layout of the department."

The move to the building in 1963 was apparently traumatic for many of the staff of the section, she added. Quoting from Joyce Brown's book *A Hundred Years of Civil Engineering in South Kensington*, she explained: "Some academic staff never recovered from the disturbance of the strata of papers and books in their rooms in the old building."

"This beautifully-worded memorial is a wonderful and highly appropriate memorial to my father, and we all wish the Skempton Building a long, and distinguished future as a national and international centre of excellence in civil and environmental engineering."

Sir Alec Skempton, who was born in 1914, had a long and distinguished relationship with the department as an undergraduate, postgraduate, professor, head of department (1957-1981) and senior research investigator.

Judith Niechcial's book *A Particle of Clay* is reviewed on page 29, and is available from Whittles Publishing on 01593 741240.

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New Faculty Principals_
Dr Julia King CBE FREng will become Principal of the Faculty of Engineering later this year. She joins Imperial from the Institute of Physics, where she has been Chief Executive since September 2002.

Professor Stephen Smith DSc, FMedSci, currently Executive Dean of the Faculty of Medicine at Glasgow University, has been appointed as the new Principal of the Faculty of Medicine, in succession to Professor Sir Leszek Borysiewicz, who has been appointed Deputy Rector at Imperial.

There will be a full report from the Faculties in the next issue of *Imperial Matters*.

Knowledge transfer funding worth £4.5 million awarded to Imperial_ Funds for knowledge transfer to business totalling almost £4.5 million have been awarded to Imperial under the government's Higher Education Innovation Fund.

They will be used to focus on better understanding and responding to business needs; a new £1.85 million 'proof of concept' fund; and development funding for a new London centre seeking to fuse technology with music, fashion and the arts.

Imperial is one of the UK's leading technology focused university institutions, making over 150 invention disclosures per year, and with a portfolio of over 60 spin-out companies employing over 500 people.

Imperial's sole award of £2.4 million will help the College develop its key relationships with business in

Maths comes home to tackle global problems

An new international Institute of Mathematical Sciences will foster the application of mathematics to understanding and tackling emerging scientific problems.

The Institute will use mathematics to study outbreaks of epidemics and their control, bio-statistics, fluids in engineering and the environment. Staff will also tackle big questions in cosmology and string theory, and provide new analytical tools for the financial sector. It will be housed in a multi-million pound refurbished building on Prince's Gate on the South Kensington campus and will be fully operational by early 2005.

Aiming to develop into a national resource that attracts top researchers from all over the world to work in collaboration with UK based scientists on selected programmes, the Institute will also attract the best young researchers through prestigious new research fellowships.

Fields Medallist Professor Simon Donaldson FRS of the Department of Mathematics is the first President of the Institute, and Professor Phil Hall, former Head of the Department of Mathematics, is its first Director.

Institute research programmes, of between three to five years and with specific goals attached, will be largely driven by problems identified across many diverse disciplines in science, technology and medicine.

Professor Phil Hall said: "A striking and beautiful aspect of mathematics is that an apparently esoteric area of research can suddenly produce a solution to fundamental problems in science or engineering.

"We envisage an institute comprising researchers carrying out mathematical research useful in the immediate term to other disciplines, alongside work that might not be useful to others for decades."

About six programmes will run concurrently, each involving five or six staff scientists and visiting scientists, giving the Institute an overall size of 40-50 scientists once it has become fully operational.

Research students from UK universities and overseas will be invited to take part in the Institute's work. Distinguished researchers will be invited as visiting scientists for all or part of the summer to assist with the summer schools and to interact with the staff scientists and faculty at the Institute. Other visiting scientists, typically on sabbatical leave, will spend longer periods at the Institute.

The new Institute will be at 52-53 Princes Gate, and the Higher Education Funding Council for England has awarded funds of £3 million to reconfigure and refurbish the building as part of its Science Research Investment Fund scheme. Occupancy of 52-53 Princes Gate represents a homecoming for mathematics at Imperial, as it was the site of the former Department of Pure Mathematics before its current home in the Huxley Building, 180 Queens Gate, was built in 1975.

League tables round-up

Global rankings
Academic Ranking of Top 500 World Universities – 3rd in Europe; 17th in world (December 2003)

UK media league tables
The *Times* Good University Guide – 3rd overall (17 May 2004)
The *Guardian* University Guide – 3rd overall (25 May 2004)

***Financial Times* Global MBA Survey**
Tanaka Business School 18th in Europe; 75th in world (26 January 2004)

Agriculture investment needed for sub-Saharan Africa crisis

Greater investment in smallholder agriculture could offer a route out of the deepening poverty facing many African nations, a study by Imperial College London economists has concluded.

They outlined five key policy themes for the international community if sub-Saharan Africa is to have any chance of meeting two of the United Nations' Millennium Development Goals: halving both the number of people living on less than $1 a day, and the number suffering from hunger.

These five policy themes are:

- diversity – policies on agricultural development such as irrigation and rain-fed cereal intensification, root crop intensification or export cash crops must be tailor-made to reflect the diversity in each country arising from differing colonial histories.
- institutional development – investigate how alternative governance structures could provide the necessary coordination while being responsive to farmers' interests, encourage operational efficiency and financial discipline. Preliminary ideas include tenders for regional franchise, with rewards to the operating company.

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several phases, including market research and intelligence capability. A New Ventures team, which incubates and creates new joint ventures and spin-outs, will receive £0.75 million to strengthen their activities.

It will also reinforce support for Imperial's Entrepreneurship Centre, part of Tanaka Business School, and singled out in the Lambert Review of Business-University Collaboration as a case study in developing staff and students' entrepreneurial skills.

History of vineyards maps Britain's changing climate_ Professor Richard Selley's latest book *Winelands of Britain* reports on the locations of vineyards across the UK during the last 2,000 years and how this information may tell us about climate change over that period.

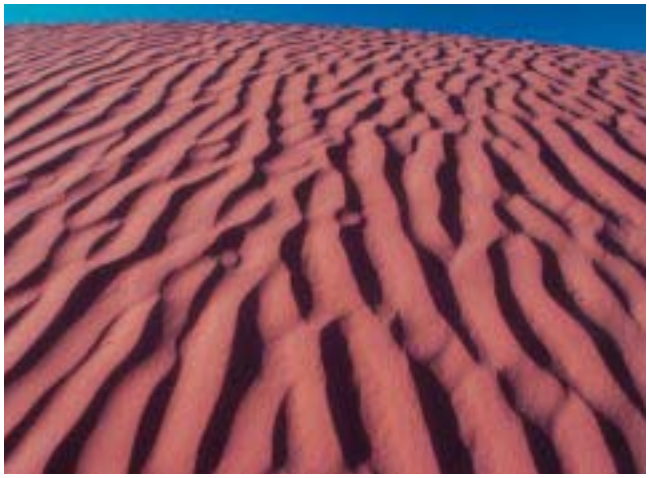
Professor Selley's examination of wineland geology has resulted in the compilation of a database mapping the locations of over 500 ancient and modern British vineyards. He says: "Wild vines have grown in Britain for over 50 million years. Only in the Ice Age of the last 2 million years have they retreated, returning during warmer phases such as the present one.

"The use of vines as a marker for climate change was first suggested some 2,000 years ago by the Roman writer Saserna. This study is another illustration of the old dictum that we inhabit this planet courtesy of its geology."

For details about his book, and more information about Professor Selley's research visit **www.winelandsofbritain.co.uk.**

How left-handed amino acids got ahead_ Professor Donna Blackmond, Professor of Catalysis at Imperial and her team have reported on a chemical reaction demonstrating how key molecules in the biological world might have come to be predominately left or right handed

Ever since discovering that the building blocks of the biological world, such as amino acids and sugars, are distinctively left or right handed – possessing a quality known as chirality – scientists have been trying to answer how and why.



- trade – studies are needed of policy regimes, which would maintain links to world markets, via competitive trading, but help stabilise prices.
- research – technological and institutional innovations are needed for economic development with a balance between bottom up and pure applied research.
- governance – interventions are needed to stimulate both political and economic development by drawing attention to the question of how accountable political institutions develop.

With the World Bank already forecasting that these two UN objectives will not be met by the target year of 2015, the study argues economic recovery must focus on expansion and intensification of smallholder agriculture backed up by manufacturing exports.

The researchers challenge the current dominant policy thinking, which under-emphasises the role of agriculture, arguing instead for a return to a more farm-centred approach supported by improved service to farmers such as research, marketing and improved access to credit.

Dr Andrew Dorward of the Department of Agricultural Sciences said: "75 per cent of the poor in sub-Saharan Africa are located in rural areas. While there are many factors that contribute to the high levels of poverty, such as bad governance or the spread of HIV, we cannot get away from the fundamental problem that agricultural growth in this region has stagnated for 30 years.

"Agricultural policies in sub-Saharan Africa have increasingly relied on the private sector to support and drive development, but haven't addressed the many practical difficulties facing private investors and farmers. New policies and action are needed to help farmers access marketing, financial, technical and information services and to help make it profitable for businesses to provide these services. There are many difficult challenges in this, but this is how smallholder development has grown and driven growth elsewhere in the world, and we cannot sit on our hands while poverty in Africa continues to grow."

The researchers argue it is possible to expand income opportunities and reduce income vulnerability by increasing the productivity of assets.

They consider the many challenges that face agricultural development such as water control, reversing soil deterioration and the effect of the free market on competitiveness.

Microscience to float at £140m

An Imperial spinout company developing a vaccine for 'Delhi belly' hoped to raise £40m at the end of June when it became the latest British biotechnology firm to brave flotation.

Spun out in 1997, Microscience, with several drugs in development including an oral, 'drink and go' vaccine against travellers' diarrhoea, plans to price itself at £120-£140 million when it launches on the Alternative Investment Market.

Ian Miscampbell, Microscience's finance director, said the vaccine market was a fast-growing one that was simple to explain to investors. "A lot of us have our children vaccinated – and most of us have had a dose of Delhi belly. It's something that's easy to understand."

With phase one trials under way, Microscience hopes to sign up a marketing partner for its diarrhoea vaccine in the next year or two and has pencilled in a launch date of 2008 or 2009. At about the same time, it hopes to bring an oral typhoid vaccine to the market with the help of a partner.

The firm is working on a vaccine for inhaled anthrax with the United States Navy, which it hopes could result in an order to supply the US anti-terrorist stockpile. Current anthrax vaccines require six injections over 18 months, and Microscience is one of several firms competing to find a faster alternative.

As part of the launch, a syndicate of four venture capital groups led by Apax Partners, Microscience's biggest owner, will increase its investment by £10m, leaving it in control of 65-70 per cent of the company. Mr Miscampbell said he was encouraged by their confidence. "I think they are investing for the medium term."

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They believe that at the dawn of biological life there were even numbers of molecules in each form, but through hitherto unknown processes, one particular form came to completely dominate the others (for example left-handed amino acids and right-handed sugars), a feature known as homochirality.

Using simple organic molecules, the Imperial researchers have demonstrated that an amino acid itself can amplify the concentration of one particular chiral form of reaction product. Importantly, the experiment works in similar conditions to those expected around pre-biotic life and displays all the signs to suggest it may be a model for how biological homochirality evolved.

>> STOP PRESS >> STOP PRESS

8.7.04
The Prime Minister has named Professor Roy Anderson, Primary Care and Population Health Sciences, St Mary's, as the new Chief Scientific Adviser at the Ministry of Defence. Professor Anderson is expected to take up his new appointment in October.

12.7.04
Anthony Constantinides, Professor of Signal Processing; Richard Syms, Professor of Microsystems Technology; and John Hutchinson, Emeritus Professor of Engineering Geomorphology are the latest Imperial academics to be elected to the Fellowship of the Royal Academy of Engineering, bringing the total number of Fellows at the College to 62. Wilf Corrigan, alumnus, Chairman and CEO of LSI Logic Corporation is also elected. Rector Sir Richard Sykes has been elected an Honorary Fellow. The Academy elects up to 60 Fellows each year from nominations made by existing Fellows.

focus on China

BY **LIZ GREGSON**

CHINESE PREMIER WEN JIABAO'S VISIT TO LONDON IN MAY 2004 presented an opportunity for Imperial Rector, Sir Richard Sykes, to put forward his views on the future of science and technology.

Sir Richard was a part of a committee of industry figures and academics who were introduced to the Premier to present key recommendations in taking forward the relationship between the two nations. The committee was established following Prime Minister, Tony Blair's visit to China in July 2003, to investigate business opportunities and joint ventures between the UK and China, particularly in the areas of trade and investment; science and technology; education; and sustainable development and the environment.

Sir Richard spoke to a delegation of Chinese politicians and trade representatives about the importance of creating a common platform upon which Chinese and UK scientists could interact to pursue areas of mutual strategic importance, particularly energy and the environment, and medicine and biotechnology.

Earlier in his three day visit to the UK, Premier Wen had also attended a Science Round Table with leading university heads and academics. Speaking on behalf of Imperial on the subject of 'Supporting Excellence in Universities', Pro Rector, Dr Tidu Maini, advocated the value of multidisciplinary studies, which bring together science, medicine and engineering to address real world problems, in attracting the best young talent to Imperial. The College itself has traditionally entertained strong links with China, with around 600 Chinese students currently undertaking study here.

The visit marked the 50th anniversary of the China-Britain Business Council, in a period of growing links between the two nations. Figures show that Britain is now the largest EU investor in China, collaborating in over 3,500 joint ventures with a total pledged investment of over £10 billion. Trade between the two nations has trebled in seven years and over 170 Chinese companies already invest in the UK.

The reported outcome of the talks, which recommended annual Prime Ministerial Summits, included the agreement of both sides to co-operate in research, the prevention and treatment of communicable diseases and epidemics, and to intensify information sharing and communication.

They also highlighted the need for China and the UK to work together to create scholarship opportunities to support the exchange of high quality postgraduate students, something which Imperial has already begun to initiate through the Lee Family Scholarships, a programme which enables one or two postgraduate students from China to pursue PhD studies at Imperial each year.

the future builders

THE COLLEGE IS INVESTING £350 MILLION OVER THE NEXT three to five years on schemes to provide 1,000 unit residences and major refurbishment. You will see on pages 10-12 how part of that money has been used for the new College entrance and Tanaka Business School.

Over £70 million is spent each year to replace, upgrade, service and maintain our building stock. We have the largest university institution estate in the UK sector, occupying over 500,000m² of built space – the equivalent of 3.5 Canary Wharf towers. This includes research laboratories, clinical and hospital space and residences, with around 90 hectares of sports and recreational space, together with farm and research land at Silwood Park and Wye covering 425 hectares.

This investment reflects our commitment to matching our environment to our world class position in science, technology and medicine, and to recruiting and retaining the best students and staff.

Current projects

Burlington Danes – £60 million
This new building will provide 13,000m² of space for research and development. It will house Imperial researchers alongside scientific partners, including GSK and the MRC. 2004-2006

Recent projects

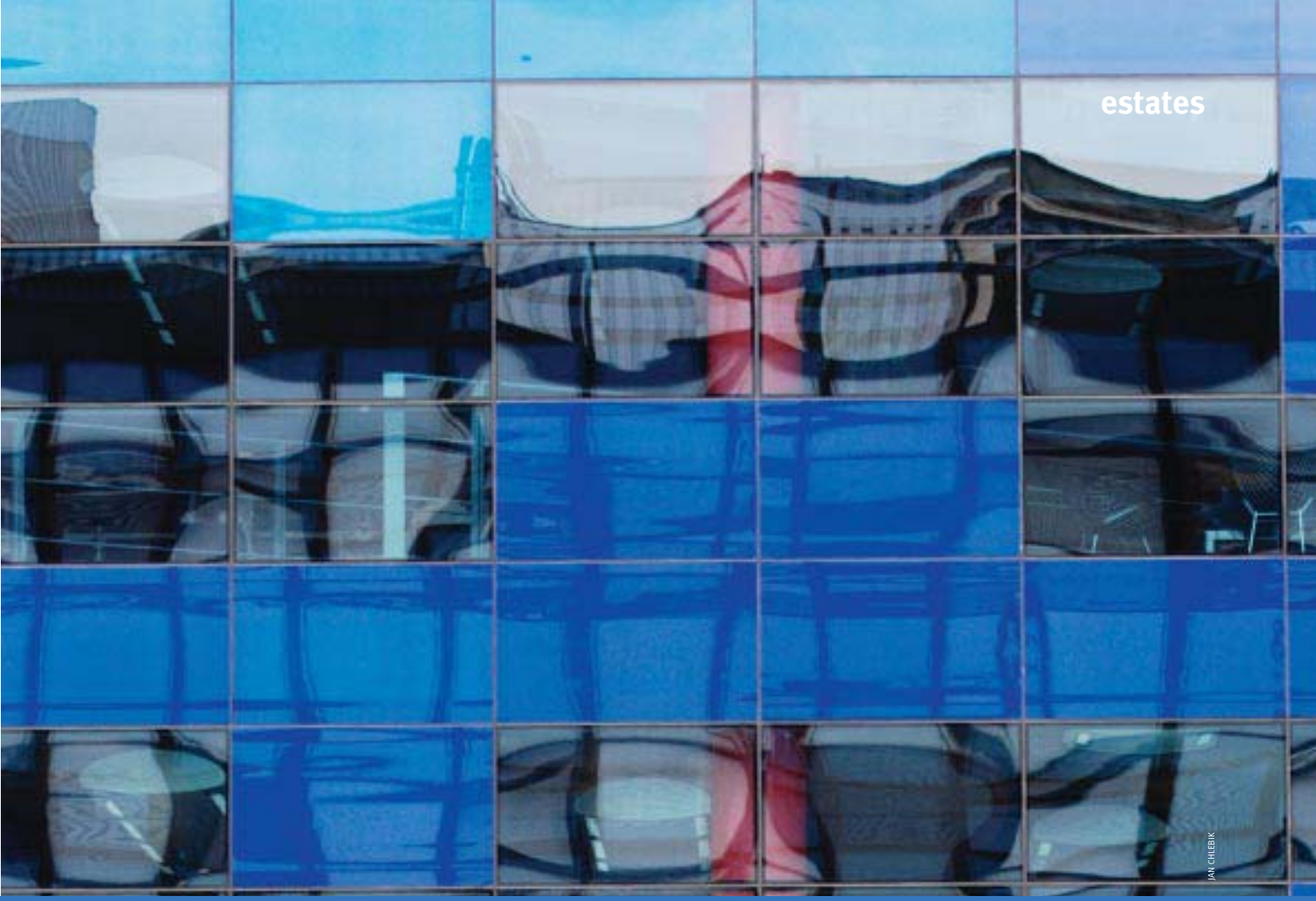
Faculty Building – £15 million
This new building provides a new strategic headquarters with co-located Faculties administration and an extension of the pedestrian walkway. 2003-2004

Recent projects

Tanaka Business School – £28 million
A new College main entrance and purpose-built Business School. 2002-2004

Recent projects

St Mary's campus – £23 million
Major rejuvenation and refurbishment of laboratory spaces and new services infrastructure. 2002-2004



JAN CHLEBIK

Current projects

Sports Centre – £17.5 million
This project will provide state-of-the-art sports facilities together with accommodation on the upper levels. 2004-2005

Current projects

Biochemistry Building refurbishment – £20 million
A refurbishment of high priority research areas also includes renewal of the façade. 2002-2004

Future projects

Prince's Gardens – £90 million
This project will provide contemporary student accommodation. 2007

Future projects

Sherfield Building – £45 million rejuvenation project.

Plus ongoing development of laboratory facilities

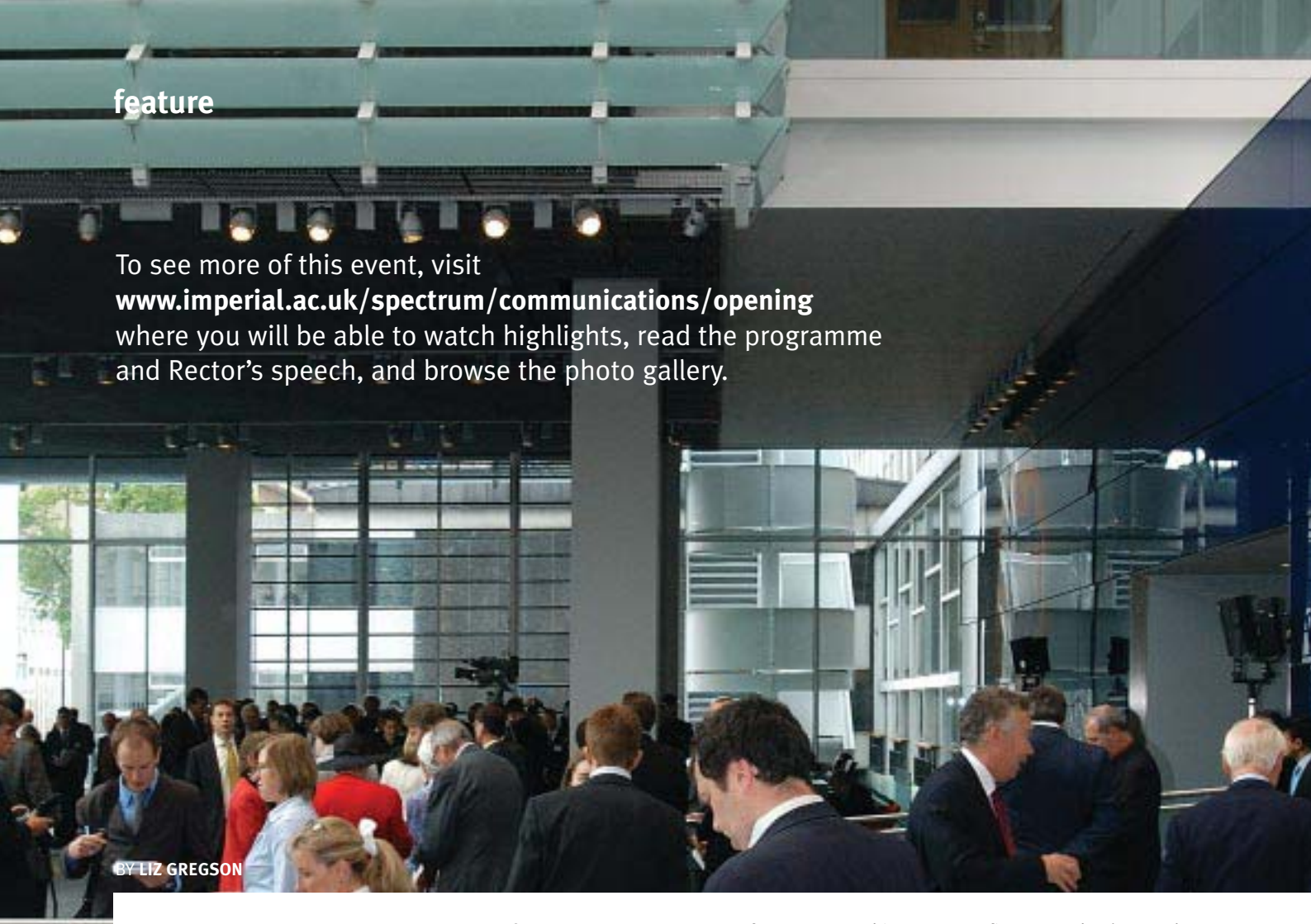
As we move towards our Centenary in 2007, we will be looking for support for a number of these projects. If you would like to learn more about any of the projects in this feature, please contact the Office of Alumni and Development on +44 (0)20 7594 6126.

WE WERE DELIGHTED TO WELCOME HER MAJESTY THE QUEEN AND HRH THE DUKE OF YORK TO OFFICIALLY OPEN THE MAIN COLLEGE ENTRANCE AND TANAKA BUSINESS SCHOOL ON 24 JUNE. THE NEXT THREE PAGES WILL GIVE YOU A FLAVOUR OF THE DAY, OUR TRIBUTE TO THE GENEROSITY OF DR GARY TANAKA.

building on the

dream

JAN CHLEBIK, NEVILLE MILES, NIGEL YOUNG



To see more of this event, visit **www.imperial.ac.uk/spectrum/communications/opening** where you will be able to watch highlights, read the programme and Rector's speech, and browse the photo gallery.

BY LIZ GREGSON

DR GARY TANAKA'S GENEROUS DONATION OF £27 MILLION TO provide a state-of-the-art building for the Business School and a new College entrance has supplied a monumental first step in a programme of development to create a truly world-class School. Our ultimate aim is for Tanaka Business School to be a world leader.

The creation of the Tanaka Business School has provided Imperial with a new home for the serious business of teaching business, via courses and programmes which play to Imperial's strengths in innovation, engineering, finance and healthcare. Additionally, it has put Imperial in a strong position to seek further funding to attract and retain world-class faculty, an enhanced capability to compete for world-class students, by completing a world-class facility.

The School's launch has provided an excellent opportunity to showcase its activities and standing through a series of special events including lectures, debates and dinners, which have taken place over the past few months.

As well as using these events to communicate the School's expertise and relevance to many of the College's key external and internal audiences, some have also been used to showcase how further support for this exciting project could be of mutual interest to both donors and the College.

SUPPORT FOR A WORLD-CLASS FACULTY

Tanaka Business School currently boasts faculty who are global experts in many fields, including macroeconomics, finance, innovation, business economics and strategy, entrepreneurship, and leadership and management learning. They are regularly consulted for their expertise by government, the media and industry.

Securing external support for chairs in areas where it already has a profile will help Tanaka retain these key members of staff and build on its reputation for practical and knowledgeable comment.

Additionally, Tanaka is looking to build further on the strengths that Imperial brings to business and new chairs are planned in the areas of entrepreneurship, corporate finance, technology and operations management, marketing and healthcare management.

SUPPORT FOR WORLD-CLASS STUDENTS

Increasingly, Imperial is seeking to recruit the best students in competition with the top business schools worldwide which are positioned to offer scholarships and publicise the fact widely. Scholarships will enable the School to recruit the highest quality students onto its programmes, regardless of financial circumstance, and to compete for such students in the global marketplace, reaching new audiences and markets.

This applies to established programmes, such as the MBA and MSc Finance, and to new ones, such as the new suite of MSc courses in Health Management. Financial support will also help talented graduates in less well-paid jobs, perhaps from the public sector or from overseas.

Competitive Masters programmes require intellectual as well as financial sustenance. One avenue for the former is a thriving PhD programme that maintains research excellence. Scholarships for PhD students are not an optional extra but an intrinsic part of a well-designed strategy for global success. Imperial's long tradition of research excellence is a unique platform upon which the School intends to build.

SUPPORT FOR A WORLD-CLASS FACILITY

Dr Tanaka has provided the Business School with a magnificent building which demonstrates a remarkable use of space by the architects, Foster and Partners, and provides a significant increase in teaching space for the School. As a result, there are many high-profile naming opportunities available, including showcase areas for the elite Research Centres which are attached to the School, lecture theatres, syndicate rooms, a dedicated computer room, as well as social and networking space.

timely honour for 'miracle mile' man

TANYA REED

BY **TANYA REED**

A 50TH ANNIVERSARY TRIBUTE TO THE MAN WHO RAN THE 'miracle mile' opened on 10 March. The £250,000 Sir Roger Bannister Lecture Theatre at St Mary's Hospital was packed with well-wishers awaiting the man who made it all possible. Sir Roger Bannister, who ran the world's first sub four minute mile in 3 min 59.4 secs on 6 May 1954, was clearly moved by the reception that rose to greet him as he took to the floor.

"This is an overwhelming occasion," he said. "The St Mary's scene has been my life for 50 years and I am touched it has decided to honour me in this way with such a wonderful theatre. I remember the Dickensian theatre here before which was so high at the back, you suspected you'd suffer from vertigo.

"When I came to do medical work here, I was swiftly engulfed in a heady atmosphere of work, sport, theatre and opera. I cavorted on stage with wobbly scenery, nearly-fitting costumes and moustaches which kept coming unstuck. The Queen Mother laughed from start to finish at our performance of Gilbert and Sullivan."

Sir Roger did pre-clinical studies — psychology and research — at Oxford before moving to St Mary's Hospital Medical School on an Open and State Scholarship in 1951 where he spent 'three happy years' as a student, involving himself in many activities which included running in many London cross country races.

He worked as a consultant neurologist at St Mary's Hospital and the Western Ophthalmic Hospital from 1963 to 1985 and chaired St Mary's Hospital Medical Committee over the same period. He has been a trustee of the St Mary's Development Trust since 1994 and its chairman since 1998.

"Sir Roger has a long and impressive association with St Mary's as student, athlete, researcher, consultant and trustee," added Sir Richard Sykes at the opening. "Not only is this theatre named after him, it is decorated with memorabilia celebrating his great achievements, including a portrait of Sir Roger, commissioned by the St Mary's Campus Dean and painted by Humphrey Bangam.

"A framed photograph of Sir Roger being carried by his fellow students on the morning after his historic run, together with the stop watch marking the time – 3:59.4 – of that record breaking run are also on display.

"The St Mary's Development Trust has generously supported the refurbishment of non-research space, something which is often neglected in major national funding initiatives, and which has a direct impact on the needs of the students studying at this campus."

The building forms part of a £30 million refurbishment of the former medical school building. Designed to seat 70, the theatre has been fully equipped with modern audio visual equipment and flip-up cinema style seating, 10 per cent of which is set up for left handed people.

Sir Roger added later: "This is the first academic institution to name a building after me and it's a great honour to be recorded for future students to wonder a little about who I was and what I did.

"I always intended to be a serious doctor and ran whilst I was a medical student. On the day, I started the morning at the medical school and remember sharpening my spikes on the grindstone in the physiology lab to make sure they went into the ground smoothly." He explained the art of record breaking at the time as 'the ability to take more out of yourself than you've got.'

See page 29 for a review of *St Mary's: A History of a London Teaching Hospital*, with a foreword by Sir Roger.

BY **TANYA REED**

the world in microcosm

IAN CHEESEMAN

IN 1948, THE 10 YEAR-OLD GORDON CONWAY AND HIS classmates of Latchmere Road Primary School in Kingston, found themselves on a playing field as their school teacher, keen to teach her pupils about life outside the classroom, hurled an open square into the air.

"We were told to study the different species of flowers, plants and insects where it fell," recalls the retiring President of the Rockefeller Foundation. "In that one moment, I saw a whole world in microcosm that I knew nothing about. To be taught ecology at that age was just phenomenal."

Over 55 years on, he is relinquishing his crown and with it some of the power to change lives across the globe. But not before receiving the ultimate recognition for his work – being elected to the Fellowship of the Royal Society.

The man who helped mastermind ecologically sound farming on a global scale, spending 30 years in places like Borneo, India and Thailand, and who spearheaded 'sustainable agriculture', a set of practices for controlling pests and boosting yields without heavy reliance on chemicals, is clearly delighted with being elected to the UK's national academy of science.

"It's the recognition of many disciplines but I've always been an applied ecologist first and foremost," he explains. "Some get this Fellowship as talented researchers when they are quite young, but for me, it's a recognition of both field and theoretical research and the application of ecology to problems of agriculture and health in developing countries."

It also recognises policy and management within the Rockefeller Foundation where 70 per cent of work is in science related fields. His successes with the organisation are too many to mention, but his latest, helping establish an HIV programme in Africa, is clearly something of which he is particularly proud.

MTCT+, an inter-foundation programme, established in 2001 under the patronage of the Secretary General of the UN, Kofi Annan, has raised $60 million towards a $100 million goal for a five year programme aimed at treating mothers with HIV/AIDS in perinatal clinics in Africa where prevention of transmission of HIV to infants is already underway.

"To see Africans properly treated and lives transformed – HIV positive mothers treated and so able to give birth to non-HIV babies – means that we're well on our way to reducing the number of orphans and helping proper families survive", Dr Conway explains.

"The Foundation's money saves lives and there's no better feeling than that. I do still wake up some mornings and think wow, what a position to be in. Some ideas will work, some will not, but I am very optimistic. IAVI, the International Aids Vaccine Initiative, which we created is seeking a vaccine against HIV. A promising candidate vaccine is already in second phase trials in Kenya and Uganda and is showing great promise."

RETIREMENT

Retiring clearly isn't going to fit comfortably into his agenda. I interview him during a taxi dash between two appointments – one at Imperial to discuss his latest position on the Development Advisory Board, the other to receive an honorary doctorate from the Open University at the Royal Festival Hall.

"My wife stays hoping I retire for a couple of days a week, while I know of a colleague who operates a seven day weekend but I'm not quite sure about that," he adds with a smile. On moving to London later in the year, both intend to indulge their love of classical and jazz music, as well as theatre and film. He also wants to learn to enjoy London and tour the art galleries. A cottage with a garden isn't out of the question.

an interview with Gordon Conway

"Realistically, I expect to continue to do work, particularly in relation to science, technology and development, and I'm also trying to write books, one about the Foundation, as well as one about the history of world agriculture." Time spent on the Royal Commission on Environmental Pollution taught him valuable lessons about perceptions and reality in science. In recent years he has spent a considerable time trying to influence the biotechnology dialogue – a subject doubtless to be tackled in his books at some point.

It's also worth mentioning that he set up the College's Centre for Environmental Technology in 1976, which he served as director, chairman, and visiting professor. Creating the first and most successful of the cross-disciplinary, multi-departmental centres, the original focus was an innovative MSc programme in Environmental Technology, beginning with 24 students and growing to over 100, plus over 50 PhD students.

"It's been extremely successful. I remember Lord Flowers saying if it lasted five years, it would be a job well done. Thirty years on, I think it's a great achievement. Life sciences is the science of the 21st century, there's no doubt about that. The big issue is how you connect life sciences to the other big technologies, particularly information technology and nanotechnology.

"The name of the game is integration now and it's being driven by the realities of the science. The more you get down to smaller and smaller levels, cellular, molecular, nano, the more things come together and have common properties and phenomena. Even if you're dealing with crops like wheat and rice which seem so very different, at the genomic level they're very similar. This fundamental similarity drives integration of life science with medicine, as well as life sciences with engineering of various kinds."

LONDON NATURAL HISTORY SOCIETY

Dr Conway wanted to be an entomologist and ecologist from an early age – in his teens he was on the ecological committee of the London Natural History Society, spending hours examining specimens in the Natural History Museum, and working on the ecology of the City of London bombed sites.

"Kingston was a very traditional grammar school, which had a brillant maths teacher. I learned Latin, which provided a good logical analysis, but they didn't do biology at A level so I went to Kingston Tech for that, before a scholarship to Bangor, and ending up a mathematical ecologist. I was accepted as a PhD student at Imperial, but went to Borneo instead!

BACK TO SOUTH KENSINGTON

His appointment to the Development Advisory Board will definitely bring him back to the South Kensington campus from the beginning of 2005. "It's an important strategy for College about how Imperial positions itself in the relationship to raising money – it's a very competitive world these days," he concludes. "Grant money related to developing countries is very important. If Imperial is to be among the top ten world institutions in science and technology, it needs all the funding it can get, together with brilliant people working within it.

"Things have got better in Britain. The charities laws have changed, making it easier to give money. The clout of the government together with the entrepreneurship of the private sector and commitment of local communities means there is a special role for universities to play, as brokers or partners, in creating public, private, community partnerships."

He may have to wait a few years before he can enjoy that cottage.

BY **NICK FRANKS**

a tribute to Professor David Blow

MANY COLLEAGUES AT IMPERIAL COLLEGE, AND ACROSS THE world, will have been saddened to learn of the death of David Blow on 8 June. A leading light in the early days of protein crystallography, David helped lay the foundations for what has been one of the most spectacularly successful techniques of modern molecular biology.

David won an open scholarship to Cambridge where he studied physics. Shortly after graduating, he was delighted to accept an offer to work with Max Perutz, one of the founding fathers of structural biology, on the structure of haemoglobin. David made an immediate impact and helped develop a key method – isomorphous replacement – for solving the structures of proteins. He wrote a seminal paper with Francis Crick on the rigorous treatment of errors which became a 'citation classic'.

Following two years as a Fulbright scholar at the NIH and MIT, David returned to Cambridge and set about developing other novel techniques for determining protein structures and, together with Michael Rossmann, showed how non-crystallographic symmetry could be detected from the diffraction data. This work led to development of the rotation and translation functions (which remain to this day as powerful crystallographic tools).

These technical developments have had a major impact on protein crystallography, but David was keen to apply these techniques himself and he solved the structure, and elucidated the mechanism, of chymotrypsin, only the second enzyme structure to be solved. In this work he collaborated closely with Brian Hartley, who was to join the Department of Biochemistry at Imperial in 1974, three years before David himself moved here to set up the Biophysics section in the Department of Physics.

While at Imperial, David solved the structures of several important proteins. He was, however, increasingly pressured by administrative responsibilities which he took on through a sense of duty rather than desire. He became Dean of the Royal College of Science and later Head of Physics, then the largest department in the College. He was also elected to the Governing Body. These duties had an adverse impact on his health which was already compromised by a serious heart condition, and David took early retirement in 1994. He then moved with his wife Mavis to the small seaside town of Appledore in North Devon, where his great grandfather had lived. Characteristically, David entered into the spirit of the community, working hard as the Chairman of the local branch of the Campaign to Protect Rural England as well as a supporter of the brass band, of which Mavis was an enthusiastic member.

Very few members of the community in Appledore would have been aware of David's scientific eminence – he was modest in the extreme and never came close to boasting about his achievements. He was quietly passionate about what he did and enjoyed nothing more than talking science to his colleagues. Even so, David was a private man who bore his final illness, lung cancer, with typical fortitude and good humour, sharing this burden with very few people. His many students, friends and colleagues will have been enriched by knowing him and will miss him greatly.

To read more about how David has contributed to student life at Imperial, see page 4 of building the connection.

BY **TANYA REED**

Boing Boing into the White House

RUTH DENISE LEAR

BOING BOING THE BIONIC CAT HAS HIT THE BIG TIME. THE fantastic feline designed by Professor Larry Hench to capture the curiosity of primary school youngsters in a series of books, is now part of a £1 million proposal to the National Science Foundation to teach the American public about nanotechnology.

The national nanotechnology centre will be located at Oak Ridge National Laboratory which has agreed to be a partner in the Boing Boing Museum Project entitled *The Adventures of Boing Boing the Bionic Cat*.

TANYA REED

"We want to show Washington how all Boing Boing's design features could be enhanced with nanotechnology," explained Professor Hench who is working with the Miami Science Museum and University of Central Florida on the project which was presented in a White Paper.

"Our proposed 2,500 sq ft travelling exhibit will feature a functioning model Boing Boing which incorporates interactive demonstrations of nanotechnology, including sensors, bionic eyes and ears, microprocessors, and energy sources.

"It's certainly a wonderful and fun way to introduce this area of science to the public." The Professor of Ceramic Materials and Co-director of the Imperial College Centre for Tissue Engineering and Regenerative Medicine, uses a model Boing Boing powered by a Lego mindstorms robotics explorer kit computer, to teach in schools.

SCHOOLS

Boing Boing, first created for a boy named Daniel who is allergic to cat fur and unable to have a real pet of his own, has also purred his way into schools as part of a cross-curriculum story-based teaching programme to stimulate interest in science and engineering.

Representatives from 10 primary schools joined science coordinators at the Armourers' Hall in spring to learn how the bionic cat would change pupils' lives.

Professor Larry Hench's cross-curriculum story-based teaching programme, designed to stimulate interest in science and engineering, is supported by the Armourers and Braziers Guild.

Each of 10 schools received £600 towards a science and technology module, including the first two Boing Boing books. In total, a series of nine is being written.

"The goal of the books is to stimulate interest and offer a pathway into learning which is related to stories, so children are not just learning for learning's sake," explained Professor Hench.

"It may also help keep science alive in young minds when it comes to making secondary school decisions about what to study."

Eight and nine-year-olds will also benefit from Discovery kits, designed for hands-on experiment design and testing, as well as interactive work books, as part of the Worshipful Company of Royal Armourers and Braziers Guild's Outreach Programme.

Larry demonstrated the prototype kits, four of which were made by Middlesex University's spin-off company, Teaching Resources. The kits range from teaching simple mechanical linkages – if you pull Boing Boing's tail, its legs move – to incorporating motor and batteries which teaches storage of electrical energy and how a motor works.

Others include a small microprocessor and two LEDs for the cat's flashing eyes, as well as a voice box and sensor features, including a chip capable of storing 20 seconds' worth of sounds, such as the pupil's name.

"Everyone loved Boing Boing. The teachers were enthusiastic about having a combination of input that involves both reading and hands-on activities to learn by doing things," he said.

"They were also excited that the kits were made for £10 each which makes them potentially available for all schools in Britain. These kits differ from most you buy at toy stores and museums as the assembly and design is left to the youngsters to decide.
"If everything isn't put in the right way, the cat won't move – its performance depends on how well a child makes decisions. Begin by creating engineering design characteristics of Boing Boing to be able to do the challenge. How well you can design determines how much you can do before you need to re-energise the cat."

A further cash injection of £67,500 in the form of a two year public awareness grant from the EPSRC (Engineering and Physical Sciences Research Council), began in July. It will be used to fund a research manager who will work one day a week at Imperial, as a coordinator for primary schools and professional societies' outreach programmes.

Jill Nelson, programme director for the British Association for the Advancement of Science, will act as a mentor for the project, helping the Imperial team expand the project in British schools.

"We are delighted with this grant which is part of EPSRC's plan to focus on literacy, science and numeracy, aimed at helping youngsters think creatively to understand technology," said Professor Hench.

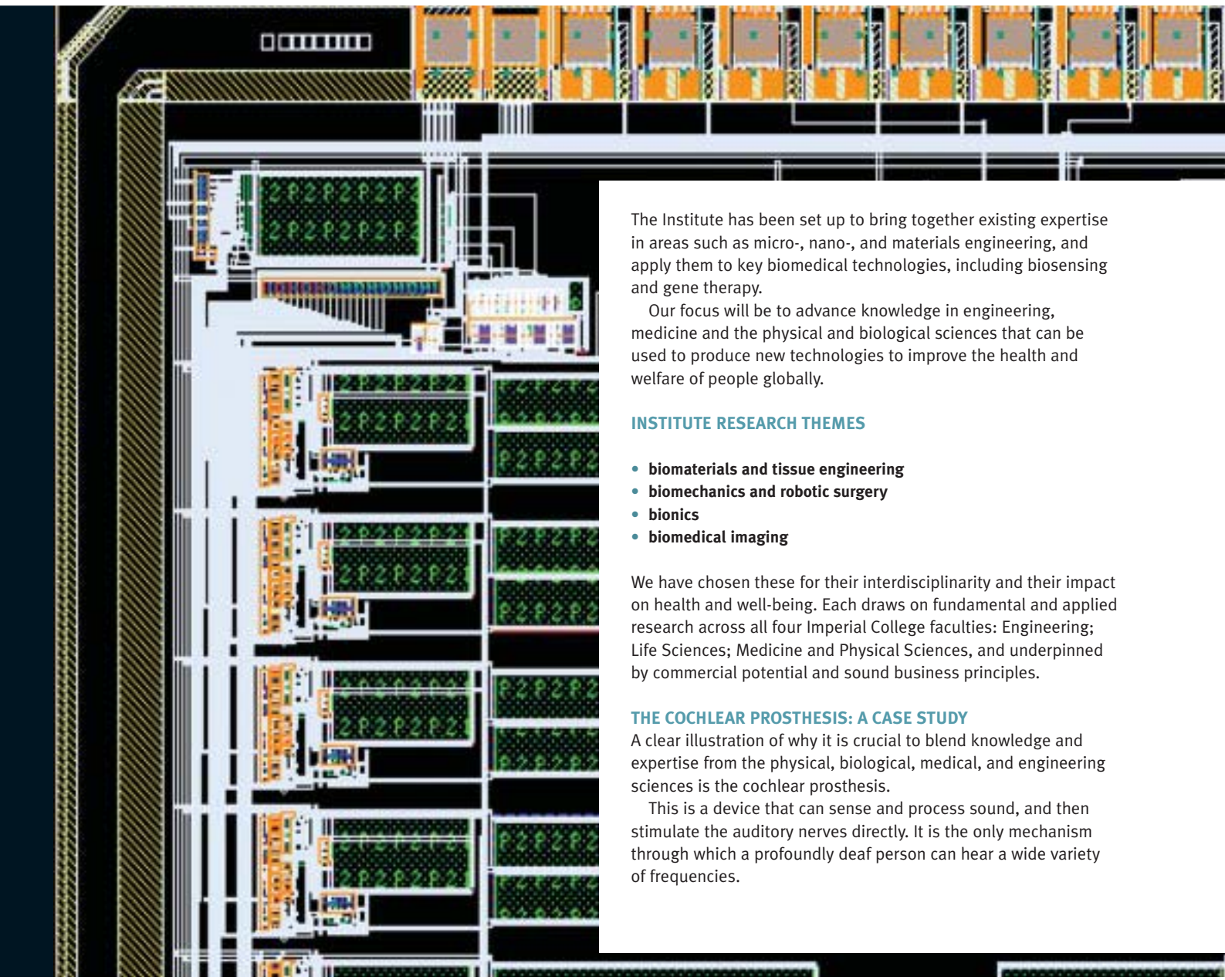
"One hundred Boing Boing kits will soon be distributed to 16 primary schools and we can now integrate hands-on robotic projects with story books and work books."

The latest book about the robotic cat will be published in August by Can of Worms Press, entitled *Boing Boing and the Lion's Claws*.

For details, visit: **www.boing-boing.org**.

BY **LIZ CARR**

Institute of Biomedical



The Institute has been set up to bring together existing expertise in areas such as micro-, nano-, and materials engineering, and apply them to key biomedical technologies, including biosensing and gene therapy.

Our focus will be to advance knowledge in engineering, medicine and the physical and biological sciences that can be used to produce new technologies to improve the health and welfare of people globally.

INSTITUTE RESEARCH THEMES

- **biomaterials and tissue engineering**
- **biomechanics and robotic surgery**
- **bionics**
- **biomedical imaging**

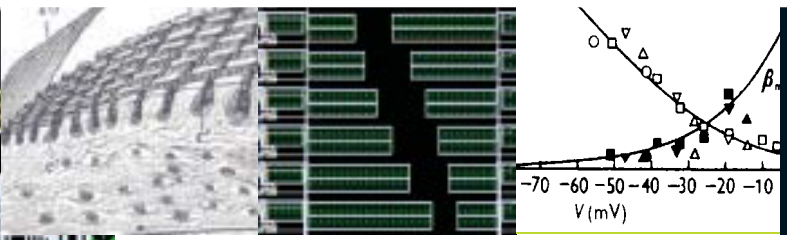
We have chosen these for their interdisciplinarity and their impact on health and well-being. Each draws on fundamental and applied research across all four Imperial College faculties: Engineering; Life Sciences; Medicine and Physical Sciences, and underpinned by commercial potential and sound business principles.

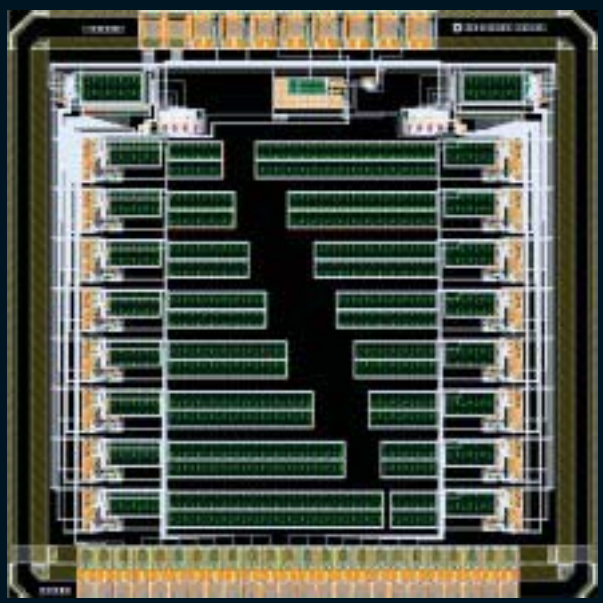
THE COCHLEAR PROSTHESIS: A CASE STUDY

A clear illustration of why it is crucial to blend knowledge and expertise from the physical, biological, medical, and engineering sciences is the cochlear prosthesis.

This is a device that can sense and process sound, and then stimulate the auditory nerves directly. It is the only mechanism through which a profoundly deaf person can hear a wide variety of frequencies.

Engineering

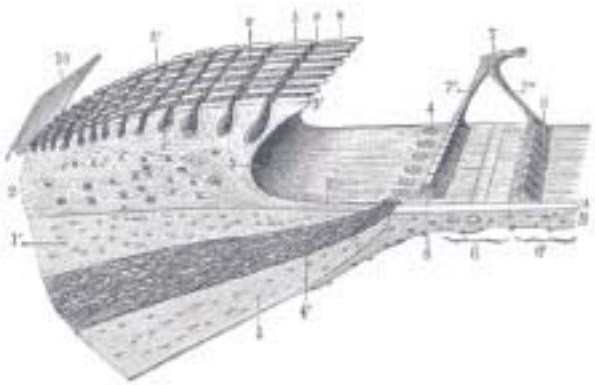


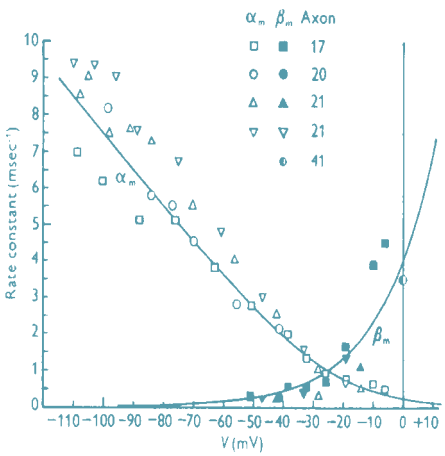


Developed by the Director of the Institute, Professor Chris Toumazou, the device relies on information gleaned from many disciplines:

- **medicine, for the understanding of deafness and the anatomy of the ear;**
- **computational neurobiology, for analysis of the working of the basilar membrane;**
- **physics, for the model of neural firing;**
- **electrical and electronic engineering, for the design of the silicon circuits required for implementation.**

The device, invented by Professor Toumazou and his colleagues, will soon be available as a product through the Canadian company Epic Biosonics. It will help profoundly deaf people all over the world — including a million in the UK and US alone — to hear for the first time. Professor Toumazou is now working towards the next stage: a self-powered prosthesis that eventually could be implanted into children. Their more adaptable brains will make it easier for them to learn to hear.





WHEN THE PIMLICO CONNECTION BEGAN IN 1975, IMPERIAL COLLEGE WAS ONE OF THE FIRST UNIVERSITIES TO INTRODUCE A VOLUNTARY SCHOOL TUTORING SCHEME.

making the connection

BY **LIZ GREGSON**

NOW IN ITS 28TH YEAR, THE PEER TUTORING PROGRAMME HAS grown from strength to strength, with 84 volunteers taking part during the 2003-04 academic year. The student tutors are highly valued members of the school community in London.

For those of you who are unfamiliar with the scheme, the Pimlico Connection places Imperial students in around 20 primary and secondary schools in the Pimlico area of London each year. The student volunteers act as role models for pupils and share specialist knowledge in the classroom environment.

Over the past 28 years, hundreds of Imperial students have volunteered their time, energy and skills to the scheme. Indeed you may have been a volunteer during your time at Imperial. If so, as Pimlico approaches its 30th anniversary in 2005, you should keep an eye out for special celebratory events.

In March 2004 Citigroup Foundation provided welcome assistance to 10 students participating in the scheme in the form of a £1,500 bursary each, as well as giving all 84 volunteers the opportunity to take part in a Citigroup training programme for careers and personal development skills.

Support for this valuable and worthwhile scheme is always welcome, be it for essential core running costs or specifically for the talented and generous students who give so freely of their time, energies and skills.

ASK THE STUDENTS

Some of the students involved during the 2003-04 academic year tell us what motivated them to volunteer for the Pimlico Connection and what their involvement gives them in return.

"The greatest benefit is being in a position to aid students with their studies in such a way that they are encouraged to learn. By introducing fundamental mathematical techniques using a fun and engaging approach, it generates an enthusiasm to learn within the pupils, so much so that they actually request homework from me!" **MARTIN CASSIDY** (2ND YEAR BIOCHEMISTRY)

"The children get individual help, attention, encouragement and inspiration. They see a student interested in them, engaging with them, making connections for them with the world of higher education. It is also an excellent opportunity to explore teaching and learning." **EMILY MANNING** (2ND YEAR BIOMEDICAL ENGINEERING)

"I benefited from the Pimlico Connection scheme as a tutee when I was at school and now I feel that I am giving back to the programme as a mentor. As a tutee, I learnt a lot about university life as well as developing useful skills in physics which helped me to think 'outside the box'." **JAD MARROUCHE** (1ST YEAR PHYSICS)

"Pimlico has greatly improved my level of confidence and by working with children and teenagers I have been able to take on many responsibilities and make decisions in ways that I have never done before. This is also helpful because these are qualities needed for a medical career." **SHILPA MISTRY** (1ST YEAR MEDICINE)

"The greatest benefit of participating in the Pimlico Connection is helping underprivileged pupils with their mathematical skills." **SONI PONE** (2ND YEAR MATHEMATICS)

"I love volunteering for Pimlico Connection because I'm able to use my knowledge to help pupils understand problems and build the learning foundation which they use for the rest of their lives. I always hope my presence in the classroom may inspire the students to aim high and achieve their full potential." **DANIELLE SCAGELL** (1ST YEAR MATHEMATICS)

"The Pimlico Connection equips and reinforces mentors with some very valuable skills such as leadership, communication, teamwork and confidence." **MOIN UDDIN** (2ND YEAR MATHEMATICS)

The aims of the Pimlico Connections are:

- **to create better links with other sectors of education and educational organisations**
- **for Imperial volunteers to act as role models to school pupils inspiring them to reach their potential and obtain a better education**
- **for the volunteers to share specialist knowledge with teachers and pupils in order to promote learning**

a tall tale

JAN CHLEBIK

BY **JOHN HONE**

THE QUEEN'S TOWER STANDS ON THE SOUTH KENSINGTON campus of Imperial College in splendid isolation. It was not always thus.

Sixty years ago it formed the central feature of the Imperial Institute Museum which stretched alongside the north side of Imperial College Road (then called Imperial Institute Road). The Museum housed a selection of artefacts from the British Empire, then in its final days.

Access to the Tower was via a small, unmarked, insignificant door on the first floor of the Museum. Needless to say it was always locked except on one occasion when a passing student noted it ajar. Such an opportunity was not to be missed and the student, unobserved, entered the Tower and climbed the staircase to the first level which forms the base of the dome. After examining the bells, he noticed a flight of wooden stairs leading to the top of the dome. Ascending these he arrived at a door to the small gallery with a parapet surrounding the base of the cupola perched on top of the dome.

The gallery was quite narrow and its parapet prevented the door from opening very far. Pushing it open as far as possible our student passed through onto the gallery and was rewarded with a panoramic view of London as it was just after WWII. To the west he could see the Lotts Road Power Station in Chelsea and Battersea to the south, both going full blast with the Surrey hills in the background. Eastwards Big Ben and St Paul's dominated the skyline with the Monument beyond. In the north he looked on the Royal Albert Hall and Hyde Park with Hampstead in the distance. There were no other high-rise structures at the time so he enjoyed a unique view from this vantage point.

Having made a circuit of the cupola the student arrived back to face the outer side of the open door with its far edge up against the parapet. To get past he pushed the door closed. He discovered to his horror that there was no handle on the outside. The door was shut and there was no way of opening it. Our student was trapped.

His predicament was too horrible to contemplate. No one knew his whereabouts. The museum staff would lock the access door below and had no reason to suppose that anyone was marooned above. Presumably, in time, he would be missed and a search initiated, but would anyone think of looking for him hundreds of feet above the South Kensington streets? It could be weeks before anyone else came up there. He looked over the parapet and briefly considered sliding down the roof of the dome and perhaps gaining access to the lower level. He abandoned that perilous idea fairly soon for obvious reasons. He could shout for help but, at that time, Imperial College Road was a through route and it was doubtful that his cries would be heard above the noise of the traffic. Possibly late at night someone might hear him but the poor student could hardly bear to think of the humiliation. He would never live it down. Moreover, College authorities were bound to take a pretty severe view of his escapade. Perhaps sliding down the dome was not such a bad idea after all!

The end of the story is quite tame. He did not know whether or not the door had a latch. If so, it was frighteningly close to being engaged. Fortunately the door did not hang exactly true and, at its lower edge, a bare millimetre or two projected proud of the opening. A tremulous fingernail engaged this slim chance of escape and, with infinite care to ensure that any latch did not engage, the door was gently eased open. A shaken and very relieved student descended the stairs and returned to his studies.

Some weeks later the same student again noticed the Tower's open door and repeated his climb to the top. This time he jammed the door open, using one of the duck boards lining the floor of the gallery. He also scratched his initials and 'RCS 1947' onto the cupola, using his penknife. I wonder if they are still there.

Occasionally the College organises trips to the top of the Tower. I've never really been tempted to join any such trip to find out if the marks remain. And besides, I've been there. Twice.

welcome to the Imperial College Association pages

The Imperial College Association is a wide-ranging and global organisation that brings together both affiliated and non-affiliated activities of alumni and supporters of Imperial College.

On the following pages we are pleased to bring you news from some of the local and international chapters and groups, as well as from some of our individual alumni, who have, as usual, achieved great and unusual things. Read on to find out more about the alumnus who's just composed his first Mass, the forthcoming Imperial College Foundation event in Houston and much more...

Agricola Club

After the success of last year's Agricola Club Dinner held on the Wye campus in September, hopes are high that this year's – to be held on Saturday 18 September – will be equally well supported. This year, the 1961-64 year group is being 'whipped in' by John Roberts (01245 420476); John Goldsack (01395 266543) is gathering the 1954 leavers together; and John Walters (01233 812823) is encouraging the 1964 entrants to come down. It could be a full house again if all goes to plan.

Before the dinner, the AGM of the Club will be held in the Old Lecture Theatre. One major agenda item will be the election of a replacement for our long-serving President John Hoskings. His long association with Wye and the county has served the Club extremely well, particularly during the merger with Imperial. He will be a hard act to follow. Lead presidential candidate is another loyal servant to the Club, Tim Calcutt, who has held most of the executive roles on the Committee in the past and is the immediate past chairman. The Club is also looking for a new treasurer to replace 'Buster' Humphreys who feels that he has done the job (admirably) for long enough.

This year's journal, *Wye*, should have landed on members' doormats in late June. The editor apologises for the delay, mostly due to circumstances beyond his control but closely related to the address list. We have moved over to the Imperial database, but there are still some transitional glitches. Members who have access to a computer can update their own details on the alumni website (www.imperial.ac.uk/alumni/form). Please take advantage of this facility so we can be sure we have your most accurate information.

A new initiative for Agricola is an effort by the Committee to establish a 'bio-database' for members and this will be launched in the Journal. The idea is to build up an electronic reference point for networking between Agricola Club members in job-related and other fields as well as delivering information to the Department about desirable course content and orientation. To start this process, there is a questionnaire at the end of the Journal for mailing back to the Club Secretary. We look forward to your feedback.

JOHN WALTERS
EDITOR, AGRICOLA CLUB JOURNAL

Business School Alumni Network

March saw Tanaka Business School relocate to its new state-of-the-art facilities in Exhibition Road. A series of special events was organised to mark the occasion, culminating in the official opening of the new building by Her Majesty The Queen on 24 June 2004 (see pages 10-12 for the full story).

The launch series also included a number of speaker events by industry leaders. In March, Professor David Miles presented his final report on the UK mortgage market, which had been commissioned by the Chancellor of the Exchequer, Gordon Brown. The lecture was chaired by Evan Davis, the BBC's Economics Editor, and was followed by a champagne reception. In May, Sir Roger Bannister, chaired a debate over whether London should host the 2012 Olympic Games. Sports economist and Director of the full-time MBA Programme, Stefan Szymanski, and PY Gerbeau, Chief Executive, X-Leisure and former professional ice hockey player, squared up on opposing sides (Gerbeau – pro; Szymanski – con) in front of an audience that included sporting heroes, past and present.

In January, Tanaka Business School also launched a new Executive Education Programme. Capitalising on the expertise and experience of the School's renowned faculty and corporate affiliates, the Programme offers both open and specially commissioned courses. Each course is designed to benefit either individual business professionals seeking to expand their skill sets or organisations with specific training needs they are unable to meet in house.

The topic for the first Executive Education lecture series was intellectual property law. Run in conjunction with the Intellectual Property Institute, the lectures were specifically designed to address major aspects of intellectual property in the context of today's modern business environment. In May, a second eight-part series started entitled 'The Ecomonics and Finance of Pensions in the UK'. This course, led by Dr David McCarthy and Professor David Miles, was designed to illustrate the economic and financial forces driving change in the UK pensions market.

Following the success of the Bosnia and Herzegovina Health Management Project sponsored by the World Bank, Tomo Lucic, Health Minister for the Federation of Bosnia and Herzegovina, visited the

Business School in April. The two-year project was led by Dr Rifat Atun, Director of the Masters Programmes in Health Management. In collaboration with Heidelberg University, the team established short executive training courses for senior managers and directors in the Federation of Bosnia and Herzegovina, as well as a Diploma and a Masters programme in health management. They also helped create two Centres for Health Management, one in Laktasi in the Republic of Serbia and the other in Sarajevo in Bosnia and Herzegovina.

This year, the Business School welcomes three new faculty members:

Annabelle Gawer; Lecturer, Strategy and Innovation
Robert MacCulloch; Professor, Public Economics
William Perraudin; Professor, Finance and Risk Management
Jaideep Prabhu; Professor, Marketing

PAULO GOMES
BUSINESS SCHOOL ALUMNI NETWORK MANAGER

Charing Cross and Westminster Medical School Alumnus Society

Dr Malcolm Phillips, who has been Chairman of the Society's Committee for the past four years, recently informed the Committee that he wished to give up when he retires from the NHS in autumn 2004. The Committee are very pleased to announce that Dr Angus Kennedy (Charing Cross 1979), Consultant Neurologist at Charing Cross Hospital, has agreed to take over from Dr Phillips later this year. Additionally, the Committee would like to express their very warm appreciation to Dr Phillips for his leadership of the Society and offer their best wishes for his retirement.

The Committee has reviewed the support for prizes from the Alumnus Fund since the final cohort of CXWMS entrants graduated from the Faculty. They have offered the Faculty funding for an annual CXWMS Alumnus Society Prize in Primary Care Medicine worth £500, to be awarded on the results of the Final MBBS. They were conscious that this field of medicine was not currently recognised in the Finals prizes and felt that this was an excellent use of the Appeal funds. They have also given a small grant towards the production of a Yearbook for this session's graduating class.

A development which the Committee has strongly supported is the formation of an 'ICSM Alumni' group for those who have graduated since the merger with Imperial College in 1997. The Society looks forward to seeing this new alumnus organisation flourish and to co-operating closely in the future.

The contact point for alumni from all three former Medical Schools (Charing Cross Hospital MS, Westminster MS and the Charing Cross and Westminster MS) is Urmila Weller in the Office of Alumni and Development: +44(0)20 7594 6129; u.weller@imperial.ac.uk

PETER GRIFFITHS
HON SECRETARY

City & Guilds College Association

Ringing the changes at CGCA

Since our last update for *Imperial Matters*, the Association's committees have been busy recovering from the death of Peter Justesen (Hon Sec and Hon Treas) and the departure of Adrian Winchester to a new career. The new Faculty of Engineering Chapter is up and running and our new Chapter Manager, Dr Teresa Sergot, has quickly become our mainstay of support. Our new Hon Secretary, Bill McAuley, and Hon Treasurer, Peter Chase, are also in full swing, and it is a measure of the work of Peter Justesen that the Association's accounts are in good health.

Our London event programme has been popular, including a lively Christmas Lunch with a provocative talk by Professor Rod Smith on what should be done with 'Britain's railways'. We have also had talks by Professor Ian Poll on 'Uninhabited aerial vehicles', Professor Kel Fidler (at the Annual Dinner in March) on 'Difficulties in communicating', and Dr Julia King (at our AGM in May) on 'Recruiting and retaining more women in science and engineering'. On a more active note, David Hattersley has continued his 'Walks with a Past President', in and around London, showing us how little we know about the city and its environs.

The Annual Dinner was at Haberdashers' Hall, a beautiful example of a Livery Company Hall built for the 21st century, which gave a large number of students, alumni and their guests the opportunity to dine in style. At the AGM, Sir Colin Terry, who had been our President since Peter Hills' death in late 2002, handed over the reins to Barry Brooks, supported by Vice-President Professor Ian Poll. We are very grateful to Sir Colin for the energy and leadership he has invested in the Association through the changes of the last two years. In his acceptance speech, Barry posed a number of questions of members, seeking their views on what we should concentrate on doing next. He suggested that doubling of our membership should not be a hard target at which to aim, but to achieve it, we would need to improve the benefits and services that will attract more students and alumni to join. The Committee has already embarked on this, with a recruitment working party, led by younger members, looking at what each segment of the 'market' wants, informing the development of new activities to build on CGCA's successful range of popular events.

The Winter issue of *IC Engineer* was a bumper edition, reflecting the hard work of Colleen Richardson and Adrian Winchester. As part of our partnering approach within the Chapter, the next edition will be named *Imperial Engineer*, a joint publication with RSMA and due in September. And 'jointness' reflects part of CGCA's new modus operandi, providing more help to students and alumni via networking and social events in conjunction with the Chapter's partners, Faculty of Engineering, RSMA and C&GCU. The new Chapter, launched formally by the Rector on 9 June, looks at further joint activities, starting with the Autumn Networking Reception for Graduating Students – a good opportunity for alumni to offer the benefit of their experience as students grapple with the unknowns of a world beyond the Faculty.

Finally, the Old Centralians' Trust continues its good work in direct support of students in financial need, and those requesting sponsorship for character building activities (such as subsidising sports teams, and engineering projects in the developing world). More could be done with more resources, so please think about how you could help us.

BARRY BROOKS
PRESIDENT

Friends of Imperial College

Friends held a Christmas Party in the Rector's residence for some 50 guests who sang carols with much help from one of the College's student choirs.

In March we were guests of the Dean, Professor Mervyn Maze, and had the chance to go behind the scenes at Chelsea and Westminster Hospital – London's newest teaching hospital. Friends, alumni and guests had the opportunity to discover the diverse range of research projects currently taking place and meet some of the scientists working there.

We heard from Dr Ann Bishop who works closely with Professor Dame Julia Polak on regenerative medicine and tissue engineering. Professor Frances Gotch introduced her work on the treatment and prevention of diseases of the immune system, such as HIV, and showed us the laboratory where blood samples are analysed. In addition, Professor Richard Grove gave us an insight into his

investigations into inflammation of the skin and wound healing.

We also visited a teaching facility where an alarmingly lifelike and youthful dummy lay breathing, awaiting medical attention (see picture above). Teachers simulate many conditions of breathing and pulse for trainee medics to treat.

Future events include a talk from Professor Jeff Waage, Head of the Department of Agricultural Science, in October, about agricultural development and crop diversity. In November alumnus Simon Singh, broadcaster and author of bestsellers such as *Fermat's Last Theorem*, and *The Code Book* will talk about his new book *The Cosmos*.

In the spring we will be organising a Behind the Scenes event in the Department of Mechanical Engineering as guests of Professor Rod Smith, and Professor Sir Ravinder Maini will be talking about his life's work to find a cure for rheumatoid arthritis. Fellow of the Academy of Medical Sciences, Crafoord Prize winner in 2000 and Lasker prize winner in 2003, he has a fascinating story to tell about the way important scientific ideas into the causes of arthritis led, eventually, to licensed drugs now available on prescription.

ROD RHYS JONES
CHAIRMAN

Royal College of Science Association

As an antidote to the formal business at the AGM in March we were transported, in spirit at least, to colder climes by David Ward and Adam Rumley, two members of the 2003 Greenland Expedition supported by the Royal College of Science Association Trust. The Trust is supporting a follow-on expedition in 2004 and we wish Adam, David and the other team members every success.

The speaker at the Annual Dinner, held in the Union Dining Hall in May (see picture below), was former ICU President Piers Corbyn. Piers is still remembered around College as a somewhat idiosyncratic President but is known more widely these days as the originator of the solar weather technique. Piers' company, Weather Action, produces long-range forecasts which take account of solar based particle and magnetic activity. In an after-dinner speech with a difference we were treated not only to reminiscences of College, but a lively debate on the origins of global warming. The discussions will continue as we have been invited to visit Weather Action later in the summer.

The Committee feels that now is a good time to explore with members what you would like from the Association, indeed whether the Association should continue to exist in its current form. You will be receiving a questionnaire shortly and we hope you will find the time to tell us what you want.

If you would like to join the Association or support the Royal College of Science Association Trust please contact us on rcsa@imperial.ac.uk; +44(0)20 7594 6129 or visit our website at www.rcsa.org.uk.

DAVID LEGG
HON SECRETARY

Royal School of Mines Association

As one of the two component parts of the Engineering Faculty Chapter, the RSMA has established a practical and secure position within the new College structure. The Chapter's goals mirror many of the Association's, particularly the welfare of students and the provision of an effective alumni structure and events.

The 18th edition of RSMA's newsletter, *Update*, was published in March and is available on the Imperial alumni website. This will be the last issue in the present format, following agreement with CGCA to produce a joint journal. We plan to include some technical articles and, in the longer term, we hope to attract industry support for what will be a quality journal reminiscent of the former *RSM Journal*.

The Association's Annual General Meeting, followed by the dinner for Final Year students was held on 17 June. It is once again pleasing to be able to report that all students attending the dinner had their tickets paid for by members. At the AGM, Giles Baynham's term as President was extended to a second year and Roger Clegg became a Vice-President. Paul Holmes, who was RSMU President in '92-93, took over as Hon Secretary from John Bramley.

The Association has continued, both directly and through the RSMA Trust, to support students and student activities in the RSM departments of Earth Science Engineering (ESE) and of Materials. RSM sports and social clubs have a critical funding shortfall and we are working with them so that traditional events can continue. One such event, the Bottle Match, was won for the eighth successive time in February this year.

RSMA will be providing two bursaries for this summer's Undergraduate Research Opportunities Programme, one in ESE and one in Materials. There were 11 entries for the RSMA Essay Competition (for a silver medal and premium of £200) which was won by a fourth year petroleum engineering student. The Trust continues to make loans and grants to alleviate student hardship, and would like to attract funds to do more in this field.

JOHN BRAMLEY

focus on US

Houston – we have liftoff

The Imperial College Foundation is going to Houston for its AGM this year, and will be running an event open to all alumni beforehand. With speakers from Imperial and the University of Texas and plenty of leisure activities planned, the event will be an opportunity for alumni to catch up with what's happening at Imperial and with each other.

The weekend is taking place at the Marriott Hotel Intercontinental, Houston, on Saturday 16 October 2004. Guests will be treated to a series of lectures throughout the morning, followed by an afternoon of planned leisure activities, including hiking, golf and tennis. A reception and dinner will bring proceedings to a close.

The guest speaker for the event is Dr John Mendelsohn MD, President of the University of Texas MD Anderson Cancer Center, one of the US's leading institutions for cancer patient care, research, education and prevention, and a pioneer of multidisciplinary techniques. President of the Center since 1996, Dr Mendelsohn is a globally respected figure in the field of cancer medicine and research.

Joining Dr Mendelsohn from Imperial's Faculty of Medicine are Professor Sirs Leszek Borysiewicz and Ara Darzi. Professor Borysiewicz, whose interests include viral immunology, infectious diseases and vaccine development, is currently Faculty Principal, but will become the Deputy Rector of the College at the end of September. Professor Darzi is a world renowned surgeon, specialising in the area of minimally invasive techniques in surgery and robotics. He and his team were awarded the Queen's Anniversary Prize in 2002 for their pioneering work in this area.

Also attending will be Dr Tidu Maini, Pro Rector, and Fiona Kirk, Director of Development, who will update guests on the College and its plans for the future.

Book your place now by visiting the alumni website and downloading a booking form:
www.imperial.ac.uk/alumni/events/foundation

Still going strong after 30 years

As the Imperial College Exiles North America East approach their 30th reunion, the roots of this annual gathering in the Adirondack Mountains can be traced back to the Exiles' first meeting in a hostelry at Niagara Falls in 1974. Studying the map and deeming that the 440 miles to the Falls was too far to travel for an evening out, the late Alan Kitchener (Physics 1953, PhD Chemical Engineering 1957) determined that the Adirondacks were equidistant for alumni in Toronto, New York and Boston, as well as a pleasant location for a weekend reunion. Never missing a year since, the Exiles will be celebrating their 30th reunion in September 2004.

The event will be held from 24-27 September 2004, at the traditional location of Great Camp Sagamore in the Adirondack mountains, New York State. Organised this year by new 'stuckees' Mike McCann (Electrical Engineering 1963) and Sandy Eames (Electrical Engineering 1970), the reunion will start with a dinner cruise on the WW Durant. Activities will continue throughout the weekend, concluding on Monday. Visit the Exiles' website for further details: **www.mccannscience.com/icenae.htm**.

Let's go to San Francisco

Rector, Sir Richard Sykes, took time out of his recent trip to Bio2004, held this year in San Francisco, to meet up with alumni from the Imperial College Northern California Alumni Association.

Sir Richard was treated to a private tour of the Computer History Museum, which chronicles the story of the information age and the history of the computing revolution and its worldwide impact. The museum trip was followed by dinner at restaurant *Il Fornaio* in Palo Alto, where alumni talked to the Rector about the College and its alumni relations programme, and more generally about the current state of higher education in the UK.

The Bay Area group has been in existence for around 15 years and their activities range from hikes, company visits, lectures, barbeques, and even Christmas dinners. Their mission is to provide a social and cultural environment for Imperial alumni and they also enjoy entertaining College members and friends who pass through the Bay Area.

Regular gatherings

Toronto
The **Imperial College Exiles North America East** hold an informal pub lunch on the last Friday of every month in Toronto. This takes place at the Jason George Pub, 100 Front St East (east of the St Lawrence Market), starting at noon. For further information contact Harry Burgess (Mechanical Engineering 1966, Mining Engineering 1968) on + 416 362 5135. All alumni and friends are welcome.

Vancouver
The **British Columbia Alumni Association** still meet for lunch at noon on every third Friday of the month at the Bull and Bear Bar in downtown Vancouver (Days Inn, 921 West Pender Street), Vancouver. The group meet in the south-east corner of the bar – any newcomers should ask the maitre d'. All alumni from any constituent part of Imperial College are welcome. Contact John Austin (Mining Engineering 1953) at fbutterfield@shaw.ca for further information.

focus on alumni

A very distinguished professor

Professor Jay Gunasekera (MSc Mechanical Engineering 1969, PhD 1972) was named as one of Ohio University's newest Distinguished Professors on 27 September during the 26th annual Honors Convocation at the university.

The Distinguished Professor Award is Ohio University's highest honour for a faculty member, recognising scholarly accomplishment, professional reputation and contributions to the university. The award is a lifetime designation, and has the associated privilege of naming one student annually to receive a Distinguished Professor Scholarship. Professor Gunasekera was nominated for the Award by Major General Paul Nielsen, Commander of the Air Force Research Laboratory at the Wright-Patterson Air Force Base, who wrote: 'Professor Gunasekera has consistently demonstrated the highest level of integrity, competence, dedication and scholarship. He epitomises the very essence of a distinguished professor.'

Professor Gunasekera (pictured right) holds the Chair of the Department of Mechanical Engineering, Russ College of Engineering and Technology, where he has worked since 1983. His academic career has involved the analysis and development of novel processes for difficult-to-form materials such as titanium aluminide, and has led to close work with the US Air Force Materials Lab and a large number of aerospace engine companies such as General Electric, Pratt & Whitney and General Motors Allison Gas Turbine. Amongst his academic achievements has been the pioneering computer modelling of the pack rolling process, which involves the rolling of titanium aluminide sandwiched between two cover materials.

Of the Award, Professor Gunsekera said: "This is a great honour and privilege for me. I appreciate the recognition and thank all those who wrote supporting letters for the nomination, and the Distinguished Professor committee for selecting me for this year's distinction."

First performance of Mass

When he graduated from Imperial, David Arditti (PhD Materials 1993) made what some may consider an unusual career choice for a graduate of science. Having been heavily involved in musical activities whilst at College, David turned his love of music into his chosen profession, and for over 10 years, he has worked as a teacher, pianist and composer.

In fact David's first major choral work, *Requiem (Op 5),* was first performed while he was studying at Imperial in 1992 by the Exmoor Singers, a choir made up of mainly Imperial graduates, at Holy Trinity Church in Prince Consort Road. Since then David has gone on to compose many songs, choral works and instrumental pieces, which have been performed all over the world. His work has been subject to many favourable reviews, including the label of a 'latter-day contemporary of the rich crop of English composers flourishing in the 1880s – Sullivan, Smyth, Somervell...' *Music and Vision Daily* internet magazine.

This has been a busy year for David so far. In June the Camden Chamber Choir performed two of David's *Four Poems by Sir Philip Sidney (Op 26)*, an unaccompanied choral piece, at a concert in Primrose Hill, London, as part of an evening which celebrated English music and musicians, alongside pieces by Britten and Purcell.

In addition, on 15 May, his second large choral work, *Mass in C (Op 12),* an arrangement for choir, soloists and full orchestra, was performed in its entirety for the first time, in Edinburgh. Despite a performance of part of the work at a concert in 1996, again at Holy Trinity Church in South Kensington, the complete orchestration of the Mass remained unfinished until recently. Following an offer from Edinburgh University Music Society to perform the whole work with large forces, David completely orchestrated and revised the Mass so that it was suitable for a full symphony orchestra.

For further information about David's music visit **www.david.arditti.co.uk**.

A breeding ground for innovation

Home to the largest IBM Software Development Lab in the UK, Hursley Park, near Winchester, is also the place where several Imperial graduates go to work each day. The IBM software developed here is crucial to the companies around the world who depend on it for a vast quantity of electronic transactions and messaging.

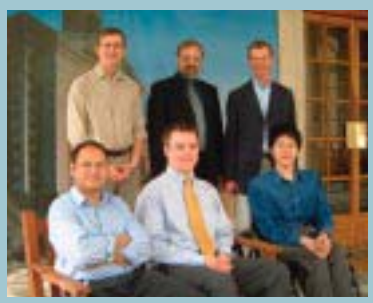
A world leader in e-business, IBM has provided employees at Hursley Park with an environment to fuel innovation. Situated in a beautiful 100-acre site, it is relaxed which promotes a vibrant and informal culture. Employees can always find an interesting talk or seminar to attend, a group to join, and there is a variety of schemes

Working life at Hursley

Some Imperial alumni share their experiences of life at Hursley Park:

"I went straight from my Masters at Imperial to IBM Hursley. I was attracted by the huge site set in 100 acres of parkland, in addition to IBM's reputation as a premier software and development laboratory. I spend my time on many interesting technical projects, leading testing on various technologies including speech recognition and telecommunications." **PETER JOHNSON** (MSc Computing 1989)

"I joined the customer technical support team after graduating, to work on a mainframe-based transaction processing product. Since then, I have continued to work in support but across a variety of products on a range of platforms, and I find it an extremely rewarding role. My day to day job involves diagnosing and fixing software problems that impact on companies across the globe. I have been a team leader, but recently moved to a role in service architecture, to work on improving our service across a whole family of messaging products." **JASON EDMEADES** (Computing 1993)



"Over the last 30 years with IBM I have held various technical and management positions involved with the development of IBM hardware and software products and have worked in the USA and the far East. During the past few years, I have managed IBM Hursley's interactions with UK universities and have been responsible for developing a close relationship between IBM and the Department of Computing at Imperial, particularly through the industrial placement scheme." **BRIAN HOLLOWAY** (Electrical Engineering 1969)

"I joined IBM as a software engineer 30 years ago and since then I have worked as a programmer, designer, architect and manager on various software and hardware development projects. Apart from a two year stint in New York, I have stayed at Hursley for all of that time, taking advantage of IBM's reach to keep working on very interesting and challenging projects." **DR GRAHAM TUTTLE** (Physics 1971, PhD 1974)

"During my studies at Imperial I developed my experience with a six-month placement with IBM at Hursley, where I worked on a customer Proof of Concept project. This gave me excellent insight into project management and corporate infrastructure and enticed me to return as an employee. The training and exposure at IBM is fantastic, and I am very happy with my career progression. My core tasks have been testing and developing as part of the WebSphere MQ department. In addition, I've been involved in organising a corporate conference and several lead career workshops at secondary schools. I maintain my connection with Imperial College principally by mentoring on career issues and via the Entrepreneurship Challenge event."
ALEXIS BILLER (Computing 2002)

"I joined IBM Hursley after graduating in 2002 and I currently work as a software developer on IBM's WebSphere MQ line of products, which provide business messaging facilities. Hursley is a very pleasant place to work, and I'd recommend it to anyone wanting to work with cutting-edge software technology."
ANDREW FERRIER (Computing 2002)

"I joined IBM in 1993, starting out as a software programmer on the WebSphere MQ product. I then joined Voice Systems as a software developer, a department renowned for its innovation. I have produced two patents during my time in the department and have progressed to team leader. I find my job extremely rewarding and the work environment is fantastic. The sporting facilities here are also outstanding and I enjoy playing table tennis for IBM in the Winchester league as well as tennis and cricket, which has enabled me to meet people from other departments."
SANJAY NAGCHOWDHURY (Computing 1993)

"I joined IBM Hursley in September 2002 having done a six-month internship here whilst at Imperial. With over 3,000 brilliant minds, seven distinct product groups and 13 Master Inventors, my choice in joining IBM was definitely the right one. I have worked on several job roles across the Java Technology Centre and been involved with additional projects outside my job, including Young Visions, The Eclipse programme, and Insight to Industry."
LAKSHMI SHANKAR (Computing 2002)

"I joined IBM Hursley in 2001, after hearing from fellow Computing students who had spent their industrial placements here about the working environment and the range of projects that are based here. I am currently a software developer for IBM's Java Technology Centre."
RICHARD LAU (Computing 2001)

"Since leaving Imperial, I have worked for IBM in the UK, France and the US, originally as a programmer, developing graphics software for mainframes and PCs. More recently I have worked in IBM's telecom industry as a telecoms architect and I currently hold 21 patents in this area. I was appointed an IBM Senior Technical Staff Member in 1999 and was elected President of the Parlay Group, a consortium of 74 companies in the telecom industry, in 2002."
ZYGMUNT LOZINSKI (COMPUTING 1984)

to encourage career and technical development.

Approximately 1,600 professionals work in the Software Development Lab at Hursley and of these, at least 20 are graduates of Imperial. Hursley has its own University Relations Manager in the shape of Brian Holloway (Electrical Engineering, 1969). Thanks to his efforts, 35 students from Imperial's Department of Computing have enjoyed six-month work placements at Hursley over the past four years.

Additionally, Hursley Distinguished Engineer, Robert Berry, acts as the Partnership Executive for Imperial College developing and fostering a strong relationship between IBM and the College.

"With my IBM team, we have already started work on a number of key areas, such as recruiting, joint research, reach (raising awareness of IBM technology) and sales. We ensure that we put Imperial students in good placements with challenging and interesting work. As a result, out of the 11 placements in 2002, six came back to IBM as employees, which is fantastic, both for them and for us."

Other initiatives, including sponsorship, PhD internships and reciprocal lecture programmes, mean that Hursley Park's relationship with Imperial is set to continue and grow.

Bringing a region to life

The Chittagong Hill Tracts in south eastern Bangladesh are a rarely visited part of the world, relatively untouched by global cultures. In this beautiful but little known region the indigenous people are trying to maintain their unique culture and beliefs in the face of encroaching settlement from the surrounding plains.

Ina Hume (Zoology 1994, MSc Environmental Technology 1997) carried out her MSc thesis in this region, and continued to work there as a development worker. As the daughter of one of the last British Deputy Commissioner's and a princess of the Chakma royal family (the largest of the indigenous groups), she was given rare access to the festivals and ceremonies of the indigenous people, enabling her to record the Chakma Raj celebrations, where a young prince was installed as the heir apparent as a part of the anniversary of his father's 25 year reign.

Ina used a mix of film, photography, sound and textiles to reflect the cultural wealth of the region, and the excitement experienced by the group as the Coronation approached. A temporary exhibition, *Vanishing Rites*, of her recordings was shown between January and July at the British Empire and Commonwealth Museum in Bristol, which chronicles the 500-year history of the British Empire and its legacy on the world today. Ina also used a number of her father's black and white photographs to illustrate changes over the past 50 years. At the end of its run in Bristol, Ina hopes that the exhibition may go on to tour further locations in the UK.

Recently, Ina has also taken installations of her films and photographs further afield, including the UN's Permanent Forum on Indigenous Issues, which took place in New York in May. The Forum, established in 2002 in response to the UN's growing concern for indigenous issues, was this year opened by Kofi Annan and was attended by indigenous people from around the world who gathered to discuss the themes of human rights, culture, education, the environment, health and economic and social development.

Ina will also be returning to the Chittagong Hill Tracts in the winter as part of a project which will train indigenous NGO workers in filmmaking, editing and the Internet to enable the community to communicate with the outside world. Her particular interest in the project lies in 'how the role of women, children and young people in community based peace building initiatives can be strengthened and disseminated to other communities suffering from conflict'.

For further information about Ina's work, please contact her at vanishingrites@hotmail.com.

Hall of Fame honour for Mines man

Michael Knuckey (Mining Geology 1957) has been inducted into the Canadian Mining Hall of Fame. The induction recognises Michael's leadership role in the discovery and development of mineral deposits, of which two have been deemed world class and eight have since become working mines. In particular, Collahuasi in Chile was a discovery of colossal proportions. Other discoveries which have also become mines include Corbet, Ansil, Winston Lake, Samatosum, Thayer Lindsley, Raglan's new zones and Ujina.

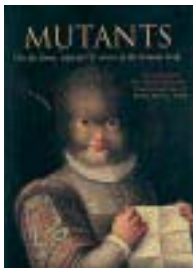
The Hall of Fame tribute also acknowledges Michael's part in championing, through support and financial backing, the development of new exploration techniques now standard to the mining industry. Lithogeochemistry and borehole geophysics EM studies produced the Ansil and Winston Lake discoveries. Similarly, MegaTM airborne and 3D seismic surveys helped to locate the Perseverence mine in Quebec and Half Mile Deep in New Brunswick. Michael continues his interest in new technology through his involvement with the Canadian Mining Industry Research Organisation, which he has chaired for many years.

Other factors that the Hall of Fame felt worthy of note are Michael's involvement in the Raglan project in northern Quebec, which produced an agreement with local Aboriginal people to provide employment opportunities at the mine and new business opportunities for northern Canadians, and which has since been taken as a standard business model.

Michael Knuckey emigrated to Canada in 1957, after completing a degree in Mining Geology at Imperial. By 1986, following further study and appointments, Michael was Vice President Exploration at Falconbridge Limited. When Falconbridge and Noranda integrated some of their business operations in 1995, Michael was appointed President and CEO of Noranda Mining and Exploration, becoming Executive Vice President, Exploration and Project Development two years later.

Whilst at Noranda, a notable success has been Michael's involvement of the company in the Antamina mine in Peru. Noranda's initial unsuccessful bid did not deter him and as a result of his insistence, and occasionally outspoken interventions, Antamina has adopted policies that made it an award-winning leader in Peru, particularly with regard to social responsibility.

books



Mutants

Armand Marie Leroi
HarperCollins

In May 2004, Reader in evolutionary developmental biology, Dr Armand Marie Leroi, made the Aventis Prize for Science Books final shortlist with his book *Mutants*. The Prize, which is awarded annually to celebrate popular science writing, was eventually won by Bill Bryson for his book, *A Short History of Nearly Everything,* but not before Dr Leroi had managed to impress judge Terry Pratchett who commented that: "The thing that really fascinated me was about the early days in the development of the embryo when it's not much more than a handful of cells. The whole thing seemed to unfold in my mind like a movie."

Mutants is a book of stories which serve as a narrative account of our genetic makeup. Using a mixture of myth and molecular biology, Mutants, seeks to answer questions such as why do some of us have heads of red hair—and others no hair at all? Why do most of us stop growing in our teens—while others just keep going? And the answer, as Dr Leroi explains, lies with the human genome.

St Mary's: The History of a London Teaching Hospital

Professor Elsbeth Heaman
McGill-Queen's University Press

With a foreword by Sir Roger Bannister, *St Mary's: The History of a London Teaching Hospital* tells the story of the development of London medicine in the Paddington area from its humble origins in temporary dispensaries for the itinerant navvies building canals and railways.

The account moves through the early age of scientific endeavour with Almroth Wright (immunology and anti-typhoid vaccine) and Alexander Fleming (penicillin) to a new era of laboratory science, molecular biology, genetics and epidemiology. At the same time, the book moves through the evolution of hospital care from voluntary hospital to the inception of the NHS in 1948, as well as covering the development of medical education and teaching at St Mary's.

A Particle of Clay

Judith Niechcial
Whittles Publishing

Professor Sir Alec Skempton (Civil Engineering 1935, MSc 1936) was a truly influential figure in soil mechanics, forming the first university department at Imperial College. Written from a unique perspective by his daughter, Judith, this book illustrates the late Professor's immense contribution to engineering, set in the context of his family life and background.

Buzz: The Intimate Bond Between Humans And Insects

Josie Glausiusz (Biology 1986)
Chronicle Books

Buzz explores the fascinating interactions between insects and the man-made world, featuring impressively larger-than-life electron microscope photographs that take us deep into the world of the insects who live among us.

Code Reading: The Open Source Perspective

Dr Diomidis Spinellis (Computing 1990, PhD 1994)
Addison Wesley

Code Reading provides a background knowledge and specific techniques for reading code written by others, an essential skill for today's software engineer.

East of Varley Head

James Platt (Mining Geology 1960)
Creighton Books

An autobiographical book of the way of life and people in James' home village of Port Isaac in North Cornwall during the years immediately after the end of the Second World War.

Stag

Tim Relf (Agricultural Business Management 1990)
Piatkus Books

A novel about a group of old university friends who get together for a stag weekend 10 years after they were students together.

Telecommunications Regulation

John Buckley (MSc Computing 1973)
The Institution of Electrical Engineers

An in-depth guide to the subject of telecommunications regulation, which examines the work of the regulator and examines the impact of the next generation of products and services.

The Probability of God: A Simple Calculation That Proves The Ultimate Truth

Dr Stephen D Unwin (Physics 1977)
Three Rivers Press

Dr Unwin uses the 200-year old Bayes' Theorem, weighing in factors such as evil and suffering, the occurrence of miracles and innate goodness to calculate the probability of the existence of God.

Triad: The Physicist, The Analysts, The Kabbalists

Dr Tom Keve (PhD Chemistry 1968)
Rosenberger and Krausz

A historical novel written in the style of an autobiography of Hungarian psychoanalyst, Sandor Ferenczi, which examines the development of atomic physics and quantum theory in relation to psychoanalysis from their early days at the start of the 20th century to the outbreak of the Second World War.

What Happened To Our Wood

Professor Julian Evans, Department of Environmental Science and Technology
Patula Books)

An account of a small family woodland, illustrated with pen and ink sketches, and a foreword by Alan Titchmarsh.

obituaries

MR HUGH DAVID ANDERSON FRIC FIChemE (DIC Chemical Engineering 1939)

Hugh Anderson was awarded a Salters' fellowship during his year at Imperial. He was Master of the Salters Company (1974-1975) and President of the Institute of Chemical Engineers (1976-1977).
Provided by Margaret Anderson

MR ERIC LUPTON (BILL) BAILEY ACGI (Civil Engineering 1944)

On graduating from Imperial Bill Bailey pursued a diverse career in civil engineering. Whilst serving as an officer cadet in the Royal Engineering Corps, he participated in post-war reconstruction works, after which he went on to work in town planning, flood control, and highways and bridges.

Bill was a Fellow of the Institution of Civil Engineering, the Institutes of Water Engineers, Municipal Engineers and Highways and Transportation. In his spare time he enjoyed golf, snooker and continued to be involved in the community of Tunbridge Wells. He is dearly missed by his two daughters and four grandchildren.
Provided by Rebecca Morris

DENNIS CORKE (Electrical Engineering 1945)

Following his graduation from Imperial College, Dennis Corke began his working life as an apprentice for Metropolitan Vickers. During the 1950s, he won a scholarship to the USA, spending some of this time at MIT. In 1957 he joined P E Consulting Group, eventually becoming their expert in production and inventory control.

Dennis was a Fellow of the Institution of Electrical Engineers, having become a member when the Institution merged with the Institution of Production Engineers. Having left Electrical Engineering in the 1950s and then becoming a Fellow of the Institution without going through its earlier stages appealed to his sense of irony. He is survived by his wife and four children.
Provided by Ian Corke

JOHN ELLIOTT FCGI FICE FWeldI

During his time at Imperial, John Elliot was an accomplished sportsman, involved in athletics, cross-country and rowing. After graduating, he served at the Ministry of Supply during WWII and then started work as a junior engineer at R T James and Partners. Renowned for putting his full energy into everything that he did, John became a partner in the firm in little over 20 years. Amongst the jobs that he worked on during his career was the high altitude test plant for Rolls-Royce aeroengineers.

In addition to his long and accomplished career, John was a long-serving and staunch member of the CGCA, serving as President from 1976-77 and holding various positions on the Executive Committee and the Board of the Old Centralians' Trust. In particular, John worked to forge closer links with the student body and ran, from its inception, the Graduate Year Representative scheme which provided a sound recruitment base for graduating students.
Taken from Imperial College Engineer, with grateful thanks to Chris Lumb (Electrical Engineering 1958)

DR JOHN ALLEN FREEMAN OBE PhD FRES CBiol FIBiol (Biology 1934)

John Freeman graduated from Imperial College with a first class degree. During his time at the College he was President of the Royal College of Science Students' Union. After graduation he held a number of postgraduate appointments in the UK and North America. He was a Ministry of Agriculture Scholar in Entomology from 1934 to 1937 and was awarded his PhD in 1938.

John's professional career was spent almost entirely in the Civil Service initially in the Ministry of Food and later at the Pest Infestation Control Laboratory where he became Director. He was also involved with several professional societies including the Institute of Biology, the Royal Entomological Society of London, the British Ecological Society and the Association of Applied Biologists.

Beyond his professional achievements he was a keen gardener and grew fine roses, as well as the first outdoor vine in Beckenham. He is survived by his wife and two children.
Provided by Simon Freeman

MR WILLIAM ARNOLD (BILL) GARDNER ARSM (Materials 1953)

After attending Wigan Mining Technical College, Bill Gardner attended Imperial from 1950 to 1953. Upon graduation he began his career with Alcan Aluminium Laboratories in Banbury, UK. While working at Alcan he met his 'Swiss girl' Gabrielle, marrying her in 1956. In 1959 he was transferred to Alcan's offices in Australia where he worked until his retirement in 1975.

Bill remained in Sydney, Australia enjoying regular golf. His wife, three sons and one daughter sorely miss their 'perfect English gentleman'.
Provided by Gabrielle Gardner

Bill Gardner (back row, far right) and classmates

DR PETER R GARNER (St Mary's Hospital Medical School 1968)

After graduating from St Mary's Hospital Medical School and Cambridge University, Peter Garner continued his studies at the University of Western Ontario, Canada.

Upon completion of his medical studies Peter remained in Canada becoming a Professor of Medicine, Obstetrics and Gynaecology at the University of Ottawa. He was a respected member of the medical community, noted for his research in the area of gestational diabetes and for helping thousands of women with high-risk pregnancies.

He was recognised internationally for his expertise in the medical care of pregnant women and reproductive endocrinology.

In addition to practising and teaching, he co-founded the Civic Hospital's in vitro fertilisation clinic and was co-editor of *The Medical Care of the Pregnant Patient* by the American College of Physicians.
Excerpts from a piece by Tony Lofaro

DR WILLIAM CECIL GILPIN (Chemistry 1939)

After graduating from Imperial, Bill Gilpin pursued a lifelong career in chemistry with the Steetley Company where he achieved the posts of Research Manager and Technical Director. He was a Fellow of the Royal College of Science, served as Presidents of the British Ceramic Society, the Institute of Ceramics and the Refractories Association of Great Britain.

Bill retired in 1980 and he enjoyed photography and gardening. He is dearly missed by his wife Shirley.
Provided by Shirley Gilpin

DR (HAROLD) BERNARD HENBEST (Chemistry 1944, PhD 1948)

Bernard Henbest completed his PhD at Imperial under Sir Ewart Jones. He later devised with Jones a way to synthesise the steroid cortisone whilst a lecturer at Manchester. In 1958, now established with an international reputation, he took up the chair of organic chemistry at Queen's University Belfast.

Following his retirement in 1973, Bernard concentrated his efforts on the development of a more holistic and exam-free curriculum for education at all levels.

MR ERIC FRANK HUMPHRIES DIC FICE (Civil Engineering 1949)

Before studying at Imperial College, Eric Humphries worked as a railway engineer and as a civil engineering contractor during WWII. He concluded his working life as a partner for G Maunsell and Partners, responsible for the design of major highway projects over the UK.

He served on numerous committees of the Concrete Society, authoring and editing many reports on concrete technology, with a particular specialisation in sprayed concrete.
Provided by Chris Billingham

MR KENNETH WALTER (KEN) HUTCHINSON ACGI (Electrical Engineering 1951)

Following a commission in the Royal Navy, Ken attended Imperial College from 1948 to 1951. Upon graduation he pursued a teaching career in science and mathematics, holding posts in Wandsworth and Nottingham before becoming Head of Science at a London comprehensive. After 19 years in teaching Ken joined the Secretariat of the Associated Examining Board where he oversaw the printing of syllabuses and examination papers.

Ken died unexpectedly in November 2003 and is sadly missed by his family.
Provided by Evelyn Hutchinson

MR JOHN DOUGLAS WEBSTER JANES CB (Electrical Engineering 1938)

Douglas Janes graduated from Imperial with a first and a Siemens Medal, briefly joining the Post Office Research Department and then the Army at the outbreak of war. He rose to the position of Major in the War Office and served in this role until 1945.

After the war Douglas joined the Civil Service and held posts in the Ministries of Town and Country Planning, Land and Natural Resources, and Housing and Local Government. His last Civil Service post was as Deputy Secretary of the Northern Ireland Office where he worked until the late 1970s.

During retirement he pursued his other passion of singing as a member of the Bach Choir. He eventually became full time Secretary of the Choir, organising choral performances for Royal events and international tours. Douglas is survived by his wife, son and two daughters.
Provided by Bob Janes (Mathematics 1968)

DR BOAZ ANTONY JARRETT BSc PhD DIC FEng FCGI IMechE MSAE (Mechanical Engineering 1943, PhD 1949)

After gaining his PhD at Imperial, Tony Jarrett worked for Lucas CAV Ltd as their first postgraduate apprentice and then later as general factory manager with responsibility for three factories and 2,500 employees. Later on in his career, following a period as Managing Director of an Eaton Yale and Towne UK subsidiary, he was promoted to Group Director for Product Engineering at Lucas.

During the 1980s, he became active as a European voice on two technical boards of the Society of Automotive Engineers in the US, giving keynote addresses on numerous occasions.

Following his retirement, Tony was President of the CGCA 1986-87, and amongst other initiatives worked tirelessly to improve the College's links to industry. In his spare time, he had many interests including photography, watercolour painting, playing the harp and microscopy. Tony is survived by his wife and two daughters.
Taken from Imperial College Engineer

MR HUGH JOBLING ACGI MBE (Electrical Engineering 1932)

During WWII, Hugh served in Kenya, Abysinia and North Africa. After being captured at Tobruk in 1942, he managed to escape from an Italian PoW camp in 1943 for which he later received an MBE.

On returning to South Africa, where he had spent his much of his childhood, he spent a number of years with the Victoria Falls and Transvaal Power Company, subsequently becoming Managing Director of Morganite and a Director of Arthur Trevor Williams.

Hugh started monthly meetings for the Old Centralians in Johannesburg, which continue today, 50 years on. Following his retirement, he moved with his family to Dodona, a beautiful farm near Pretoria, which quickly became the regular venue for the Old Centralians' annual picnic.
Taken from Imperial College Engineer, with grateful thanks to Richard Gundersen (Electrical Engineering 1976)

ELIZABETH (BETTY) JOHNSON

Eminent physicist Betty Johnson was affiliated with Imperial College during her career, both as a Daphne Jackson fellow in 1986 and later as Research Associate and Honorary Research Fellow in the Blackett Laboratory. She was a driving force in the establishment of the Daphne Jackson Trust, which works to help women resume work in the sciences after a career break.

AIR VICE MARSHAL RHYS TB JONES CB, MB, FRCS, FRSM, CStJ, LRCP, RAF Rtd (St Mary's Hospital Medical School 1946)

Following graduation from St Mary's, Rhys Jones went on to have a successful career with the RAF. He achieved many senior posts including his final position as Queen's Honorary Surgeon. Rhys is survived by his family, who deeply miss his company and knowledge.
Provided by Jeremy Rhys Jones

MR PETER JUSTESEN Hon MCGI (Chemical Engineering 1946)

After graduation Peter Justesen worked in his father's bakery and confectionery business until he took over a small engineering business in the 1970s.

Motoring was one of Peter's great loves and whilst studying at Imperial, he held the dubious honour of being disqualified from the annual London-Brighton rally for speeding, perhaps explaining his strong advocacy for the sustained upkeep of Bo'.

Peter was an active member of the City & Guilds College Association from the day he left Imperial, becoming Hon Secretary in 1993 and later also taking up the role as Hon Treasurer. He saw his work for the CGCA as his 'retirement' hobby, never seeking personal recognition for his untiring energy and diplomacy.
Taken from Imperial College Engineer, with grateful thanks to Professor Robert Schroter (Chemistry 1959) and Mark Justesen

DR HAROLD (JIM) TUTT KAY FRCP (Westminster Medical School 1945)
Whilst studying at Westminster Medical School, Harold Kay was an active member of the home guard, serving faithfully during raids on London and Birmingham. For this he was awarded the Defence, Victory and Long Service Medals.

In 1952 Harold relocated to Ottawa where he worked at the General Hospital and later in the western part of the province. Beyond his hospital work he was a member of the RCAF reserve, an avid writer and a Sunday school teacher. Harold is survived by his daughter, son and five grandchildren.
Provided by Jackie Kay-Le Pors

MR EVAN MELFYN LEWIS ACGI (Civil Engineering 1939)

After graduating from Imperial College, Evan Lewis served in the RAF. Upon demobilisation he joined WS Atkins and Partners where he worked for the duration of his career, having risen to Deputy Chairman at the time of his retirement. He is survived by his wife and two sons.
Provided by Joy Lewis

PROFESSOR BRIAN LOCKE FCGI (Chemical Engineering 1948)

Brian Locke joined Imperial College to read Chemical Engineering in 1942 but volunteered for war service soon after, returning to complete his degree after the war. In 1965 he joined the National Research Development Corporation and six years later he was leading Special Projects responsible for nurturing new ideas, including fluidised combustion of coal and a process for making blast furnace coke. In 1977, Brian formed Cadogan Consultants.

He was a mainstay of CGCA for over half a century, serving on committees, as Secretary (82-90), and President (91-92). He was passionate about engineering, its role in society and how CGCA helped Imperial by bringing together students and alumni to promote 'international camaraderie'.

He was a Founder Member of the Club of Rome, President of the Design and Industries Association, member of the World Academy of Arts and Science, Fellow of both the Institution of Chemical Engineers and the City and Guilds of London Institute, Liveryman of the Worshipful Company of Engineers and a Freeman of the City of London.
Provided by Rod Rhys Jones ACGI (Civil Engineering 1964)

DR HUGH PATRICK MACGRILLEN (PhD DIC Chemistry 1970)

Hugh MacGrillen sadly died of cancer on 10 January. Following his graduation from Imperial, he most recently worked at the London Hazards Centre, where he used his knowledge as a chemist to make workplaces, housing, communities and the environment safer.

Away from work he enjoyed playing chess and was the 1973 Irish chess champion and a member of his national team at two Chess Olympiads.
Provided by Tim Evans

DR JAMES IVOR MISSEN PhD MinstP MIEE CEng (Physics 1949)

Before studying at Imperial College, James Missen served in the army (1942-1945) and worked at AC Cossor on the development of television receivers (1945-1947).

After graduating from the College, he began work for the Semiconductor Department at the GEC Research Laboratories, where in 1952 he built the first solid state radio receiver in Britain.

In 1959 Dr Missen joined the Physics Department of Northampton College of Advanced Technology (later to become City University) as a Senior Lecturer, gaining his PhD in 1969.

After his retirement in 1983 he moved with his wife to Norfolk where he pursued hobbies including the completion of his original design for a mains powered clock with an electromagnetically impulsed free pendulum and Roman striking. He is dearly missed by his wife, four daughters and their families.
Provided by Marjorie Missen

DR DESMOND WILLIAM NORTON (Charing Cross Hospital Medical School 1954)

After graduating from Charing Cross, Desmond Norton went into general practice in Sale, Cheshire, retiring from his practice over 30 years later in 1989.

In his retirement he accomplished many things including attaining an MPhil in Egyptian Medicine while working as research assistant at the Manchester Museum Egyptology Department. Additionally he served as chair to his son's charity SKCV in India, where he would visit and hold medical clinics. His wife, two sons, two daughters and his grandchildren survive him.

MR RICHARD JAMES PURSER (DIC Geology 1981)

Whilst working to cut a track through a jungle in Cambodia, Richard Purser died in a tragic accident. He is deeply missed by his wife and three young children who are currently residing in Australia.
Provided by Evelyn Tilsley

MR FRANCIS WILLIAM TOOVEY (Botany 1933)

Francis Toovey received the Forbes Medal for Biology during his studies at Imperial. Following his graduation, Francis worked in Trinidad and then in Nigeria, latterly for the West African Institute for Oil Palm Research. He concluded his working life as the Director of the Glasshouse Crops Research Institute in Sussex.
Provided by Ric Toovey

DR WILLIAM BRIAN WHOWELL BA (St Mary's Hospital Medical School 1945)

William Whowell spent his working life as a GP in Loughborough. His former partners at the surgery paid tribute to him by planting a tree in his memory.
Provided by Joy Whowell

Also sadly deceased

DR DAVID KILROY BROOKS Former Sub Dean St Mary's Hospital Medical School
DR EUSTACE ANTHONY (TONY) EVANS Chemistry 1952, PhD 1955
MR JOHN FREDERICK HARRINGTON Materials 1949
MR JOHN RICHARD GERALD HERON Chemistry 1943
MR KENNETH ARTHUR KERSHAW Civil Engineering 1948
MR RONALD VERNON MATHEWS DIC Civil Engineering 1948
MISS NADIA NATHOO Biological Sciences 2001, MSc 2002
MR KEITH GRAHAM PALMER Physics 1982
MR ERIC POPPLEWELL Materials 1926
DR CHARLES EDWARD QUIN Charing Cross Medical School 1939
DR PETER SNELL St Mary's Hospital School 1960
MR ARTHUR JOHN TUCK Civil Engineering 1958
PROFESSOR PETER NORTHCOTE WILSON Agricultural Studies 1950
MR PETER MICHAEL WRAGG Physics 1963

honours

New Year Honours 2004

SIR PETER GERSHON CBE (Member of the Imperial College Court and Council)
Chief Executive, Office of Government Commerce
Knighted.

PROFESSOR DAME SANDRA DAWSON DBE
(former member of staff)
Director, Judge Institute of Management Studies, University of Cambridge; Master, Sidney Sussex College
DBE for services to higher education/management research.

MRS JANE BARRIE OBE (Chemistry 1969)
Chair, Dorset and Somerset Strategic Health Authority
OBE for services to the NHS.

PROFESSOR ROY HARRISON OBE (Civil Engineering 1974)
The Queen Elizabeth II Birmingham Centenary Professor of Environmental Health, University of Birmingham
OBE for services to environmental science.

DR MARGARET SPITTLE OBE (Westminster Medical School 1963)
Consultant clinical oncologist, Middlesex Hospital and St Thomas's
OBE for services to medicine.

EUR ING JEAN VENABLES OBE (Civil Engineering 1969, MSc DIC 1974)
Lately Chair, Thames Regional Flood Defence Committee
OBE for services to flood defence.

DR ROGER COOK MBE (MSc DIC Botany 1966, PhD 1969)
Institute of Grassland and Environmental Research
MBE for services to scientific research within the agricultural research sector.

DR SUSAN KOHLER MBE (Wye College 1961)
Chair, Friends of the Botanical Gardens, Sheffield
MBE for services to the community.

MRS JANE RAIMES MBE (Physics 1969)
Chief Executive, Dorset Community Action
MBE for services to the community in Dorset.

DR PHYLLIS WINDSOR MBE (St Mary's 1977)
Clinical Oncologist
MBE for services to radiotherapy and oncology.

Birthday Honours 2004

PROFESSOR SIR JOHN PENDRY FRS
Professor of Theoretical Solid State Physics, Imperial College London
Knighted for services to science.

MR IAN GLENDAY CBE (Chemical Engineering 1964)
Executive Director, Gateways Office of Government Commerce

DR TIMOTHY MARRS OBE (Westminster Medical School 1968)
Chief Toxicologist, Food Standards Agency

MR STEPHEN PAYNE OBE (Chemistry 1979)
Lately Architect, Queen Mary 2 Cruise Liner
OBE for services to the shipping industry.

PROFESSOR ELIZABETH SIMPSON OBE
Professor and Deputy Director, Medical Research Council Clinical Sciences Centre, Imperial College London
OBE for services to biomedical research.

MR STELIO STEFANOU OBE (Chemistry 1974)
Chief Executive, Accord plc
OBE for services to business.

MR RODNEY ALLAM MBE (Chemical Engineering 1962)
Director of Technology, Air Products Ltd
MBE for services to the environment.

MRS RUTH HUNT MBE
Head, Technical Services, Medical Research Council Clinical Sciences Centre, Imperial College London
MBE for services to science.

DR ROBERT LYLE MBE (St Mary's 1948)
MBE for services to young people and the community in Prestbury, Gloucestershire.

Fellows of the Royal Society 2004

PROFESSOR DONAL BRADLEY (Physics 1983)
Professor of Experimental Solid State Physics and Deputy Director of the Centre for Electronic Materials and Devices, Department of Physics, Imperial College London

PROFESSOR VERNON GIBSON
BP Professor of Inorganic Chemistry, Department of Chemistry, Imperial College London

PROFESSOR EDWARD HINDS
Director of the Centre for Cold Matter, Department of Physics, Imperial College London

PROFESSOR DAVID HOLDEN
Division of Investigative Science, Faculty of Medicine, Imperial College London

PROFESSOR GORDON CONWAY
Fellow of Imperial College and founder and former Director of Imperial College Centre for Environmental Technology
President of the Rockefeller Foundation

PROFESSOR BRYAN GRENFELL OBE (Zoology 1976)
Professor of Parasite Ecology, University of Cambridge

PROFESSOR WILLIAM MOTHERWELL (DIC Chemistry 1976)
Alexander Williamson Professor of Chemistry, University College, London

Other Awards

PROFESSOR MATIUR RAHMAN (MPhil DIC Mathematics 1969)
Professor of Applied Mathematics and Fluid Mechanics, Department of Engineering Mathematics, Dalhousie University, Halifax, Canada
Admitted as a Fellow of the Wessex Institute of Great Britain in recognition of leadership in engineering sciences and his outstanding research in the field of fluid mechanics.

PROFESSOR JAYASIRI GUNASEKERA (MSc Mechanical Engineering 1969, PhD 1972)
Chair of the Department of Mechanical Engineering, Russ College of Engineering and Technology, Ohio University, US
Awarded the Distinguished Professor Award by Ohio University (see page 26).

PROFESSOR JOHN LAWTON (founder and former Director of the NERC Centre for Population Biology, Silwood Park campus)
Chief Executive of the Natural Environment Research Council
Awarded the Japan Prize by the Science and Technology Foundation of Japan.

MICHAEL KNUCKEY PGeo GAC PDAC CIMM (Mining Geology 1957)
Inducted into the Canadian Mining Hall of Fame (see page 28).

PROFESSOR CECIL COGBURN (PhD Nuclear Engineering 1964)
Emeritus Professor of Mechanical Engineering, University of Arkansas, US
Made a Fellow of the American Society of Mechanical Engineers.

SIR SAMUEL ESSON JONAH KBE (MSc Mineral Technology 1979) Chief Executive, Ashanti Goldfields Corporation Ltd, Ghana
Presented with an Honorary Knighthood by HRH The Prince of Wales in recognition of his exceptional achievements as an African businessman, a leading business executive from the Commonwealth and an international public figure.

If you receive a special honour or award, we will try to include your name on a future Honours page. Let us know by emailing matters@imperial.ac.uk.

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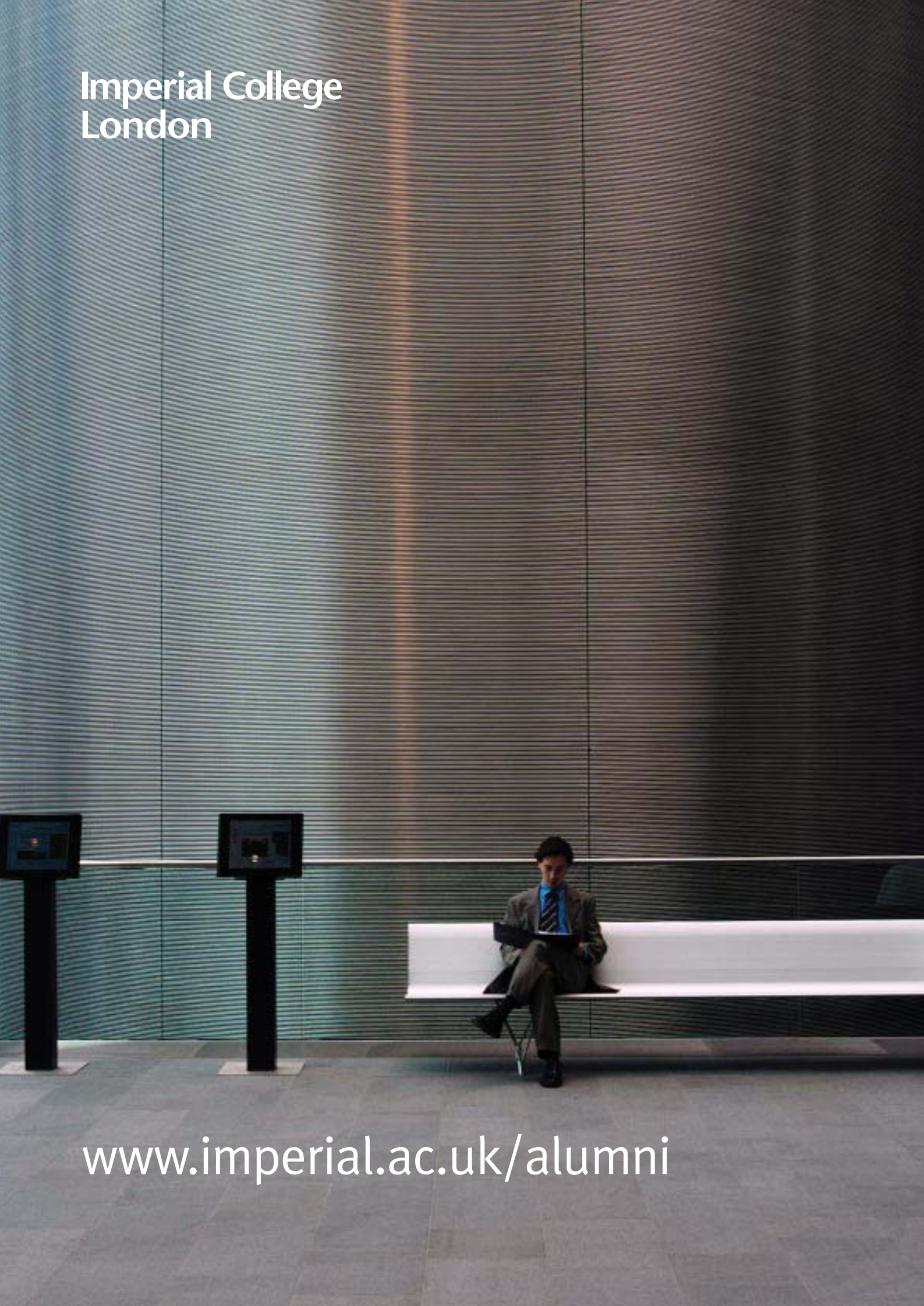

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