

Imperial College  
London

# staying connected

*ISSUE 27 WINTER 2006* \_WHITEHALL AND SCIENCE\_  
\_SOUTHSIDE REMEMBERED\_ \_ALUMNI SERVICES EXPLAINED\_ \_PLUS\_  
\_ALL THE NEWS FROM THE COLLEGE AND 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.

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# IMPERIALmatters

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# regular features



- 1 editorial by Sir Richard Sykes**
- 2 letters** – your opinions and views, covering Health and Safety and the Student Opportunities Fund. Submit a letter for the next edition of Imperial Matters by emailing: [matters@imperial.ac.uk](mailto:matters@imperial.ac.uk).





# editorial



## DEAR ALUMNUS

I am delighted to introduce the latest edition of your alumni magazine, *Imperial Matters*.

As I write, we are one year from the 2007 Centenary of Imperial College's foundation. Moving towards this significant landmark in our history, it is important that we not only look forward to future plans for our continued advancement, but also look back in celebration of a century of notable and numerous achievements by our staff, students and alumni.

The future and the past are both themes that run through this issue, no more so than in our feature on Southside on page 12, which looks at the College's plans for redeveloping the halls for today's students, as well as talking to some of its former residents about their memories of their time there.

We also explore some of the traditions and heritage of the College, as we take a closer look at some of the items that reside in the College Archives (pages 10–11).

The main theme for this issue is science and the government. On page 15, we interview three of Imperial's distinguished academics who are also Chief Scientists to UK government departments, and have the crucial role of advising our politicians on scientific matters. We also talk to some members of the alumni community about the impact that they are having on political decision-making around the world.

Last year was yet another eventful year at the College and

within our news pages (pages 3–9), you can read about some of the recent successes of our talented staff and students. In 2005, we continued to top the university league tables, and were thrilled to read recently that more students from Singapore are studying here than at any other university in the UK.

Elsewhere, our academics continued to win global recognition for their world class research and you can also read about how the College has been involved in global issues such as avian flu, HIV testing in the developing world and the future of energy supply.

Enclosed with this issue is a copy of *building the connection*, our fundraising newsletter. I thank you all for the support that you give to College initiatives such as the Student Opportunities Fund, which over the past three academic years has made a huge difference to many students who would not otherwise have been able to study at our world class institution.

I enjoyed meeting some of you in the autumn at our annual donor event for the Fund, and I look forward to seeing more of you return to the College during 2006.



## Putting safety first

Dr James Charles wrote in Issue 26 of *Imperial Matters* about the 'ludicrous nannyng' of today's safety regulations. As someone who has spent virtually his entire career in health and safety, my experience is that the law is rarely the problem, EU directives not excepted! Misunderstanding and misapplication are far more common. Guidance and opinion are often taken to be rigid law or mandatory legal interpretation, and second-hand stories and rumours merely add to the confusion. Take a look at [www.hse.gov.uk/press/record.htm](http://www.hse.gov.uk/press/record.htm) and [www.hse.gov.uk/riskdebate/index.htm](http://www.hse.gov.uk/riskdebate/index.htm).

Whilst my co-workers in the business and I are not blameless (we sometimes get it wrong and we naturally tend to err on the side of safety), our job is to help people produce sensible, workable solutions that allow them to get on with the job, but also protect their health and safety. Risk management, rather than risk elimination. We also have the advantage, if that's the correct term, of first-hand experience of the effects of getting it wrong. Having to interview the colleagues and relatives of a deceased worker tends to concentrate the mind on what is important, as does reading the statistics showing how often it is still happening elsewhere.

If you need more convincing, I'm sure Imperial College's Safety Department will be happy to help!

**DEREK PRATT** (Chemical Engineering 1971)



## Paving the way for future generations

May I congratulate you on the establishment of the Student Opportunities Fund. Many students struggle financially – these days even more than a few decades ago – I am sure we all wish we could have used some of the money to which we now have access for supporting those early student days.

If we, who know what a degree from Imperial will mean to these talented and dedicated prospective students, cannot find a way to contribute in some small way, then it is a sad reflection on us.

I continue to be proud of being an alumnus of Imperial College. I have just retired but throughout my career I have been so aware of the quality of the tuition I received, not only in connection with the work I have had the privilege of tackling, but also through the respect accorded immediately one mentions Imperial. I feel it really prepared me for a very rewarding career. My son who attended Imperial more recently tells the same story.

**TONY COOK** (Electrical Engineering 1963, MSc 1965)

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# news



- 3 **Imperial news** – catch up with the latest news from the College, including new plans for the Wye campus.
- 4 **faculty news** – keep up-to-date with the latest news from each of the faculties. You can find out about some of the most recent research projects, including new insights into the cause of the world's largest mass extinction at the end of the Permian period and the findings of NASA's flyby of Enceladus, one of Saturn's 34 known moons.



## World class scientific research centre planned for Wye



IAN MACGILVEY

Wye is to become the home of a new £1 billion, world class science research and manufacturing facility. The facility will create 12,500 high-quality job opportunities, bringing prosperity and sustainable regeneration to Ashford, and acting as a major economic driver for Kent and the south east.

Rector of Imperial College London, Sir Richard Sykes, said: "We have a fantastic opportunity to explore some of the most exciting problems in science, engineering and medicine today. One such opportunity is to explore the potential for non-food crops in clean and affordable bio-fuels and bio-based products. We are forming a partnership with Kent County Council to take this forward with a global centre for non-food crops research."

The Wye Concordat, signed in December 2005 by Ashford Borough Council, Kent County Council and the Rector, establishes a common and workable framework for cooperation and collaboration between the three parties. Leader of Ashford Borough Council, Paul Clokie, said: "We are delighted to be associated with such an inspiring vision for the future of the Wye campus. We look forward to working with all relevant stakeholders to shape the emerging proposals in a way that delivers that vision while protecting the essential qualities of the village and the local community."

The future of the Wye Campus had been uncertain in light of the decline of the agricultural industry and a reduction in students wanting agri-business related qualifications. In response to this change, Imperial College London and the University of Kent have joined forces to deliver the Applied Business Management (ABM) courses at the Wye campus. The courses, which combine the disciplines of business with applied natural sciences, will be taught jointly by Imperial and University of Kent staff.

## Imperial flies high in world rankings

Imperial College London was placed 13th in the world and fifth in Europe in the 2005 World University Rankings, published by *The Times Higher Education Supplement* in October, and are largely based on an international poll of academics, students and recruiters.

Imperial was placed first in Europe and fifth in the world for technology. The College was also placed third in Europe and tenth in the world for science and fourth in Europe and sixth in the world for biomedicine.

Further a field, figures published in *The Straits Times, Singapore*, in January 2006 seem to suggest that Imperial is the new jewel in the crown for Singaporean university students in Britain. The statistics show that 276 Singaporeans were enrolled at the College in the 2003/2004 academic year, more than double the 110 studying at Oxford and well above the 195 at Cambridge as well, a marked change from years past.

Loh Wei Jie, medical student at Imperial and former secretary of the United Kingdom Singapore Students' Council, attributed Imperial's growing popularity to its rise in Britain's league tables, namely those produced by *The Sunday Times* and *The Times Higher Education Supplement*, which in 2005 rated Imperial above Cambridge as the best university in Britain for technology.

## Imperial as One

Launched in July 2005, *Imperial as One* is a new initiative from Imperial College to promote equality and diversity throughout the College. An advisory group of representatives, from all disciplines and levels of the College's black and minority ethnic (BME) staff, has been formed to examine pertinent issues.

Speaking at the launch event, Sir Richard Sykes, Rector of Imperial College London, said: "*Imperial as One* is about making sure that diversity is promoted, strengthened and celebrated throughout the College. It's much deeper than simply complying with legal requirements."

The group will assist the College in setting priorities and raising the profile of equality issues, focusing on career progression and professional development, improved social and cultural relations and a mentoring programme for BME staff and students. Through a review of College working practices the group aims to identify ways to challenge the discrimination and stereotyping that disadvantages BME staff.

The *Imperial as One* mentor programme, launched in October, has put in place mentors to support BME staff and students working to achieve specific goals. Mentors have been selected from a number of different and interesting backgrounds, both from the College and the wider community.



CHERYL APSE

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**30th anniversary of the Pimlico Connection** Student mentors past and present celebrated the thirtieth birthday of the Pimlico Connection, Imperial's student tutoring in schools programme, in November 2005. Begun in 1975 as an undergraduate group project, the scheme has grown over the years to become a key strand in Imperial's widening participation activities. Over 100 students each year are now placed in local schools to give one-to-one support and help pupils develop their understanding of subjects such as science, maths and IT.

**Rector to lead London's new science council** Sir Richard Sykes has been appointed to lead CATALYST, a new Science and Industry Council for London. CATALYST aims to ensure London maintains its global competitiveness by linking science with business across a range of diverse industries, including biopharmaceuticals, healthcare, and energy and the environment.

**Imperial spin-out company's SwirlGrafts a success** Imperial spin-out company Veryan Medical, founded by Emeritus Professor Colin

Caro, may have found the solution to help bypass grafts and dialysis shunts last longer. To make blood flow in grafts and shunts as it does in natural arteries, the company has developed synthetic tubes with helical twists known as SwirlGrafts. These mimic the natural twist of arteries, generating a swirling blood flow that promotes mixing and eliminates stagnant regions where disease preferentially develops. European clinical trials have begun, with highly encouraging early results.

**Construction starts on Imperial's BioIncubator** In December 2005, Imperial Innovations, the technology commercialisation company based at Imperial College, announced the start of construction of the Imperial BioIncubator. The two-storey, 24,000 square foot building, will consist of 12 wet labs, 16 private offices and several meeting rooms, providing tenants with a range of research resources, and business and support services. The Imperial BioIncubator is jointly funded with £4m from Imperial College and £3m from the London Development Agency (LDA).

# Rocks yield secret of mass extinction

Dr Mark Sephton, Department of Earth Science and Engineering, is lead author of research which tells a new story about the world's largest mass extinction at the end of the Permian period.

An asteroid hitting the earth or a deep-sea methane release were previously believed to be responsible for the extinction, which occurred 250 million years ago, obliterating more than two-thirds of reptile and amphibian families.

An international team of scientists, including Dr Sephton, has countered that the reason was more likely to have been poisonous volcanic gas from the greatest ever eruption of basalt lava. They believe that these gases killed rooted vegetation, meaning that ground soil was no longer retained on land. Instead the soil was washed into the surrounding oceans, blocking out light and soaking up oxygen.

Polysaccharides remains, sugar-based structures common in plants and soil that derived from land, were found during molecular analysis of marine sediments from the Dolomites, supporting this theory.

Dr Sephton believes that lessons can be learned from the damage caused: "Land degradation is a worsening global problem thanks to human activity and soil erosion, which has caused the loss of a third of arable land over the last 40 years. Identifying the nature of the end Permian soil crisis may help us understand what is in store for us in the years ahead."

# Prestigious prizes for young researchers

Dr Molly Stevens, Reader in the Department of Materials, and Dr Sebastian Uchitel, Lecturer in the Department of Computing, have been awarded Philip Leverhulme prizes worth £50,000. Every year 25 prizes are awarded to researchers of international standing, usually under the age of 36, who have already influenced understanding in their field.

Dr Stevens's research has made exciting advances in the field of tissue engineering, using a novel approach, which uses the body as a 'bioreactor' to engineer large quantities of bone. Additionally, in the field of nanotechnology, her team discovered new ways to create new dynamic nanomaterials, biosensors and drug delivery systems.

Dr Uchitel's work addresses the problems associated with designing large-scale complex software systems. The traditional engineering approach has been to build an entire mathematical model of the system

prior to analysis. Dr Uchitel's approach uses automated techniques for building and analysing such models in an incremental manner, providing a powerful design tool which is much more cost effective.

# Hard work rewarded

Science, Engineering and Technology Student of the Year awards were presented to Imperial students, Paul Bilokon, Computing, and Ian Pong, Materials, in September 2005.

The awards were made at a gala dinner in London attended by senior figures from industry, government, science and the media. Only Imperial and Cambridge had more than one prizewinner.

Paul received the British Computer Society Award for the Student Making the Best Use of Information Technology. Paul's project investigated how particles can be detected in biomolecular electron micrographs used to analyse biological macromolecules, such as virus proteins. His work has resulted in a new image processing system, enabling much greater control of the particle selection process than existing systems provide.

Ian won the Morgan Crucible Award for the Best Materials Student. His project examined the properties of magnesium alloys, establishing that certain alloys could recrystallise and be deformed superplastically. Superplasticity could provide a useful alternative to the cold forming metal working process, which is difficult with magnesium alloys because of their brittleness.



# Innovating engineering education

*EnVision 2010*, an initiative to evolve the way the engineering faculty teaches undergraduates and prepares them for future careers, launched its second phase in November 2005. It aims to build on the Faculty's already excellent international reputation to ensure that, by 2010, Imperial will be in a sustainable and recognised position within the top five institutions for engineering education in the world.

The project looks at how educational ethos, facilities and infrastructure, and the level of educational innovation can be improved.

Dr Ruth Graham, Director of *EnVision 2010*, said: "One key element is to update how we educate our students, putting more emphasis on active learning and hands-on project work, and enhancing the skills and attributes of our engineering graduates."

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### Earliest meteorites provide new piece in planetary formation puzzle

Researchers trying to understand how the planets formed have uncovered a new clue by analysing meteorites that are older than the earth. The research shows that the process which depleted planets and meteorites of volatile elements such as zinc, lead and sodium, must have been one of the first things to happen in our nebula. The implication of this clue is that 'volatile depletion' may be an inevitable part of planet formation – a feature not just of our solar system, but of many other planetary systems

too. The researchers reached their conclusions after analysing the composition of primitive meteorites, coal-like rocks that are older than the earth and which have barely changed since the solar system was made up of fine dust and gas.

### New Head of Materials

Professor William Lee, appointed new Head of Materials, took up his post in January 2006. Professor Lee was previously Professor of Ceramic Science and Engineering and Director of the Immobilisation Science Laboratory at the University of Sheffield.

### Long jump forward for catching sporting drug cheats

A new technique could provide a long jump forward in spotting athletes' use of banned substances. It will enable sporting drugs officials to distinguish between the presence of naturally occurring human steroids and those that have been synthetically manufactured. The new approach, developed by scientists from Imperial College London and the University of Nottingham, allows easy analysis of the carbon ratio, which differs between synthetic and naturally occurring steroids. It uses a catalytic

reaction to strip steroids of their more aggressive parts whilst leaving the carbon 'skeleton' intact.

### John Perkins discusses engineering in the 21st century

The future of engineering as an academic and professional discipline was the subject of this year's Roger Sargent Lecture. Professor John Perkins, Vice-President and Dean of the Faculty of Engineering and Physical Sciences at the University of Manchester and former Principal of the Faculty of Engineering at Imperial delivered the lecture in December 2005. As well as



Heads of Department, academic staff, representatives from industry and over 1,500 undergraduate and alumni engineers took part in the phase one scoping study, which recognised that internationally, undergraduate engineering education has seen a strong trend of innovation and radical reform over the past decade.

Again involving a broad range of stakeholders, phase two of the project will now develop proposals for the improvement of undergraduate engineering education at Imperial and what resources will be needed to make such changes a reality.

Professor Julia King, Principal of the Faculty, said: "We are really glad to have people involved from all parts of the engineering community. We have got to the stage where we have strong support from the College and across the Faculty and people are recognising the importance of this project."

## Shaping the future of energy

November also saw the launch of the *Energy Futures Lab*, which is dedicated to tackling the scientific challenges posed by the world's demand for energy. Its goal is to develop new multidisciplinary, cross-faculty research programmes which will meet the broad energy challenges that we face, particularly the transition to sustainability.

The lab will bring together existing strengths in developing technologies, such as carbon capture, fossil fuel engineering, renewable energy resources and fuel cells. Its initial research programme includes a £4.5 million project with BP on energy urban systems and the £6.1 million *Keeping the Nuclear Option Open* initiative.

The BP *Urban Energy Systems* project will explore how money and energy could be saved if cities integrated the systems that supply them with resources. It will analyse the benefit that would result if a whole city optimised its use of resources such as power, heating, transport and water, for example, by heating homes with the heat from waste water. Research will draw heavily on Imperial's expertise in modelling complex systems.

Explaining that 80 per cent of the world's population is projected to be living in cities by 2030, Professor David Fisk, Royal Academy of Engineering Professor of Sustainable Development and co-director of the project, said: "Reducing the amount of urban energy wasted is critically important. The savings from optimisation could be huge."

The *Keeping the Nuclear Option Open* initiative will look into how the UK could create a new reactor-based capacity to generate nuclear power, and how to improve the cost, safety and acceptability of doing so.

Led by Imperial, in collaboration with six other UK universities, the initiative will examine issues such as how nuclear reactor systems function, how reactors are monitored and how reactor waste can be dealt

with. Funded through the research councils' *Towards a Sustainable Energy Economy* initiative, it represents the single largest research council commitment to fission reactor research for more than 30 years.

Professor Robin Grimes, Principal Investigator and project co-ordinator at Imperial, said: "A broad research programme is necessary if we are to be in position to underpin a new reactor-based generating capacity. Nuclear power is clearly a route to achieving the UK's commitment to reducing its carbon emissions."

These two new projects add to the College's energy-related research portfolio of over £20 million per annum in external funding and more than 200 research projects, involving around 250 staff and their research teams.

Energy Minister Malcolm Wicks spoke at the launch, saying: "The major energy issues we face extend far beyond just technical challenges, and social scientists, engineers, business, economists and, dare I say, even politicians have a key role to play in addressing these. In the UK we must get to grips with these complex issues and have to make some hard choices."

Rector, Sir Richard Sykes, said: "Energy is one of Imperial's three key research themes and we are one of the few places in the world with the breadth and depth of knowledge to tackle the bigger picture and create practical, workable solutions to energy problems."

## Engineering an end to poverty

Enabling some of the world's poorest communities to become self-sustaining is the aim of an Imperial College London-based organisation which designs innovative technologies to tackle poverty.

Developing Technologies uses Imperial student projects to find low-cost technical solutions that respond directly to a community's specific situation using locally-available materials so that products can be repaired, developed and replaced locally.

According to Dr Keith Pullen, Senior Lecturer in Mechanical Engineering at Imperial and a co-founder of the project, technologies such as a footbridge in Sri Lanka and hay mowers for Mongolian farmers are already making a real difference to people's lives.

As well as giving organisations in developing countries access to skilled engineers and innovative ideas, the scheme also gives engineering students at Imperial the chance to get involved in hands-on projects.

More information on Developing Technologies can be found at [www.developingtechnologies.org](http://www.developingtechnologies.org).

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analysing the evolution of engineering over the past 200 years, Professor Perkins envisaged what the future holds for the discipline in the twenty-first century.

### Clam-like creature preserved perfectly in ancient fossil

An ancient shellfish not seen for 425 million years was found in a quarry in Herefordshire, by Dr Mark Sutton of Imperial College. The 'articulate brachiopod' fossil is the first of its kind to be preserved with its soft parts intact in three dimensions. In August, Dr Sutton revealed the structure of

the clam-like organism using a three-dimensional colour computer model, giving a unique insight into the workings of the ancient shellfish. The find has challenged the assumption that ancient brachiopods were put together in the same way as their modern descendents.

### Imperial professor turns media guide

The world's media sought Professor Hans Michels' expertise following the bomb attacks on London's transport network last July. As an accident investigator with interests from industrial explosions to

train crashes, Professor Michels, Professor of Safety Engineering, gave 25 live or recorded interviews in front of the cameras of the BBC, Channel 4, Sky News and ITV following the events on 7 July 2005.

**Future rail technology** Advancing new areas of railway technology and developing people with high level technical capabilities are the two major aims of a new Centre based in the Department of Mechanical Engineering.

Hitachi Europe Ltd is funding research in Imperial's Future Rail Research Centre that will look at issues

such as train performance, how to optimise trains' consumption of energy, and the best sources of train power.

### New course for globe-trotting natural resource entrepreneurs

A new course that teaches engineers every aspect of setting up and running their own mining and energy business was announced in October 2005.

Students on the Metals and Energy Finance MSc will gain the skills to become minerals, metals and energy entrepreneurs by combining knowledge of engineering with an understanding of the world of finance.

## Research excellence recognised by Bill and Melinda Gates Foundation

In June 2005, two research teams received grants totalling \$28.8 million from the *Grand Challenges in Global Health* initiative, a programme sponsored by the Bill and Melinda Gates Foundation, the Wellcome Trust and the Canadian Institutes of Health Research.

Professor Douglas Young, Department of Infectious Diseases, received a grant worth \$20 million to develop drugs for the treatment of latent TB, a condition affecting around one third of the world population, with up to a 10 per cent risk of progress to active disease.

Dr Austin Burt, Division of Biology, Natural Sciences, received a grant worth \$8.8 million to develop genetic strategies to block the spread of malaria by mosquitoes.

Rector, Sir Richard Sykes, said: "These high profile grants recognise how research at Imperial can make a real difference to the world by helping to alleviate the suffering caused by these major causes of ill health and mortality in the developing world."

### HIV immune system testing

November 2005 saw Imperial become the recipient of a \$8.6 million grant from the Bill and Melinda Gates Foundation to develop a simple, affordable and rapid test to measure the health of the immune system in HIV/AIDS patients in developing countries.

The *CD4 Initiative* will develop an easy to use device that can measure CD4+ T-lymphocytes in HIV+ patients. The CD4 cell count measures the number of these critical disease-fighting cells in the blood, a figure required for key clinical decisions in managing HIV disease, such as when to begin or to switch antiretroviral therapy.

Current technologies for measuring CD4 counts are expensive to buy and maintain, and require a level of infrastructure and training often not available in developing countries. The initiative will develop new tests using specifications developed with healthcare workers in Africa and elsewhere in the developing world.

Professor Stephen Smith, Principal of the Faculty of Medicine, said: "Despite the burden of HIV/AIDS on the developing world, many of the diagnostic tools are just not accessible there due to the high cost and complexity of use. This initiative will help remove one important barrier to the effective implementation of AIDS care in these countries."

### Disease treatment programme hits 10 million



A disease treatment programme started three years ago has now treated over 10 million African children and adults for schistosomiasis and intestinal worm infections in six sub-Saharan countries.

Schistosomiasis, affects more than 200 million

people in developing countries, causing debilitating malnutrition, stunted growth and anaemia. The *Schistosomiasis Control Initiative*, supported by a \$30 million grant from the Bill and Melinda Gates Foundation, was established at Imperial in 2002 to tackle the disease in sub-Saharan Africa.

## Preventing avian flu

In August 2005 Imperial researchers reported in *Nature* that a global pandemic of avian flu costing millions of lives could be prevented if governments immediately took the right steps to contain it.

Researchers simulated an outbreak of a H5N1 influenza virus in rural Thailand which mutated to become transmissible from person to person. Currently very rare, if the virus were to become more person-to-person transmissible, the consequences of a global pandemic could be disastrous.

According to the model, to limit an outbreak to fewer than 200 cases, two key conditions need to be met. The virus would need to be identified whilst infection was confined to around 30 people and courses of antiviral drugs would need to be given rapidly to the 20,000 individuals at the same schools, workplaces and in the same geographic area as the infected people.

Professor Neil Ferguson, Division of Epidemiology, Public Health and Primary Care, Medicine, and lead researcher on the study said:

"Stopping an emergent pandemic in its tracks at an early stage is the only strategy which could have a dramatic impact on the levels of death and disease that a new pandemic would cause.

"We can't just cherry-pick the more easily implemented options, such as closing schools and encouraging people to stay home, and expect to have a containment strategy with a good chance of success."

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**National network for diabetes research** Researchers at Imperial College London and the University of Oxford will lead on a £20 million initiative from the Department of Health to set up a UK Diabetes Research Network to coordinate diabetes research in the UK.

The network will coordinate initiatives from health service groups, practitioners and academic groups as well as from industry. It will enable researchers to conduct larger and more efficient clinical trials that will examine factors that have an influence on the

development of diabetes, its management and the complications that arise from it.

**How dirt could educate the immune system** Scientists believe that knowing exactly which type of dirt provides the best education for the immune system could be key to providing new treatments for diseases such as asthma. Scientists have called this the 'hygiene' hypothesis, blaming a lack of exposure to common viral infections and dirt on children being unable to build up resistance.

This lack of exposure could be

behind the rise in the levels of asthma among children. Studies have shown that most common colds can help protect against wheezing in later childhood, and other childhood infections such as chickenpox also provide a level of protection.

### Putting your brain to good use

Doctors and researchers are calling for donations of brains to conduct medical research into disorders such as Parkinson's and Alzheimer's. As well as brain tissue from individuals affected by Parkinson's and Alzheimer's, researchers need

samples from healthy individuals.

Dr Kirstin Goldring, Tissue Bank Manager at Imperial College, comments: "While we have made big steps in new treatments for these disorders, a lack of brain samples has seriously hampered our efforts to date."

### A taste of medicine at Imperial

Almost 400 potential medical students enjoyed a taste of Imperial College London in November 2005. The students, lower sixth formers from schools across the UK, were taking part in an open day for Imperial's Medicine

## First step towards growing human lungs

Imperial scientists have successfully converted human embryonic stem cells into lung cells, taking a first step towards building human lungs for transplantation. The team, lead by Dame Julia Polak, Division of Investigative Science, Medicine, took human embryonic stem cells and 'directed' them to convert into the type of cells needed for gas exchange in the lung.

She said: "This is a very exciting development, and could be a huge step towards being able to build human lungs for transplantation or to repair lungs severely damaged by incurable diseases such as cancer."

The research involved taking human embryonic stem cells and growing them in Petri dishes in the laboratory in a specialised system that encouraged them to change into the cells that line the part of the lung where oxygen is absorbed and carbon dioxide excreted. Although this was performed initially on embryonic stem cells, the system will now be tested on stem cells from other sources, including umbilical cord blood and bone marrow.

## Stem cells used to grow cartilage

Imperial scientists had further success in converting human embryonic stem cells, this time into cartilage cells, offering encouragement that replacement cartilage could one day be grown for transplantation.

Allowing doctors to grow cartilage for transplantation means a number of injuries and medical problems, including sports injuries, could be treated as well as providing new cartilage for people having hip replacements, and even for cosmetic surgery.

Dr Archana Vats, clinical medicine researcher, said: "With the UK's aging population, there will be an inevitable increase in age-related problems. Although doctors have been able to carry out joint replacements for a number of years, the worn out cartilage is not replaced. By doing so it may be possible to avoid the need for a joint replacement for some time."

## Can cannabis relieve breathlessness?

A team of researchers sought volunteers in September 2005 to test if the active ingredient of cannabis could be used to alleviate the sensation of breathlessness caused by illnesses such as chronic obstructive pulmonary disease (COPD). They believe that cannabinoids could be used to reduce the sensation of breathlessness without depressing the respiratory system.

Dr Elspeth Pickering, Clinical Research Fellow at the Chelsea and Westminster Campus, said: "Despite the best efforts of scientists for many years, no one has been able to develop a way to deal with the sensation of breathlessness without suppressing the drive to breathe. Breathlessness can have a major impact on the quality of life for patients with respiratory diseases. By using a cannabinoid, we hope to find a way to block the mechanism which causes it."

## New TB test scoops top prize

An inexpensive and rapid test for tuberculosis (TB) which could be used in developing countries won first place in the Best Innovation to Improve Global Healthcare category of the Medical Futures Innovation Awards in December 2005, going on to scoop the overall prize at the ceremony.

MODS (microscopic observation drug susceptible assay) was developed by Dr David Moore, Division of Investigative Science,

Medicine, to confirm the presence of TB from sputum samples in around one week, up to one quarter of the time of a standard TB test. At the same time, the new test is able to spot if the TB is drug resistant five to ten times faster than existing tests, costing \$2 to perform compared with around \$35 for a standard test.

Dr Moore said: "This test can be carried out using cheap and readily available tools and requires relatively little training or expertise. This is particularly important in developing countries with little infrastructure."



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MBBS/BSc degree course. Activities included a course overview, advice on how to apply and a mock interview.

### Better public health campaigns needed for river blindness

An international team of researchers are calling for better public health campaigns to reduce instances of river blindness, which is causing significant health problems for at least 18 million people in areas such as West Africa, Nigeria and Congo. The disease is transmitted by a parasite in biting flies.

The team has developed a

mathematical model that measures exposure by looking at how often people were bitten by the flies. It will help by providing a better understanding of the role of exposure to the biting flies that transmit river blindness and could be important in developing effective health campaigns.

### New asthma and allergy research centre funded

A new research centre to study asthma and allergies is to be opened at King's College London and Imperial College London thanks to funding from the Medical Research Council (MRC) and

Asthma UK. The MRC-Asthma UK Centre in Allergic Mechanisms of Asthma will facilitate the integration of basic and clinical research to advance the generation of new treatments.

The Centre's creation is timely, as incidences of allergies in the UK have risen approximately three-fold in the last 20 years, with one in three people now developing an allergy at some point in their lives.

### Transplanting animal organs could soon be a reality

The process of transplanting organs from one species into another

could soon be a reality. The idea of xenotransplantation is not new, but it is only in recent years that many of the potential immunological problems, such as transplant rejection, have been solved. The use of animal organs may be the only hope for many suffering from problems such as kidney, heart or lung failure.

Despite the progress made, the dangers of animal viruses crossing over and infecting humans are still a cause for concern, as researchers have been unable as yet to create an animal model to test the likelihood and extent of any cross-over.



## A new Faculty of Natural Sciences

The new Faculty of Natural Sciences was created in November 2005 combining the existing Faculties of Life Sciences and Physical Sciences, enabling a new academic grouping of internationally recognised scientific researchers to take greater advantage of the increasingly close alignment of scientific disciplines.

Of the new faculty, Rector Sir Richard Sykes said: "Science doesn't stand still and our academic structures need to change too, to reflect new opportunities and understanding, and help us move our interdisciplinary thinking further forward.

"The research and teaching quality of the two present Faculties has always been recognised as pre-eminent, but what we are now creating is a Faculty of a similar size to Engineering and Medicine, and offering an improved balance to the community of scholars at Imperial."

The new Faculty will employ over 1,100 staff, teach over 2,700 undergraduates, train over 680 PhD students, and have a research income totalling £56.5 million (2004–05 figures).

Professor Sir Peter Knight, FRS, has taken up the post of Faculty Principal. He was previously Head of the Department of Physics, a post he had held since 2001.

## Enceladus continues to intrigue scientists



NEVILLE MILES

NASA's Cassini spacecraft obtained more detail about the features and processes of one of Saturn's 34 known moons, Enceladus, following a flyby on 14 July 2005.

Results from the magnetometer instrument in two previous distance flybys of Enceladus showed a flowing magnetic and plasma field from Saturn towards and then around the moon,

indicating the presence of an atmosphere.

On the basis of these results, Professor Michele Dougherty, Department of Physics and lead scientist for the magnetometer instrument, persuaded the Cassini team to take a much closer look at Enceladus: "We were able to get within 173 kilometres of the surface

and our data is starting to build up a really surprising picture of the processes at work. We were able to confirm the presence of an atmosphere following the third flyby, and while it was found around the whole body, a cloud of water vapour indicated a concentration at the south pole."

Images from Cassini revealed Enceladus' surface in incredible detail, including the intriguing south pole area which has a surprising hotspot and 'tiger stripe' features on the surface, which act like vents spewing out vapour and fine ice water particles that have become ice crystals. These findings support previous results that the moon's southern pole is currently active and has undergone episodes of geologic activity as recently as 10 years ago.

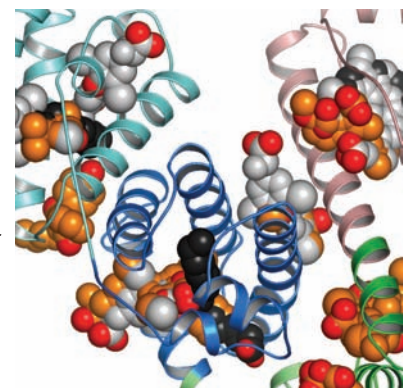
## Helping drugs get around

New research showing how drugs stick to a key protein in the bloodstream could help to create drugs that are delivered more effectively to organs in the body.

The research, published in the *Journal of Molecular Biology* by scientists at Imperial College, gives an insight into how human serum albumin (HSA) binds tightly to a wide range of different drugs

preventing them reaching their targets in the body. Detailed three-dimensional images show how HSA binds twelve different drugs including ibuprofen, diazepam and warfarin.

Dr Stephen Curry, Biophysics Group, said: "This is the first time we have been able to see high resolution images of HSA interacting with different drugs. Working out which features of HSA are responsible for binding drugs may make it possible to change the design of the drugs so they cannot be bound so easily."



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**Small farmers are key to easing poverty** Small farmers can be a driving force in cutting hunger and poverty worldwide, found a workshop organised by the International Food Policy Research Institute, the Overseas Development Institute and Imperial College London. Seventy per cent of the world's poor live in rural areas and the vast majority of these depend on agriculture as their main income source. Investment in small farm agriculture can help to raise them out of poverty and catalyse wider economic growth, participants at the *Future of Small Farms* research workshop concluded.

**Awards and appointments** Staff and students have been the recipients of numerous prizes and appointments over the past six months. Professor Sir John Pendry is a member of the international EXEL team that received the Descartes Prize for Research awarded by the European Commission. Professor Donal Bradley received the 2005 Latsis Prize for Nano-Engineering, awarded by the European Science Foundation. Professor Fotis Kafatos has been announced as the first Chairman of the Scientific Council of the new European Research Council (ERC).

**Mission to Mars unlocks the potential of gifted students** Gifted young people from around the UK spent three weeks at Imperial College in August to try their hand at space science research. Over 120 students between the ages of 11 and 16 took part. Students planned all aspects of a mock mission to Mars, from the launch to surviving in space and investigating the Martian environment. Working in teams, they designed, built and stocked a self-sustaining ecosystem that could be used to survive on the planet, as well as devising radio-controlled robots capable of exploring the landscape.

**New star survey sheds light on the evolution of galaxies** The first survey of the entire northern Milky Way for 40 years is shedding fresh light on the life-cycle of stars in our astronomical backyard. The latest high resolution instruments are being used to seek out stars and nebulae in the short-lived early and late phases of their evolution. The new survey reaches beyond the sun's orbit around the centre of the Milky Way to a radius of 30 kiloparsecs (kpc), around 90,000 light years. Currently almost nothing is known about the star populations beyond a distance of about 15 kpc.

## New technology transfer research chair for Tanaka

The commercialisation of discoveries in science labs and the promotion of innovation in large companies is the focus of a £1 million Chair in technology transfer in the physical sciences. The first of its kind in the UK, the Chair is funded jointly by QinetiQ, the hi-tech defence and security firm, and the Engineering and Physical Sciences Research Council (EPSRC).

One thrust of the new professor's research will be to develop a comprehensive understanding of why technology transfer models differ between biomedicine and the physical sciences or engineering. It will also analyse the barriers to successful technology transfer, the role of organisational culture and incentives and the effect of the intellectual property regime.

Imperial's Business School is acknowledged as a leading centre for research on the process of technology transfer. It is currently ranked fifth globally for entrepreneurship by the *Financial Times*, and its Innovation and Entrepreneurship Group recently won a series of major grants from EPSRC.

Professor David Begg, Principal of Tanaka Business School, said: "Imperial is one of Europe's leading universities for technology transfer, combining leadership in the creation of scientific intellectual property and proven success in its practical commercialisation. We are delighted that the EPSRC and QinetiQ have chosen to build on Imperial strengths in seeking to deepen our understanding of how effective technology transfer takes place."

## Dr Rifat Atun to chair WHO tuberculosis task force

Dr Rifat Atun, Director of the Centre for Health Management, will chair a new World Health Organization task force on health system strengthening and tuberculosis control.

Dr Atun is a leading expert in public health systems, and conducts research on behalf of international agencies on how health systems can contribute to efforts to control or eradicate public health diseases.

Dr Atun said: "Around one third of the world's population is infected with tuberculosis. Of these, around eight million people develop the active disease and each year two million people die from tuberculosis. The new WHO task force has been created as a direct response to the

fact that tuberculosis is a treatable disease and those two million deaths need never have happened.

"It will identify how the linkages between global disease management programmes and health system strengthening initiatives can be strengthened to reduce the number of deaths from this debilitating and prevalent disease."

## Business Week case study award winner

The Director of Imperial College's Entrepreneurship Centre, Dr Simon Barnes, has won the entrepreneurship category of the 2005 *Business Week/ECCH European Case Awards* with his case study exploring the venture capital financing of Renovo, a biotechnology start up company at the University of Manchester.

The Renovo case examines the issues central to the creation of technology start-ups from the viewpoint of both entrepreneurs and venture capitalists. The case also illustrates milestone-based financing for venture capital-backed technology start-ups, and the complexities of creating a business from within an academic institution. The case study was published in the *International Journal for Entrepreneurship Education*.

Dr Barnes said the Renovo case showed just what could be achieved in terms of venture financings: "After 18 months of developing business plans, talking to venture capitalists, negotiating with strategic partners and managing expectations, Renovo was close to securing the largest first round of venture capital finance ever seen in the UK for a life sciences start up.

"With this level of finance, the scientists involved were finally in a position to build the world's leading drug discovery company focused on scar-free wound healing therapies."

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**Lost laptops**\_The winners of the 2005 Tanaka Business School Business Plan Competition, *Doh! Lost and found*, think they have the answer to people losing personal electronic equipment.

The team offers an item retrieval service based on serialised identification tags that tell the finder how to return an item easily in return for a reward. Similar services are already popular in the United States and Australia, but despite retrieval rates exceeding 80 per cent in the US, web-based lost and found services have yet to take hold within the UK.

**Academic awarded MIT Beckhard prize**\_Professor Nelson Phillips is one of three academics to receive 2005's prestigious Richard Beckhard Memorial Prize. Awarded by the MIT Sloan Management Review (SMR), the prize goes to the authors of the most outstanding article published by the SMR on planned change and organisational development in the previous academic year.

Professor Phillips and his co-authors wrote *Managing Organisational Forgetting*, based upon the premise that an

organisation's effectiveness is equally determined by what it chooses to remember, to unlearn or not to learn in the first place.

**World class faculty for risk management degree**\_Tanaka Business School has made three major new appointments to its world class finance group to lead the new MSc Risk Management.

Karim Abadir, Professor of Financial Econometrics, was Professor of Econometrics and Statistics at the University of York, where he was Head of the Statistics Group.

Nizar Touzi, Professor of Mathematical Finance, is Associate Editor of *Mathematical Finance*, the *Journal of Financial Econometrics*, and *Finance and Stochastics*, and was previously Head of Finance and Insurance at CREST in Paris.

Andrea Buraschi, Professor of Finance, formerly held posts as Associate Professor of Finance at Columbia University and Assistant Professor of Finance at London Business School.

# features



- 10 **one hundred years on...** – with the College’s centenary approaching in 2007, Anne Barrett, College Archivist and Corporate Records Manager, explains what the past 100 years have meant for the College. Buildings, ceremonies and even the fixtures and fittings have become an integral part of College life.
- 12 **farewell to Southside** – Southside halls of residence were recently closed and demolished as part of the Prince’s Gardens restoration project. Imperial Matters pays tribute to Southside and its bar, and have found out what the future holds for the Prince’s Gardens.
- 14 **a trip to remember** – Dr Tony Griffiths recalls an adventure to sea, which took him to Holland, while he was a student at St Mary’s Hospital Medical School.
- 15 **science behind the policy makers** – three members of College staff currently act as Chief Scientific Advisers to government departments, Professor Roy Anderson for the Ministry of Defence, Professor David Fisk for the Office of the Deputy Prime Minister and Professor Sir Gordon Conway for the Department for International Development. Imperial Matters spoke to each of them about their roles, achievements and the challenges that they face.
- 18 **alumni in government** – many alumni play their own role in governments around the world, with roles ranging from an MP and government advisers to the recently appointed Governor of Western Australia.
- 20 **fifty, not out** – Dr Geoff Stephenson and Emeritus Professor Felix Weinberg have both worked at the College for than 50 years, they spoke to Imperial Matters about their experiences at the College over the years.



# One hundred years on...



THE CENTENARY OF IMPERIAL COLLEGE LONDON TAKES PLACE in 2007, commemorating the drawing together of three nineteenth-century institutions; the Royal School of Mines, the Royal College of Science and the City and Guilds College, to form the constituent colleges of the Imperial College of Science and Technology, a new school of the University of London.

Clearly this is a notable milestone and the College is currently putting together an events programme to commemorate its distinguished past, as well as to focus on the impact of current and more recent academic activities on the future.

In November 2005, alumni were invited, through the monthly alumni e-bulletin and alumni website, to suggest ways in which activities and events could be themed or targeted throughout 2007. A number of ideas were received and we are grateful for your input. We will publish an events calendar for the 2007 Centenary year later in 2006, and sincerely hope that many of you will be tempted back to South Kensington to join in our celebrations.

Additionally, the College is producing a commemorative DVD, and again we are looking for input from alumni in two ways. Firstly, we would like to hear from alumni who are interested in sharing their memories of their time at the College for the DVD. Interviews will be filmed on the South Kensington campus in Spring 2006.

Secondly, we are looking for alumni who are willing to donate or lend photographs, film, videos or paper-based media collected during your time at Imperial to the College archives. We are hoping to feature some of them in the DVD and any donations that alumni may choose to make will be kept in the College archives.

You can register your interest in being interviewed or in donating or lending an item to the archives by completing the online form on the alumni website: [www.imperial.ac.uk/alumni/news/dvd](http://www.imperial.ac.uk/alumni/news/dvd) or by contacting Zoë Perkins on +44 (0)20 7594 1971.

## ARCHIVE CORNER

To get readers into the Centenary mood, Anne Barrett, College Archivist and Corporate Records Manager, explains the background behind some of Imperial's traditions and heritage.

## THE FOUNDATION OF IMPERIAL COLLEGE

Imperial College owes its foundation to the need for an improved system of scientific education to support industry and so the economy. Germany was held to have the exemplary system in its Charlottenburg University. Imperial was to be London's Charlottenburg, a scientific university; it already had the basis in its constituent colleges, according to Lord Rosebury, who with Lord Richard Burdon Haldane, lobbied for the setting up of a committee to consider the matter.

The committee took two years to report and in 1906 concluded that the constituent colleges should become one and that new buildings were necessary to accommodate the new institution. This echoed what Lyon Playfair, first chemist of the Royal School of Mines and statesman, had wanted to achieve with Prince Albert, when they discussed the disposal of the profits from the Great Exhibition of 1851 and began developing the South Kensington site.

This is the brief view; Hannah Gay, of the Centre for the History of Science, Technology and Medicine, will complete her history of Imperial College in time for the Centenary year, bringing us up to date with developments in the twentieth and twenty-first centuries.

## BEIT QUAD AND THE UNION

Still an integral part of student life today, the original Students' Union building in the north of the quad was designed by Sir Aston Webb and built in 1910–11. The east side was designed to house the Departments of Botany, Plant Pathology and Physiology and was completed in 1914. The west side was constructed for Biochemistry, with a hostel at its north end, and the labs were



finished in 1923 and the hostel in 1925.

The quad was completed with a south frontage onto Prince Consort Road in 1931 and named the Beit Building after Sir Otto Beit, a generous supporter of the College, who gave over £40,000 to assist with the development of the Union and hostel. A plaque commemorating him is situated in the right-hand wall of the entrance to the Beit Building.

The Union has been enlarged, and in common with the other College buildings, considerably altered over the years. Recent refurbishments include the bar and disco, and the student accommodation was expanded when the academic departments moved out. Yet more developments are to come.

Outside, tennis courts took up most of the space in front of the building until a memorial to Sir Roderic Hill, a previous Rector, in the form of the quad designed with Portland stone and plantings was laid in 1957.

The original idea for a union building came from Sir Arthur Acland, a member of the governing body. He saw the need for a place in which students could meet and develop a collegiate social life. Sir Arthur 'emphasised the value in the life of students of a spirit of good comradeship, without which a student career was of little account' at the opening by the former Rector, Sir Thomas Holland, on 3 November 1911.

An article in *Phoenix* on the twenty-first anniversary of the Union describes the accommodation and notes that there was a reading room for women students – they were excluded from the bar for some years!

#### COMMEMORATION DAY

The graduation ceremonies, which take place each year at the end of October on Commemoration Day, recall the visit made to the College by King George VI and Queen Elizabeth in 1945, on the centenary of the foundation of the Royal College of Chemistry, Imperial College's oldest forerunner. The first celebrations, 60 years ago, took place at the Royal Albert Hall and there was also an exhibition, with the College buildings open to visitors for the following two days.

Some extracts from the running order for the ceremony include: "As His Majesty turns to the left to leave the platform the President of the Imperial College Union will call for 'Three cheers for Their Majesties'.

"Dancing will follow and (it is hoped) Light Refreshments, the dancing continuing until 4.30am. During the earlier part of the evening (i.e. from the time that Their Majesties leave the Albert Hall until, say 1.00 am) all members of the College should regard themselves as hosts entertaining their guests."

In his speech, the King referred to the contributions Imperial College war work had made to "total victory". Queen Elizabeth's farewell word to Sir Richard Southwell, the Rector at the time, was "inspiring".

#### LIGHT FITTINGS FROM THE ORIGINAL ROYAL COLLEGE OF SCIENCE BUILDING

An armillary sphere, or spherical astrolabe, is a skeletal representation of a celestial globe that was first used in the teaching of astronomy by the early Greeks and the Chinese. They often appear in Renaissance portraits, indicating wisdom and

knowledge on the part of the sitter.

One particular armillary sphere has found its way into the College archives as an example of the electroliers, or light fittings, that were part of the carefully thought-out construction and decoration of the Royal College of Science building, designed by the architect Sir Aston Webb and built between 1900 and 1906.

With an astrophysical lab forming part of the building, the theme was picked up in the decorative artwork of the light fittings. Of the many crafts suppliers who produced fixtures and fittings for the building, the Bromsgrove Guild made the stylised spheres. The guild was part of the art and crafts movement, which began in the nineteenth century and continued producing into the 1960s, using materials as varied as metal, wood, plaster, bronze, tapestry and glass.

The electrolier spheres are metal and held glass lampshades. The corporate records unit and archives adopted an image of this object as its logo some time ago. The object itself stands in a block of concrete outside the archives offices. Alumni are welcome to come up and see it – and the archives staff in Room 445 Sheffield Building, South Kensington campus.

#### SILWOOD PARK COURT ROLLS

The oldest documents held in Imperial's archives at South Kensington are manorial records, in the form of court rolls relating to Silwood Park, then Sunninghill Manor.

Manorial records are official documents associated with the administration and legalities of a landed estate – the manor house. The court rolls relating to Silwood date from the sixteenth century and end in the nineteenth. There are gaps where court sittings were not held, but there are subsidiary documents relating to land deals even from these times. The documents are mostly in Latin until 1729, then English. The last private owner of the land was a Philip Hill and it is thought that the title of Lord of the Manor ceased with his death.

Manorial documents are usually made of vellum, a kind of very resilient and long lasting calf or kid skin. They are mainly written in iron gall ink consisting of tannin, iron sulphate, gum and water. The ink is indelible, although depending on the proportions and quality of its constituents, it can fade. Originally black, we often see it faded to brown. Its resilient qualities meant that iron gall ink was used on official documents well into the twentieth century.

The handwriting on manorial records and other early official documents is formulaic, and once learnt, it is easy to read – much more so than the freehand of more recent times! Examples of this old style, known as court hand, can be seen at:

<http://homepages.rootsweb.com/~oel/courthand.html>

Manorial records were also generally created to a set formula, which makes it easier for modern day researchers to find what they are looking for. However, there were some variations according to local custom, the Recorder's, or Lord of the Manor's interest in transacting the business. This is evident in the Silwood records, which in the main discuss the transfer of land and admission of tenants, with some subsidiary documentation relating to accounts and rents paid.



*SOUTHSIDE HALLS OF RESIDENCE WERE CLOSED FOR REDEVELOPMENT ON 24 JUNE 2005 AND, ALMOST 42 YEARS TO THE DAY SINCE THE BUILDING WAS OPENED, ON 6 OCTOBER 2005, GUESTS GATHERED TO WITNESS THE RECTOR BEGIN THE DEMOLITION. WE PAY TRIBUTE TO THE BUILDING THAT HAS HOUSED OVER 14,000 STUDENTS AND HAS BEEN HOME TO MANY MEMORIES.*

# Farewell to Southside



BY ZOE PERKINS



WHEN PRINCESS MARGARET OFFICIALLY OPENED THE SOUTHSIDE halls of residence in 1963, it was listed as one of the flagship buildings of post-war university development. Due to its innovative plan and method of construction, the building was of considerable architectural interest. Designed in the manner of Le Corbusier by Sheppard Robson and Partners, rooms were connected by the high level 'streets' that ran the length of the horizontal slab block and the strong horizontal emphasis of the windows characterised the modernist building design.

Since that time, well over 14,000 students have lived there and many more have visited the bar. However, both Southside and Linstead halls are now the focus of the Prince's Gardens restoration project, and are being demolished to make way for two new buildings, designed by Kohn Pedersen Fox.

Permission to demolish Grade II-listed Southside was granted on the basis that the College retains Weeks Hall, which was listed at the same time as Southside and is of a similar design and construction.

Demolition became necessary because the buildings were beyond repair. In fact, continuous repair has been required since 1967, just four years after they were opened, and the deterioration continued over the years until, just prior to demolition of Southside, large chunks of concrete fell off its precast façades and the access balcony had to be closed for safety reasons. The aging buildings were also no longer providing good quality accommodation for students, offering adequate space or facilities, or meeting current environmental and disability standards.

The new buildings, due to open in September 2007, will provide six halls of residence, and will offer a mix of accommodation types for differing needs and budgets.

Although the new halls will undoubtedly be modern, they will fit more sympathetically with the surrounding buildings, restoring the original sense of integrity and enclosure to Prince's Gardens that

was lost as a result of the urban design strategy of the 1950s. The cornice lines of the nineteenth-century terrace have determined the height of the new buildings, and although this means a reduction in the number of storeys, the number of students who can live in the halls will actually increase through much more efficient use of space. Renowned landscape architects, Kim Wilkie, will complete the restoration with a facelift for the Prince's Gardens square.

## SOUTHSIDE BAR

As much a part of College life as Southside itself was Southside Bar. Playing an integral part in the life of Imperial's students for over 40 years, it was a place where friendships were forged, anecdotes swapped, banter indulged in and even a place where knowledge changed hands. Elections and other aspects of student politics were all plotted over pints, as were tours and holidays.

In 2004, Southside Bar was voted runner-up in the National Club of the Year competition and it held the Campaign for Real Ale's Greater London Club of the Year title from 2001–2004. The bar was recognised for its range of beers and keen pricing. Around eight constantly changing and sometimes rare, cask-conditioned ales were served at any one time, including strong ales, seasonals, wheat beers and milds.

Southside Bar was opened with the building in 1963, but it was during its refurbishment in 1981 that it took on its award-winning form. Roger Pownall (Chemistry 1974, Southside Bar Manager 1981–2005) remembers the bar back in the early 80s: "At the time of its refurbishment Southside was a trendsetter. It was actually the first university pub to have a purpose-built bar."

The welcoming feel of a traditional English pub made the bar a winner with students and staff alike as a former barman recalls: "A quick survey of the clientele any weekday lunchtime or early evening would reveal an entire cross-section of the College community; a number of undergraduates, some College



administrators, a couple of academics, maybe with their research group, some MSc students brainstorming over a beer and a bite, some maintenance staff, and a couple of lab technicians.”

Over the years the bar played host to a number of exciting characters. Sir Vivian Fuchs, polar explorer, who led the first surface crossing of the Antarctic, was among the first visitors to the bar in July 1964, and first to sign the bar’s visitors book. Miss Great Britain 1963, Gillian Taylor, also made a visit to the bar.

Four decades later a number of alumni returned to Southside to enjoy a final drink before the bar closed its doors for good. Many former students returned for the reunions that took place, including those for former bar staff, Engineering and the Links Club, RSM and the Chaps Club, RCS and the ’22 Club, Environmental Science and the College rugby team from the late 80s and early 90s. Individual alumni also flew in from all around the world, including Australia, Canada, Zimbabwe and South Africa, to meet with old friends from College days and to ensure Southside got a proper send off. On the final night the bar was full to bursting as current students and alumni were all eager to toast the bar and the memories it held.

Harrington’s Bar and Grill in Linstead Hall has now replaced Southside Bar. Roger Pownall, Bar Manager, would be delighted to see some familiar faces in the new bar.

### Many alumni have fond memories of Southside Bar. We’ve gathered a collection of them from some of the familiar faces you might have seen at the bar over the years.

**Chris Molam** (Electrical Engineering 1965, Mining Engineering 1967) was Deputy President of Imperial College Union and student representative on the College Wine Tasting Committee. Chris remembers: “After the wine tasting each member was allowed to select the remains of a bottle tasted, with me taking the bottles left over. I brought many bottles down to the Southside Bar, for a group of us to sample – this led to many more fine celebrations there!

“Southside Bar has a special place in the happiest memories of many Imperial students.”

**Dick Conn** (Physics 1966) was saddened to hear of Southside’s demolition: “Those bare concrete walls had a special place in my affections as an icon of the 60s and my student years at Imperial.

“In comparison to the Union, Southside Bar was quieter, more comfortable and even sophisticated. It was the bar of choice for a drink with female friends, and since Imperial had such a small percentage of women students, this was an activity that earned diligent attention!

“My memories of life as a resident include great staircase parties that were surely a permanent feature at Southside, encouraged by the unique vertical communities that the staircase architecture created – but I can’t imagine that the warden’s sherry parties, which even then seemed a relic of an earlier age, survived much longer.”

**Terry Knott** (Chemical Engineering 1971, MSc DIC Civil Engineering 1972) remembers when he was a fresher, living in Falmouth Hall: “Southside Bar was my local. It was a very civilised lounge in those

days, quiet and comfortable. Nothing like its eventual format!

“I recall that Watney’s Red Barrel – quite awful keg beer – was only one shilling and ten pence a pint (less than ten pence). This may sound cheap nowadays, but it’s all relative – a term in Falmouth was only about £30 then! The problem with Red Barrel was that it was so weak you had to spend half your term’s grant in one evening to feel any effect. Or so they tell me!”

**Roger Pownall** managed Southside Bar for 24 years. “There is so much history and tradition attached to the bars at Imperial College that alumni continue to return long after they have graduated. There were always different people coming into Southside Bar and I have many good memories from over the years. Although I miss Southside Bar I hope that in time the new bar in Linstead Hall will be just as successful.”

**Professor Nigel Bell** is Professor of Environmental Management at Imperial. Southside Bar was the haunt of students on the MSc in Environmental Technology from the time the course began in 1977 until the bar closed in 2005.

Professor Bell recalls: “Following the environmental policy seminars every Thursday afternoon there was a mass exodus to Southside Bar where the festivities continued until closing time. It would be interesting to know how much cash our 2,000-plus graduates have passed over the bar in the last 28 years, certainly a substantial sum!”

On the penultimate day of the bar’s life a reunion was held for alumni and current students to say farewell. “A large number of alumni turned up, as they so often have on Thursday nights, and they gave the bar a good send-off. We miss the bar very much, but look forward greatly to its successor in Linstead Hall.”

**Adrian “Jelly” Johnson** (Electrical and Electronic Engineering 1987) could be found either side of the bar, working or drinking. “Southside Bar for me was always a place where I could find a friendly face, a fine range of beer and good service. We had more fun there than you’d think was likely, or even possible.

“There are times that I remember being in Southside because they were earth stopping moments, other times I remember just because of the atmosphere or the fun we were having. Until the late 1980s, the Guinness barrel sat behind the bar, rather than in the cellar. Every time the barrel needed changing you had to go down the complete length of both bars to the end cellar to get another barrel. Our game used to be to run down the length of the bar, pushing the upright barrel and to figure when to stop running. We would just hold onto the barrel and slide, like a bizarre game of curling. Woe betide those who left it too late to start sliding (especially on a busy night when the floor was wet!).

“Although Southside bar did have its downsides (it could be seriously overcrowded on a Friday night, the air conditioning was more mythological than legendary and a degree of shabbiness crept into the environs) it was Bagpuss to our Emily; it may have been old and saggy and a bit loose at the seams, but we loved it anyway.”

**We hope this brings back your own memories of Southside and its bar, if you would like to share your memories you can submit them online at: [www.imperial.ac.uk/alumni/news](http://www.imperial.ac.uk/alumni/news)**



*DR E.A. (TONY) GRIFFITHS IS A RETIRED OPHTHALMOLOGIST, LIVING IN NEW PRESTON, CONNECTICUT. THIS IS HIS RECOLLECTION OF AN ADVENTURE AT SEA, WHICH TOOK PLACE WHEN HE WAS A MEDICAL STUDENT AT ST MARY'S HOSPITAL MEDICAL SCHOOL. WE HOPE THAT IT PROMPTS SOME MEMORIES OF LIFE IN THE FABULOUS FIFTIES.*

# A trip to remember

BY DR TONY GRIFFITHS (ST MARY'S HOSPITAL MEDICAL SCHOOL 1952)

IT WAS EARLY SUMMER IN 1950. I WAS MINDING MY OWN business, looking at the cartoon strip *Just Jake* and his lightly clad Jane in the *Daily Mirror* in St Mary's common room, when Jeremy Lawson (St Mary's 1953) came up to me and quietly asked if I would like to sail with him, Gordy Greville and his father, Doc Greville, in the Royal Ocean Racing Club's (RORC) race to Holland. No passport, little money and little else, never having left the country before, "OK," said I. "Let's go!" So off to the passport office we went, where they dished out a three-week pass. We were on the train to Harwich that evening.

Arriving in Harwich, there was no boat, but a great pub where we sampled *Bols* Dutch gin for the first time. I cannot remember where we slept that night but we awoke the next day to hear that Doc Greville and his accountant navigator, Cutty, had arrived by some mischance after having been lost in the English Channel. "Do you want crew?" we asked. "You bet," was the reply. So we pier jumped with Gordy onto his dad's yacht, *Erivale*, and off we went.

At first, a pleasant reaching breeze blew us 150 miles towards S2 lightship, but soon the weather began to freshen and the 2,000 square foot spinnaker was torn to shreds. But on we sailed and rounded the S2 at dusk when my watch finished. I retired for a snooze in a hammock, only to be awoken four hours later for a second watch.

I expect most of us are not quite awake when we first arise, and that was the case with me. It took me some time to realise that I was dressing standing with my two feet on the side walls of the cabin, which made me think that the yacht was not perfectly upright either. (I did not study engineering at Imperial, as you may well be able to discern!) Indeed my suspicions were confirmed when exiting the hatchway, I found the lower parts of the sails wallowing in the North Sea and my feet soaking wet as the briny came over half of the deck, swamping the hatch.

By now, fully awake, I remembered the skipper's words of wisdom when we embarked: "By the RORC's rules, if you fall overboard, we must try to look for you – but we won't find you."

Down came the genoa and the mainsail was shortened, but that did not seem to make much difference to the angle of the yacht, and in the darkness of the night onwards we sped, seeing a tramp steamer a quarter of a mile away over the billowing waves and enormous swells. I wondered if I would ever see the light of day again.

Which way to the Hook of Holland, 200 miles away, I thought? Ah, but we had on board Cutty, that excellent navigator. Unfortunately he too had sampled the Dutch gin and we recalled that the reason there was no yacht when we arrived at Harwich was because Cutty had lost the way.

We continued to battle with the storm through the night, and then, lo and behold, there was the Hook of Holland in front of us, and we had won the race, mainly because everyone else had heaved-to to ride out the storm. But worse was yet to come when we tacked and had to tighten the huge bronze lever that held up the weather shroud. It was wet, and when I touched it, it was highly charged with static which caused semi-convulsions from my fingers to my toes, but with Skip bellowing at me, and taking what seemed to be an eternity, the lever slowly and surely moved 180 degrees and the mast was saved.

It was quite a change motoring up the River Maas to Rotterdam. Doc Greville came up trumps when we landed at De Maas Yacht Club, taking us to the slickest restaurant in town, where we had a six-course meal, with Dutch gin between the courses – a real change from the austere post-WWII British dining experience!

After we had been there a day and a half and had thoroughly introduced ourselves to the city, the passport officer arrived to enquire if we had passports. We said that three out of the six of us had them, so he was quite happy with that and settled down in the cabin to sample our wine cabinet.

After a trip to Gouda, hitched in a trailer-tractor, to see Holland's famous windmills, we were more than relieved to learn that Doc Greville was going to sail back to the UK soon, especially as I only had a train return ticket to London and sixpence for the underground.

Please send us your own memories of your time at Imperial College, Wye College or one of the former medical schools, either via the alumni website: [www.imperial.ac.uk/alumni/news](http://www.imperial.ac.uk/alumni/news) or to the Editor, Imperial Matters, Imperial College London, Office of Alumni and Development, South Kensington Campus, London SW7 2AZ.

Memories may also appear online as part of the Alumni Memories page on the alumni website.



THREE IMPERIAL ACADEMICS TALK TO IMPERIAL MATTERS ABOUT THE ROLES THAT THEY PLAY IN PROVIDING SCIENTIFIC ADVICE TO GOVERNMENT.

# The science behind the policy makers

BY LIZ GREGSON AND ALEX PLATT

ONE OF THE KEY FINDINGS OF SIR NICHOLAS PHILLIPS' 1998 inquiry into BSE identified that the way that science informed government decision-making required serious review. A second inquiry into the scientific advisory service ensued, in which the House of Commons select committee on science and technology made several recommendations.

Key amongst these was that the provision of sound scientific advice to government was of crucial importance, and that this advice would benefit from a greater degree of independence and neutrality, drawn from a broader range of sources. It was hoped that a more independent system, which imparted openly accessible information, would improve public credibility of government policies based on scientific advice.

A modified system has since been implemented which employs Chief Scientific Advisers who are associated with organisations outside of the government, rather than employed on a full time basis by the department. At present, three of these are Imperial academics – Professor Roy Anderson, Chair of Infectious Disease Epidemiology, Professor David Fisk, BP/Royal Academy of Engineering Chair of Engineering for Sustainable Development and Professor Sir Gordon Conway, Professor of International Development – a rarity for one institution.

Professor Anderson has held the post of Chief Scientific Adviser at the Ministry of Defence since October 2004, Professor Fisk has held governmental Chief Scientist posts since 1988, and is currently Chief Scientific Adviser to the Office of the Deputy Prime Minister, and Professor Conway became the first Chief Scientific Adviser to the Department for International Development in December 2004.

We talked to each of them about their respective roles, the particular issues each one faces and the importance that science and technology plays in political decision-making.



JAN CHLEBIK

## Science and the military MINISTRY OF DEFENCE

**Professor Roy Anderson** is a scientist with a long standing relationship with Imperial College, which began with a degree in biology, and subsequent PhD in parasitology. Spells at Oxford and King's followed, before he returned to

Imperial in 1977, later becoming Head of the Department of Biology. Going back to Oxford in 1993, he returned to Imperial in 2000 to take up a Chair in Infectious Diseases Epidemiology.

As Chief Scientific Adviser to the Ministry of Defence (MoD), he holds the longest standing of such posts within the government, which originates from the close relationship that developed between the operational commanders and the defence research staff in the Second World War.

The post was formally established in 1960 and first appointed to the role was celebrated medical physiologist, Sir Solly Zuckerman. A long list of equally distinguished successors followed including Sir Keith O'Nions, now Director General of the Research Councils, and Lord Oxburgh, prior to his rectorship of Imperial College.

The responsibilities of the post have remained broadly similar since its creation, as has the credibility given to the role by the military. Professor Anderson explains: "It is one of only two posts appointed at a Permanent Under-Secretary level, the other being the Chief Scientist to the Prime Minister, currently Sir David King.

"I sit on the Formal Defence Management Board and the Defence Council, whose membership includes Ministers and the Chiefs of Staff. So I can participate in all areas of decision-making and am regarded as an integral part of this process.



"It is essentially a full-time job. I am employed by the MoD for four and a half days per week and for half a day by the College, which allows me to continue with some of my research."

A career in the defence sector may seem an unusual choice for an epidemiologist, but Professor Anderson points out: "Biomedical sciences are not insignificant in defence now. Huge advances have been made for the benefit of human health but these coins are double sided. If somebody has evil intent, what you can manipulate to improve health, could be adapted to inflict harm."

"I am very interdisciplinary in my research, I always have been. I learnt a lot about applied mathematics and computation in the Department of Biomathematics at Oxford, and throughout my research career I have used models and mathematical analysis as a central part of biology."

The research spectrum of the Ministry of Defence is broad, ranging from molecular biology through to electrical engineering, and covering every aspect of science. The role of Chief Scientific Adviser involves constantly scanning technologies across this broad spectrum, and has the support of approximately 120 staff in the main office dealing in specialist areas. Additionally, across the defence service agencies there are around 6,000 scientists and engineers, again capable of providing specialist expertise to Professor Anderson, as well as contacts within his own scientific networks, such as the Royal Society.

There are several aspects to the role that makes Professor Anderson's working life both challenging and enjoyable.

He explains: "An unexpected joy is how impressed I have been with the professionalism of my colleagues in both the civil service and the military. I work with some very talented individuals. The civil service culture in the MoD benefits enormously from that of the services, who adopt a 'can do' attitude in terms of solving problems."

"The defence R&D budget in the MoD is £500 million per year, presenting opportunity to actually commission research that solves problems. But an even greater difference is the urgency. If issues come up, they need to be solved as quickly as possible."

He continues: "Another significant difference is going from an environment where you are always publishing and talking about your work, to one in which in many areas it is not appropriate to discuss results. I have come from a culture where submitting your results to a peer review journal and talking to the media are exciting parts of completing a project, but you have to adapt because the reasons for doing so are very good."

The Chief Scientific Adviser to the MoD also chairs the Investment Approvals Board, responsible for large procurements of over £100 million. Professor Anderson explains: "There is an extremely rapid pace of change in technology, whether it is in electronics and software, materials, or sensors, both infrared or satellite orientated. In procurement, whether it is an aeroplane or a ship, you have constantly got to think about a design architecture that will allow you to replace the components that are likely to evolve rapidly."

When asked about the issues that face defence, Professor Anderson says: "Countering terrorist threat is of importance in both the defence and the civil sectors. Whether in Iraq or

London, we are interested in technologies that detect explosives. There are some very exciting scientific approaches to this and developing technologies to mitigate against terrorist or insurgent activity will be a theme for the coming years.

"One of my current priorities is to create very strong interactions in science and technology between the MOD, universities and industry so that we get some of the very best minds involved in solving the challenges we face."



## Science and community

OFFICE OF THE  
DEPUTY PRIME MINISTER

Professor David Fisk has played a long standing role within the scientific advisory system to government and is currently the longest serving Scientific

Adviser to the government.

He began in 1988 as Chief Scientist to the then Department of the Environment and for most of the 1990s, worked on the climate change negotiations, which took place in the lead up to the Kyoto Protocol, as well as on radioactive waste policy, the UK's first national air quality strategy and the safe release of genetically modified organisms and chemicals into the environment.

He is currently the Chief Scientific Adviser to the Office of the Deputy Prime Minister (ODPM). Professor Fisk explains: "The ODPM has responsibility for most of the things that relate to physical place in England – the planning system, housing policy, local government, building regulations, fire regulations. The Chief Scientific Adviser is part of the machinery within the ODPM which analyses the evidence upon which policies are based."

The department places special emphasis on creating sustainable communities according to Professor Fisk: "The big technical issue for the department currently is raising standards in new housing, in particular for thermal performance, and reducing CO<sub>2</sub> emissions."

In his long career of providing scientific advice to government, the most challenging issue that Professor Fisk has faced has been handling the uncertainty of climate change. He explains: "Climate change has always been carried out in an international forum, is governed by a great many variables and has huge risk attached." He was instrumental in the formation of the Hadley Centre for Climate Prediction and Research, which was founded to consolidate expertise for global climate models.

Soon to step down from his secondment to the ODPM, Professor Fisk hopes that his legacy to the scientific advisory system will be his contribution to raising awareness that handling science as evidence is important in the political world. As for his successor, he believes: "The next big issue will be getting used to living in an uncertain energy future, particularly as buildings consume around 40 per cent of the nation's energy usage."

As his term comes to an end, it seems the future will not hold any fewer challenges for Professor Fisk. He joins Professor Nilay Shah, Department of Chemical Engineering and Chemical Technology, as co-director of the Imperial's BP funded Urban Energy Futures project (see page 5), which will attempt to document and understand in detail how energy, people and materials flow through a city, in order to use this information to improve the efficiency of both existing and new-built cities.

Explaining that 80 per cent of the world's population is projected to be living in cities by 2030, he says: "Reducing the amount of urban energy wasted is critically important if we want to tackle diminishing natural resources and climate change. We're going to try to find out what savings could be achieved if whole cities organised themselves to integrate their energy use. The savings from optimisation could be huge."



## Science and the developing world

DEPARTMENT  
FOR INTERNATIONAL  
DEVELOPMENT

**Professor Sir Gordon Conway** was appointed as Chief Scientific Adviser to the Department for International

Development (DFID) in December 2004, a new part-time post which provides science and technology advice and support to DFID.

DFID manages Britain's aid to poor countries, working to eradicate extreme poverty. Professor Conway spends four days a week with the department and one day at Imperial, where he returned in 2004 as Professor of International Development, following his retirement as President of the Rockefeller Foundation. He had previously worked at Imperial from 1970–88, founding the Centre for Environmental Technology.

He explains the origins of the new post: "My role came about after a report was produced by a House of Commons select committee in 2004 that listed certain criticisms of DFID, one of which was that not enough attention is paid to the areas of science and technology. My aim is to raise the profile of what we do within that arena, letting people know that in 2006–07 we in fact plan to spend £5 billion on international development."

Professor Conway can be asked to advise on any number of issues. He explains: "If you take all the problems of development, just for example, ill health or a lack of clean water, most can be solved by a mix of economic and

technological measures. It is rare that these things can be resolved with only one of these. To aid this collaboration I work very closely with Tony Venables, Chief Economist for DFID. This partnership is a very strong and productive one."

The latest issue to face Professor Conway, and perhaps the biggest since being in post, is the current outbreak of avian influenza in south east Asia. He says: "If the form of the flu changes and humans become able to contract it and pass it on, the centre of the outbreak will be there. I've been pushing for a major investment programme in this area and am very happy that this has now been confirmed."

The position means that Professor Conway must travel regularly: "I'm lucky enough to travel all around the world; I am just back from China where I've been looking at soil and water erosion and my next trip will be to Tanzania to speak on the challenges of climate change. There are obviously such different issues for each country, but the biggest satisfaction is the satisfaction I gain from demonstrating the role of science and technology to those who don't understand how it can help."

According to Professor Conway the most challenging aspect of his role is: "The design of approaches that countries can take to prevent them suffering from climate change, Bangladesh being the most recent. We need to establish how they can protect themselves from those things out of our control. Cyclones, storms, increased rainfall and drought can all have devastating consequences."

Another challenge is the change to working in a political arena. Professor Conway explains: "Despite being a civil servant, I'm having to learn to be a politician. There is such an enormous amount of politics, both internally between different departments, and with other countries. One of the most political issues of all is this one of climate change. It has been an interesting learning curve!"

His previous position as President of the Rockefeller Foundation provided good grounding for his current role, in terms of the common aim of alleviating poverty. "However," Professor Conway explains "the biggest difference is obviously the amount of money available to us. We had \$200 million a year at the Rockefeller Foundation, and we specialised in showing how problems could be solved, rather than having the funding to actually do so. At DFID we have \$9 billion per year and try to apply research findings to help millions of people all over the world – a much bigger challenge."

When asked about the legacy that he would like to leave to DFID, he replies: "I think one of my biggest contributions to the department will be their enthusiastic desire to continue having someone in this post when I eventually leave. In the past year I think we have fully established the need and usefulness of this position to the department, which is really fantastic."



*IMPERIAL ALUMNI, IN THE UK AND OVERSEAS, ARE INVOLVED IN MAKING LANDMARK DECISIONS AND DEVELOPING PIONEERING POLICIES IN THEIR ROLES WORKING FOR, AND ADVISING, GOVERNMENTS. THEIR WORK IS SHAPING THE SOCIETIES IN WHICH WE LIVE. IMPERIAL MATTERS SPOKE TO SOME OF THEM ABOUT THEIR ROLES AND WHAT THEY HAVE ACHIEVED.*

# Alumni in government



BY ZOË PERKINS



**ADAM AFRIYIE, MP**  
Member of Parliament for Windsor

Adam Afriyie (Agricultural Economics 1987) was elected to Parliament as the Conservative MP for Windsor in May 2005. Adam has been a member of the Conservative Party since 1990 and is the first black Conservative MP. Adam's priorities as an MP include reducing aircraft noise, combating over-development and ensuring flood protection. Adam is also a spokesman for the "no to the Euro" currency campaign.

Although Adam was only recently elected as an MP, he is already beginning to achieve his goals. "I am pleased to serve on the Science and Technology Committee, which is investigating the reduction of greenhouse gases. It was also a delight to argue against the internment of terror suspects for 90 days without trial, as I believe additional resources would achieve a better result for national security. But it's early days and there is still a lot to achieve. We should be looking to assist the elderly, the less well off and the most vulnerable."

In addition to his role as an MP, Adam is founding Director of Connect Support Services, an IT support services company, and Chairman of DeHavilland Information Services. Past appointments have been as a Governor of the Museum of London, a Trustee of the Museum in Docklands and a Director of the think tank, Policy Exchange. Adam was a regional finalist in the 2003 Ernst and Young Entrepreneur of the Year awards.



**SIR BRIAN BENDER, KCB**  
Permanent Secretary, Department of Trade and Industry (DTI)

Brian Bender (Physics 1970, PhD 1973) became Permanent Secretary of the DTI in October 2005. He works closely with the DTI's ministerial team to

increase competitiveness and scientific excellence and, in turn, generate higher levels of sustainable growth and productivity in Britain.

Sir Brian draws upon his experiences from Imperial in his role as Permanent Secretary. "As the DTI is responsible for managing the government's science budget to the research councils, having a physics degree and doctorate has been very useful to me. The same was true when I was head of the Department for Environment, Food and Rural Affairs, as it is also a very science-based department."

Sir Brian has worked in central government since graduating in 1973. "I started talking to people about a career in public policy in 1972, as I realised during my PhD that I wasn't really cut out for a career in research." Prior to holding this position Brian spent some time working for the Cabinet Office. More recently, he was Permanent Secretary at the Ministry of Agriculture, Fisheries and Food and Permanent Secretary at the Department for Environment, Food and Rural Affairs. He was made a Knight Commander of the Order of the Bath in 2003.



**PROFESSOR MARIA DA GRAÇA CARVALHO**  
Policy Analyst, Bureau of European Policy Advisers

Maria da Graça Carvalho (PhD Mechanical Engineering 1983) is a policy analyst in the areas of science, higher education, energy, transport and environment for the Bureau of European Policy Advisers (BEPA). BEPA, a department of the European Commission, provides advice and formulates recommendations on issues regarding the policy of the EU.

In addition to her role at BEPA, Maria da Graça is a Professor at Instituto Superior Técnico, Lisbon, Portugal. She has 20 years' research experience in the areas of energy, environment and sustainable development and was formerly Minister of Science, Innovation and Higher Education for the Portuguese XVI



Constitutional Government. Maria da Graça was designated a Great Official of the Order of Public Instruction by the President of Portugal in 2002 and decorated with the Great Cross by the Chancellery of the International Order of Merit of the Discoverer of Brazil in 2005.



**DR SUE ION, OBE, FRENG**  
**Member of the Council for Science and Technology**

Sue Ion (Metallurgy 1976, PhD 1979) is an independent member of the Council for Science and Technology (CST). The CST is the UK government's top level advisory body on science and technology policy issues,

advising the Prime Minister on strategic issues that cut across the responsibilities of individual government departments. The CST's work is based on five broad themes: research, science and society, education, science and government, and technology innovation.

Sue is Executive Director of Technology for British Nuclear Fuels, responsible for the BNFL group's research and technology activities. She has held a number of public roles in the past, including Council member and Chair of the Audit Committee for the Particle Physics and Astronomy Research Council.

Sue was awarded an OBE for services to the nuclear industry in 2002, elected a Fellow of the Royal Academy of Engineering in 1996 and won the Hinton Medal for excellence in nuclear engineering in 1993.



**DR TIDU MAINI**  
**Trustee, Emirates Foundation and Member of the Joint Advisory Board, Texas A&M University at Qatar and the Qatar Foundation**

Tidu Maini (Civil Engineering 1966, PhD Rock Mechanics 1972) is a member of the Joint Advisory

Board for Texas A&M University at Qatar (TAMUQ) and the Qatar Foundation. TAMUQ brings world class engineering programmes and research to the Gulf region, in line with the Qatar Foundation's aims of progressing education, research and community welfare.

As an independent member of the board, and based on his extensive experience, Tidu provides advice and recommendations regarding the management and operation of TAMUQ in a number of areas, including the organisation's long-term strategy, future projects and student recruitment.

Tidu is also a Trustee of the Emirates Foundation, which has an initial fund of \$1 billion. The Foundation aims to enrich intellectual, social, and community development, embracing all aspects of life in the UAE. Initiatives span arts and culture, social development and the environment, as well as education. Both foundations were established to improve quality of life for their citizens.

Tidu has a wide range of commercial and strategic management experience, which he brings to these roles. Previously he was Senior Vice President of Schlumberger and, prior to that, a Main Board Director of Sema plc and Deputy Chairman of GEC Marconi. He said: "I've always wanted to work with, but not directly for, government. It is enabling me to pass on my years of commercial experience to government."

Tidu is currently Pro Rector for Development and Corporate Affairs at Imperial College and was involved in the technical aspects of London's 2012 Olympic bid.



**HIS EXCELLENCY DR KEN MICHAEL, AM**  
**Governor of Western Australia**

Ken Michael (PhD Civil Engineering 1967) became Western Australia's Governor on 26 January 2006. Ken officially took up the appointment and moved into Government House on Australia Day. As Governor, Ken will represent Queen Elizabeth II as Head of State, undertaking important constitutional, ceremonial and community functions.

Ken was honoured and surprised to be considered for the position. "I am thrilled to have the opportunity to serve my State and to cap off my public service career. I see it as a wonderful opportunity to make that additional contribution, which is something I truly believe in."

Throughout his very successful career as an engineer, Ken has contributed greatly to government, business and the community within Western Australia. He joined Main Roads, Western Australia's State road authority, following graduation from the University of Western Australia in 1961, subsequently becoming Commissioner in 1991. Following his retirement in 1997 Ken took on a number of roles, which he still holds, including Chancellor of the University of Western Australia, East Perth Redevelopment Authority Chairman, W.A. Museum Chairman and Economic Regulation Authority member.

Ken was the recipient of the General Division of the Order of Australia in 1996, named Western Australian Citizen of the Year in 2001, awarded the Peter Nicol Russell Memorial Medal in 2002 and the Centenary of Federation Medal in 2003.



**PROFESSOR PRIYANTHA WIJAYATUNGA**  
**Director General, Public Utilities Commission of Sri Lanka (PUCSL)**

Priyantha Wijayatunga (PhD Electrical Engineering 1992) was appointed the first Director General of PUCSL when it was established in July 2003. PUCSL

was initially involved in regulating the restructured electricity industry. Other sectors have now been brought under PUCSL's remit, including water and petroleum, making it the first multisector regulator for infrastructure in South Asia.

Priyantha was involved in establishing the organisation right from the beginning. "I feel a sense of achievement that I have made a major contribution in building and developing PUCSL, which has played a major role in advising the Ministry of Energy over the last two years."

As PUCSL is such a new institution, Priyantha feels there is still a lot he would like to achieve. "I would like to see PUCSL take full control over regulation of the main infrastructure sectors such as electricity, petroleum, ports and water in the near future, and make their services efficient, transparent and accountable to the public."

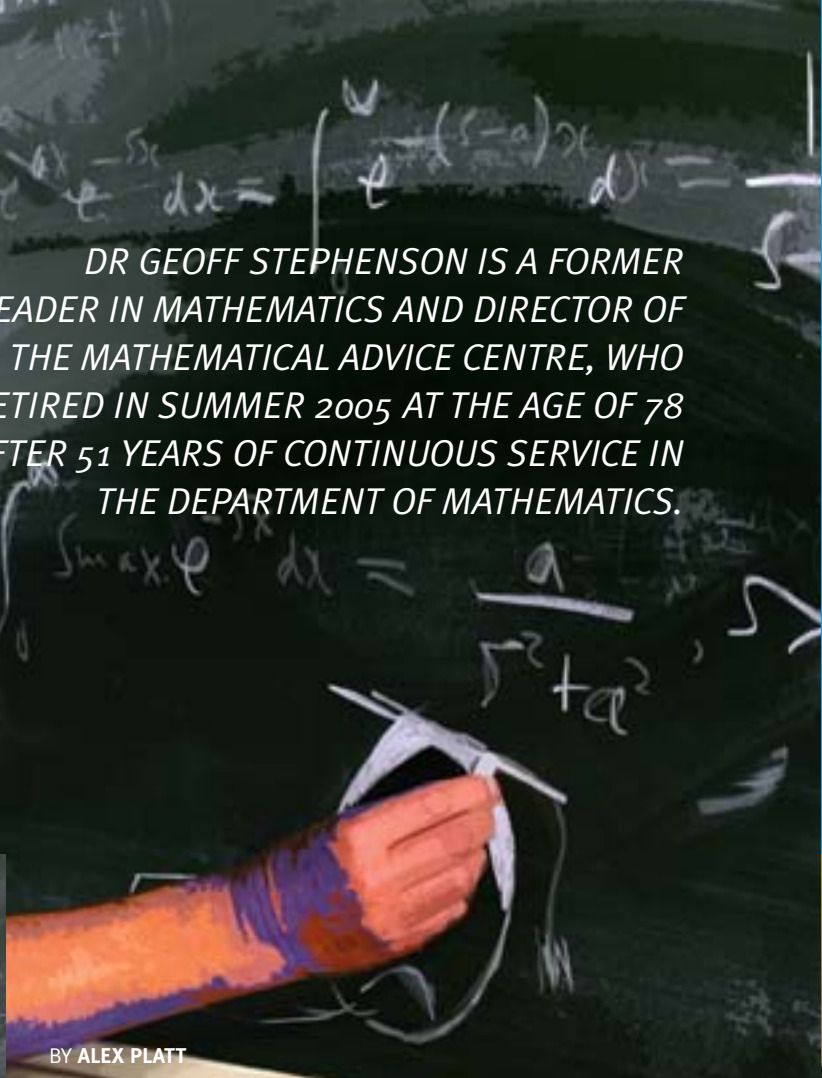
Prior to his role at PUCSL, he was extensively involved in teaching, research, and consultancy services in the field of energy, both in Sri Lanka and abroad. Following his PhD, Priyantha returned to the University of Moratuwa, where he obtained his first degree, as a Senior Lecturer in Electrical Engineering. Subsequently, he established the Faculty of Information Technology at the university, taking up the post of its Dean.

Recognising his achievements in the academic field, Priyantha was awarded the Jaycees Top Young Persons Award for Academic Achievements and Accomplishments in 2002.

feature

DR GEOFF STEPHENSON IS A FORMER READER IN MATHEMATICS AND DIRECTOR OF THE MATHEMATICAL ADVICE CENTRE, WHO RETIRED IN SUMMER 2005 AT THE AGE OF 78 AFTER 51 YEARS OF CONTINUOUS SERVICE IN THE DEPARTMENT OF MATHEMATICS.

# 50, not out



BY ALEX PLATT

GEOFF'S TIME AT IMPERIAL BEGAN IN 1948 AS A NEW PHYSICS PHD student under Professor Sir George Thomson, FRS. His research primarily concerned the quantum theoretical calculation of atomic and molecular transition probabilities. In 1950 he was awarded a postdoctoral Royal Society research fellowship to continue this work and in 1951 he received an ICI fellowship where, under Professor Sir Harrie Massey, FRS, he extended his research interests to classical field theory and semi-classical quantum theory, a research area to which he has contributed many papers.

In 1954, Geoff was appointed Lecturer in Mathematics, with promotion to Senior Lecturer in 1963 and to Reader in 1965. He has taught mathematics in most engineering departments at Imperial and proved to be a very popular lecturer. Professor Peter Cheung, Deputy Head of Electrical and Electronic Engineering, said of his former lecturer: "Geoff is without doubt the most remembered lecturer among the alumni. In the numerous alumni events I have attended in the past ten years, almost everyone I've met has asked about him and commented on how much they enjoyed his lectures."

Geoff explained: "I have always cared deeply for the success and welfare of my students, amongst some of whom I retain strong friendships. Teaching has always been my big focus. I've been so lucky to have had the chance to help young people achieve success.

"During the time I have spent at Imperial, I have probably taught over 10,000 students. I'm lucky to be able to say that I've enjoyed many good times with many generations of Imperial alumni. I hope that many of those also look back fondly at their time at the College, and the experience of international friendship on offer here."

In 1984, recognising the increasing mathematical needs of engineering and science postgraduates, Geoff set up the Mathematical Advice Centre, which dealt with over 4,000 mathematical problems over 21 years. The service has now largely

been replaced by the use of powerful computer-based algebraic systems, such as Mathematica, Maple and Matlab, and the centre finally closed at the end of June 2005.

During his time at Imperial, Geoff wrote many mathematical texts for undergraduates, the most successful being *Mathematical Methods for Science Students*, a standard text at Imperial and in many other universities in the UK and abroad for almost 25 years and still a widely recommended text for scientists and engineers. One of his other books, *Partial Differential Equations for Scientists and Engineers*, is currently published by Imperial College Press.

Geoff will be continuing his association with the College as Honorary Lecturer in Mathematics. For more information visit [www.ma.imperial.ac.uk/~gs](http://www.ma.imperial.ac.uk/~gs).



*EMERITUS PROFESSOR OF COMBUSTION PHYSICS, FELIX WEINBERG, STARTED WORK AT IMPERIAL IN 1951. HE REFERS TO THE COLLEGE AS “THE CENTRE OF THE KNOWN UNIVERSE IN TERMS OF RESEARCH”.*

# 50, not out



BY ALEX PLATT

FELIX ARRIVED IN THE UK AFTER SPENDING SEVERAL OF HIS teenage years in Auschwitz, the concentration camp in Poland, during the Second World War. He explained: “During my time in the camp, I lost the majority of my family. I was of the only age you could really survive in the camps, as I was just old enough to work. I eventually arrived in Britain in a stripped out Lancaster bomber, to be reunited with my father on VJ Day. I hadn’t had any schooling since I was 12, couldn’t speak English and had effectively forgotten how to write. Normally school children don’t want to learn, but I was desperately keen to make up for the lost years. I don’t advocate sending children to concentration camps now for motivation, but maybe a lumberjack camp?”

Taking inspiration from his industrial chemist father, Felix completed an external general science degree at the University of London and fell in love with physics. He explained: “My father wanted me to take chemistry as this was his subject, but for chemistry you needed a memory that I seemed to have lost during the war. With physics you could just advance by understanding and this inspired me to go on to a second degree in the subject. I arrived at Imperial to complete my PhD on the structure of flames, and was employed as a research assistant in 1951.”

Felix has now been in continuous employment by Imperial for the last 54 years and describes it as a: “Wonderful place and quite simply the hub of my universe ever since. When I started my research, what excited me most was the opportunity to develop intricate optical methods for studying the detailed structure of flames. I must confess that I was largely unaware of the importance of the process – the fact that the overwhelming proportion of the world’s energy is released by combustion.

“It was not until I completed my PhD and had been offered a permanent academic appointment that I decided to make this my field of research because of growing concerns about finite fuel supplies and the environment.” He has been working on more sophisticated combustion systems ever since.

When recalling his first day at Imperial, he said: “I was told to register at the Science Museum Library by crossing the yard and descending through a manhole into the central heating pipe system. And I did, but realised that I must have taken the wrong turn when I ended up crawling on all fours! The estate looked very different than it does today too, there had been much bomb damage during the war. Although the site has continually changed the whole time I have been here.”

Throughout his time here, Felix has taken various sabbaticals and visiting professorships, but has always returned. He said: “Imperial always called me back. Usually through the dedication of the many PhD students I have had the privilege of teaching over the years. Communication has certainly improved too, I used to receive telegrams from them telling me that my latest suggestion did not work, now it’s just an email!”

Felix who was elected FRS in 1983 has written, co-written and edited several books during his time here, written over 220 papers, seen half a dozen Heads of Department in Chemical Engineering and the current Head, Professor Stephen Richardson was an undergraduate who used to attend his lectures. Felix said: “He must have forgiven me as he has not yet thrown me out!”

When asked what it is that has kept him here all these years, Felix said: “I’ve spent 80 per cent of my life doing this, when I’m not here I work from home. Having spent this much time doing research it’s hard to find anything of comparable interest. I don’t think people like me can ever really stop...”



# association



- 22 **alumni group news** – each of the association groups from across the College have been busy over the past six months. Catch up with the latest news, including the Tanaka Business School’s Distinguished Speaker series and Emeritus Professor Igor Aleksander’s lecture, *The Emergent Mind*, for Friends of Imperial College. You can also find out about plans for 2006.
- 25 **international group news** – the international association groups have been just as busy as their UK counterparts, with activities taking place around the globe. Read about the Singapore Association’s recently formed Dragon Boat teams, the Imperial College Club of Germany’s annual meeting, held in Dresden, and much more.
- 26 **alumni focus** – read about individual alumni making the news, including the alumnus who has been selected to represent England in the World Golf Croquet Championships 2006 and the newly appointed Director of the Space Telescope Science Institute.
- 29 **books** – information about publications by Imperial alumni and staff.
- 30 **obituaries** – the lives and achievements of Imperial alumni that have sadly died.
- 33 **honours** – Imperial alumni and staff honoured in the Queen’s Birthday Honours List 2005, as well as other awards and appointments.

## Welcome to the Imperial College Association pages, where we are pleased to bring you news from alumni around the world

Our alumni groups have been as busy as ever, with Sir Alan Sugar kicking off the Distinguished Speaker Series for, amongst others, members of the Tanaka Business School Alumni Network, more on page 24. Further afield, the North East American Exiles held their 31st Annual Reunion in Canada, and alumni in France reignited their alumni group, with two meetings in Paris.

If you are thinking about trying to get back in touch with an old classmate and aren't sure how to go about it, or are wondering about coming back to an event at College this year, we lay out the services and benefits available to you as an alumnus of Imperial College on page 26.

Many individual alumni have been making the news over the past six months, including Dr Mattias Mountain, recently appointed Director of the Space Telescope Science Institute. Read more on page 28.

And finally, a listing of honours and awards received by Imperial alumni and staff can be found on page 33. Read on to find out more...

### Agricola Club

#### **Agriculture is dead but long live the College!**

This year's Agricola Club Annual Dinner and AGM was a day of extremely mixed emotions. At midday, a service of celebration, reflection and prayer was held at Wye Parish Church in memory of Jeanne Ingram (see page 31). Former colleagues and students came together with friends from the local community in thanks for her life.

The dinner on the evening was held in great expectation since, not only did we have ex-student and land agent Mike Bax to entertain, but also the promise of some words of wisdom from Professor Peter Bearman. Professor Bearman is heading up the team charged with making recommendations on the future of the campus. Mike Bax did not disappoint; he delivered some intriguing pearls of wisdom about the PR job needed by agriculture, interspersed with some extremely crass, but very funny, jokes!

The moment all had been waiting for came when Professor Bearman delivered his piece. We had to remind ourselves that he is only making recommendations and that it is Imperial management that will make the final decisions, with or without noting his ideas. Nevertheless, we took heart from the fact that nowhere in his paper was there suggestion of selling off the property, or hiving off bits and pieces.

There are long-term questions about the future of the farm and the land; but it is hoped that it will continue to be farmed. Clearly, agriculture at Wye is finished, partly due to its unpopularity amongst undergraduates and partly due to the high hurdles for entry set by Imperial. But business studies is a very popular option—with over 1,000 applicants for the intake of 150 in the 2005–06 academic year. In order to continue with applied business study courses, the College has entered into discussions with University of Kent at Canterbury with a view to some form of joint activity. Up until 2010, Imperial should continue to award its own degree to graduates from Wye. These ideas support the review group's recommendation of retaining undergraduate education at Wye.

Another exciting possibility is the formation of a research institute at Wye, manned by a multidisciplinary research team. So far this is only at concept stage, but it could be a great way of attracting top level researchers and finance to the campus. There would also need to be substantial investment in the Wye campus in order for this to happen.

All we can say is, let's hope some or all the recommendations are taken on board!

**JOHN WALTERS**  
AGRICOLA JOURNAL EDITOR

### Charing Cross and Westminster Medical School Alumnus Society

The Society is very pleased to announce that the new Charing Cross and Westminster Medical School Alumnus Society Prize for General Practice was awarded in July to Hannah Waters, a Year 6 medical student of the College, based on the Finals examination and her work in the preceding session. The Prize is worth £500 and is drawn from the Alumnus Society Fund.

The contact for alumni of all three former schools is the Society's Honorary Secretary, Peter Griffiths, [peter.griffiths9@btinternet.com](mailto:peter.griffiths9@btinternet.com).

**PETER GRIFFITHS**  
HONORARY SECRETARY

### City and Guilds College Association

The Association was fortunate to have Morton Neal (President 1994–95), Trustee of the Courtauld Institute of Art, to arrange a private viewing at the gallery in November. Sponsored by CGCA, nearly 200 Imperial alumni, staff and students enjoyed wine and canapés whilst being enthralled by the art collection in Somerset House. Making the event even more memorable were two expert art historians' descriptions of the André Derain London paintings.

The Faculty Internship Fair in October initiated by CGCU with CGCA support, has now grown into a major event with the Careers Advisory Service. A Networking Reception for graduating students followed, providing an opportunity for many students to ask alumni questions about the issues to be considered when choosing and embarking on their careers.

David Hattersley (President 2000–01) continued his *Walks with a Past President* around London. This year's walks included the Thames walk. Jean Venables (Civil Engineering 1969, MSc 1974), Vice President of the Institution of Civil Engineers, explained the risks of the river flooding and the solution that



the Thames Barrier provides. Spring 2006 will include a walk around Roman London. For details visit [www.cgca.org.uk](http://www.cgca.org.uk) or contact Teresa in the Chapter Office on +44 (0)20 7594 1184.

December saw a celebratory dinner to honour the incredible support Rogers Knight (President 1974–75) has provided to the College, the CGCA, the Old Centralians and the Old Centralians' Trust, and to celebrate his 90th birthday. Rogers was a co-driver of Boanerges and a driving force behind the Association's Wines Committee. His clarity of purpose, soundness of judgement and stalwart support of the Association over seven decades is a huge example to us all.

Did you know that Imperial College has a landlord, and that it is the Royal Commission for the Exhibition of 1851? The Commission's Secretary described the work of the Commission, then and today, at the Association's Christmas Lunch in December.

Planning for the 2006 Annual Dinner is well in hand. The Ironmongers Livery Hall will be the venue on 16 March 2006. Our speaker, Lord Ramsbotham, will emphasise the importance of vocational training for individuals, industry and society.

For more information, see *Imperial Engineer*, produced jointly with RSMA, under the Editorship of Bill McAuley.

**BARRY BROOKS**  
PRESIDENT

## Engineering Chapter

The Faculty of Engineering is privileged to have an Imperial College Association Chapter. The Engineering Chapter is a partnership of the Faculty of Engineering, City and Guilds College Association (CGCA), Royal School of Mines Association (RSMA) and the Engineering Students' Union.

In addition to providing support to the Faculty's Alumni Associations, the Chapter draws together the expertise and membership of its associations in providing alumni, students and staff with information, publications, events and networking opportunities. An increasing number of events is now being run jointly, through the Chapter, such as the Networking Reception for final year engineering students, which builds on well-established events held by CGCA and RSMA in previous years.

Major projects for the coming year include a student recruitment event in Hong Kong, drawing on local alumni, and the launch of a mentoring scheme for engineering students. The Chapter will also play a pivotal role in the Faculty's input to the Centenary celebrations. The Engineering Chapter web pages are at [www.imperial.ac.uk/engineering/aboutthefaculty/alumniengineeringchapter](http://www.imperial.ac.uk/engineering/aboutthefaculty/alumniengineeringchapter)

**TERESA SERGOT**  
CHAPTER MANAGER

## Friends of Imperial College

### Great changes at Friends

This period has seen major changes at Friends of Imperial College, and we are now entirely responsible for our own finances and administration, although we still receive advice and support from College. One of the results is that we were able to arrange and publish a complete annual programme of events at the beginning of the new academic year, details of which are at [www.friendsofimperial.org.uk](http://www.friendsofimperial.org.uk). On the website you can find details of our future programme and a membership application form, if you are not already a member.

We have greatly reduced the annual subscription and ticket prices in our drive to enlarge our audience and membership base, so that these lower prices can be maintained. So please join us or, if you are already a member, get your friends to do so. We provide a very good way of keeping in touch with developments in science, medicine, technology and business at Imperial, in a convivial atmosphere.



ROD RHYS JONES

### First things first

A large crowd of members and their guests attended the first Friends event of the year, a talk by Emeritus Professor Igor Aleksander on human and machine consciousness entitled *The Emergent Mind*. After the lecture, Professor Aleksander signed copies of his new book of the same name, whilst wine and bites were served. Many members

then moved on to very sociable supper at a nearby restaurant. Both were well attended, with over 80 at the fascinating talk and 25 at supper. The talk was fascinating and informative and the supper and discussion were highly enjoyable; together, they resulted in many new applications for membership. Much of this success was undoubtedly due to the reputation of the speaker and his well-known ability to combine clarity and entertainment in the presentation of ideas, but we would like to think that it was also partly the result of our new policy of greatly reduced subscription rates and ticket prices, and the widespread advanced publicity. Time will tell.

### Administrative demands

The changes at Friends have brought increased responsibilities and we were somewhat overwhelmed by the sudden increase in administrative demands, which the success of our first event brought on our committee. We apologise for some delays in acknowledging subscriptions, etc. We have taken steps to put this right. We still want many more members if we are to be able to maintain our low prices, and continue with our aim of introducing as many people as possible to the importance of the research being carried out by Imperial in science, technology and medicine. So please join us or, if already a member, get your friends to do so.

### Our New Year programme

Our programme for 2006 opened with a lecture by Professor Roy Anderson, Chair in Infectious Disease Epidemiology and Chief Scientific Adviser to the Ministry of Defence, who gave a talk entitled *Mad cows, monkeys, and Chinese ducks—the birth of new epidemics* on 17 January. On 22 March we will be going behind the scenes of the Department of Aeronautics by invitation of the Head of Department, Professor Richard Hillier. Professor Rod Smith, Chair in Mechanical Engineering, will be talking about the latest developments in energy and transportation policy on 3 May. We will be going behind the scenes of the new Institute of Biomedical Engineering by invitation of its director, Professor Chris Toumazou, Winston Wong Chair of Biomedical Circuits, on 19 July.

**ROD RHYS JONES**  
CHAIRMAN



## Royal College of Science Association



In June 2005, members took part in one of the regular London walks organised by the Association. On this occasion the walk was around legal London. There proved to be more to see than could be done justice in a single evening and we hope to continue next summer.

The Annual Dinner was held in the Union Dining Hall in July. The guest speaker was Dr John Gibson, who spoke about his experiences as a vineyard owner.

The winner of this year's Royal College of Science Association Prize was Martin Archer of the Department of Physics. Martin was presented with the prize by the Association's President, Dr Digby James, at the reception following the Commemoration Day ceremony. The prize is given for performance during the academic year and contribution to the College community. Particular attention is given to character, personality and to

participation in general sporting or other College activities, as well as to examination results. In addition to achieving excellent academic results, for the past two years Martin was head of programming at *IC Radio*, including presenting the most listened to show on the station. He was also active with the College's Musical Theatre Society.

The Association's Committee has been working to establish links with the Life Sciences and Physical Sciences Faculty Unions, which are now going from strength to strength. We welcome the announcement of the creation of the new Faculty of Natural Sciences, which will align with the Association more closely.

If you would like to join the Association, please visit our website at [www.rcsa.org.uk](http://www.rcsa.org.uk)



**DAVID LEGG**  
HONORARY SECRETARY

## St Mary's Hospital Association

The St Mary's Hospital Association Annual General Meeting will take place on Tuesday 25 April 2006 at 18.00 in the McRae Functions Room, QEQM Wing, St Mary's Hospital, Praed Street, London, W2 1NY.

**MIKE JENKINS**  
HONORARY SECRETARY

## Tanaka Business School

### Distinguished Speaker Series

Are successful entrepreneurs born or made? Do all top businessmen make enemies? How do you judge pitches for funding?

These are just a few of the questions that were posed to Sir Alan



Sugar, founder and Chairman of electronics firm Amstrad, during a Distinguished Speaker Series event on 19 October 2005. Showcasing some of the country's most interesting and prominent business people, politicians and community figures, the Distinguished Speaker Series is designed to provide alumni and students with the unique opportunity to get real insight into how these dynamic people have made their mark. Details of upcoming events in the series will be posted on the School's website at [www.imperial.ac.uk/tanaka](http://www.imperial.ac.uk/tanaka).

### Executive Education

From January 2006, alumni from all Imperial MBA programmes will have the opportunity to attend electives with current students. *Electives for Alumni*—a continuing education programme designed to keep alumni up-to-date with the latest developments in business management—will give alumni access to world class content and faculty, while current students benefit from their professional experience and insights. *Electives for Alumni* is the first in a range of executive education programmes being developed at the School. For a list of course offerings, visit [www.imperial.ac.uk/tanaka/alumni](http://www.imperial.ac.uk/tanaka/alumni).

### Industry Sector Groups

Launched in 2004, the Industry Sector Groups continue to be popular with alumni. Bringing together alumni and students who share professional interests, the Industry Sector Groups provide a platform for members to access industry leaders, world experts and targeted networks. The groups cover a wide range of practice areas including banking and finance, biopharma, entrepreneurship, management consulting, media, public sector and venture capital. If you are interested in joining an existing group, or starting a new one, please contact Kate Vinall. Telephone +44 (0)20 7594 9137, email: [k.vinall@imperial.ac.uk](mailto:k.vinall@imperial.ac.uk)

### Regional Alumni Clubs

Regional Alumni Clubs are vital to ensuring the alumni network is a strong international organisation. The Alumni Relations team is committed to helping regional clubs realise their full potential by offering their members well designed activity programmes, including networking and social opportunities. If there is a regional club in your area, you are encouraged to join; if not, why not start one yourself? For information about a club in your area, or to receive practical information about starting a club, please contact Kate Vinall. Telephone +44 (0)20 7594 9137, email: [k.vinall@imperial.ac.uk](mailto:k.vinall@imperial.ac.uk)

### Alumni Relations Manager appointed

Following the departure of Paulo Gomes to head Alumni Relations at City University, Nicola Pogson has been appointed Alumni Relations Manager. Previously, Nicola was Head of Student and Corporate Relations for two MBA programmes at the ESSEC Business School in France. During her four-year tenure at ESSEC, Nicola was responsible for developing global alumni programmes, the design and delivery of career services for students and alumni, organising alumni events, managing media campaigns, as well as developing and maintaining corporate databases. She will take up the post in January 2006.

### New programme launched

In April 2006, the School will welcome the first Weekend Imperial Executive MBA students, and future alumni. During the first eight months of the 21-month programme, the students will attend classes on Thursday afternoons, Fridays, Saturdays and Sunday mornings. Subsequent programme components include varied attendance depending on the choice of electives, an international study tour and a project. For more information visit [www.imperial.ac.uk/tanaka](http://www.imperial.ac.uk/tanaka).

**REBECCA THOMAS**  
INTERIM ALUMNI RELATIONS MANAGER

Imperial College's international alumni associations had another busy year in 2005 with numerous events taking place. This year looks set to be no different: we're already hearing about plans for many exciting events around the world. Check the events calendar on the alumni website, [www.imperial.ac.uk/alumni/events](http://www.imperial.ac.uk/alumni/events) to find out if there is an event coming up in your area. All of our international association groups are keen to expand their networks, particularly with younger alumni. If you live or visit overseas and would like to get involved, then visit [www.imperial.ac.uk/alumni/international](http://www.imperial.ac.uk/alumni/international).

## Imperial College Exiles North East America

Held for the first time in Canada, the 31st annual ICENAE Reunion was a resounding success. The sun shone and the activities provided by the Fairmont Chateau Montebello met with the approval of all. Mountains were climbed, horses and bikes ridden, canoes paddled, and historical landmarks visited. The wining and dining that interspersed these physical feats was excellent. The 32nd ICENAE Reunion will also take place at Montebello, organised by Harry Sewell: [hsewell@sbcglobal.net](mailto:hsewell@sbcglobal.net).

**MS ROSAMUND ROSSETTI** (Chemistry 1969), Convenor

## RSMA Australia

Perth-based association members continue to meet on the first Friday of every month in one of the local hostels. Every effort is currently being made to update the contact list and extend the group's activities. If you are in Australia but have not yet been in touch please email Ron Butler at [rbutler@acenet.com.au](mailto:rbutler@acenet.com.au)

**MR RON BUTLER** (Materials 1952), Convenor

## Imperial College Alumni Association of Northern California

The Bay Area's eclectic collection of events kicked off with a tour of the San Jose Museum of Art, followed by an idyllic trip to Angel Island in San Francisco Bay. The summer's activities included a tour of Genencor, a biotechnology company, and a recital by concert pianist Sujeeva Hapugalle. The annual BBQ was held in the marine headlands overlooking the Golden Gate Bridge. The year ended with a talk by Boon Hwee Koh (Mechanical Engineering 1972), Chairman of Singapore Airlines, and a Christmas Dinner.

**MR ARJUNA JAYASINHA** (Civil Engineering 1980, MSc 1981), President

## Imperial College Alumni Association of France

The recent activities of the Association in France are proving a great success; about 40 alumni attended a drinks event in Paris. The atmosphere was just as we remembered; many fascinating people working in numerous different fields. A similar event was held in December at Kitty O'Shea's Pub, Paris, and was just as successful!

**MISS FLORENCE ANGLARET** (Bioengineering 2003), Convenor

## Imperial College Club of Germany

Dresden was the setting for the 2005 annual meeting; the packed itinerary included a number of lectures and a magnificent tour of Dresden's cultural heritage sites. An evening meal and the Bunte Republik Neustadt street festival followed! The 2006 gathering will be held in Munich from 26–28 May, email [board@iccg.net](mailto:board@iccg.net) if you would like to attend. The annual Homecoming event was held in November to welcome new alumni to ICCG. For other news about ICCG visit the new website: [www.iccg.net](http://www.iccg.net).

**MR PHILIPP HAGEN** (Physics 1990), Secretary

## Imperial College Alumni Association of Greece

The year got off to a great start for the alumni group in Greece with the annual Pitta Cutting Celebration in January. May's workshop *Tsunamis—The Role of Engineers* organised in conjunction with the National Technical University of Athens, included lectures by prominent researchers and academics in the field.

**MR PERIKLIS TSAHAGEAS** (Software Engineering 1990),

Honorary Secretary

## Imperial College Alumni Association of Hong Kong

The inaugural *Business Talk on Supply Chain Management* was held in May, providing an excellent opportunity for members to share their expertise. The Annual Freshers Reception was held in August, attended by more than 100 current students, alumni and parents. Along with counterparts from Oxford and Cambridge, ICAAHK members also organised the Careers Fair 2006.

**MR SIMON LAM** (Mechanical Engineering 1993, MBA 2001), Honorary Secretary

## Imperial College Alumni Association of India

Senior members of the association arranged a delightful lunch in September with Dr Tidu Maini, Pro Rector for Development and Corporate Affairs, which sparked interesting discussions on ways the profile of the College could be raised in India. The association would like to express its thanks to former president Mohan Puri who retired from the post in September.

**MR RAJIVE KAUL** (Materials 1971), President

## Imperial College Alumni Association of Singapore

The ICAAS Seminar Series has proved a resounding success. Professor Dorothy Griffiths, Deputy Principal of Tanaka Business School, provided the first lecture of 2005. In October, the series led the group to the Paulaner Brauhaus microbrewery for a guided tour.

ICAAS has recently formed two Dragon Boat teams, with the maiden race taking place against other alumni groups in March. Following a commendable performance the teams achieved third and fourth positions. ICAAS also held their 28th AGM Dinner, at the Tanglin Club on 16 September 2005.

**DR HING YAN LEE** (Computing 1981, MSc DIC 1982), Honorary Secretary

## Slovenia Alumni Association

October saw the 10th anniversary celebrations of the Slovenian association at the Breskvar tavern. The group continues to meet regularly, but are keen to hear from alumni outside of Ljubljana.

**PROFESSOR ANDREJ PAULIN** (PhD Materials 1967), Convenor

## CGCA South Africa

Meeting on the third Thursday of every month, the South African branch of the CGCA is alive and well! In June a joint dinner was held with the RSMA South Africa, which was well attended by both groups. There was even a visitor from London, Paul Croney (Civil Engineering 1969), who joined the group.

**MR CHARLES LEWIS** (Mechanical Engineering 1974), Honorary Secretary

## South Kensington Kai

Members of eight other Japanese alumni associations joined SKK alumni for the 9th annual London University Alumni Party in June, held at the British Embassy in Tokyo. The AGM and annual reunion party were held in November at the British Council with a talk by Dr Michael Norton, visiting professor at the Tokyo Institute of Technology.

**DR HITOSHI HAMAGUCHI** (DIC Mechanical Engineering 1976), Vice President

## Imperial College in Victoria (Australia)

*Budapest*, a fine Hungarian restaurant, hosted the 25th Annual Dinner in November, with over 30 alumni attending.

**DAVID BISHOP** (Electrical Engineering 1964, MSc Mechanical Engineering 1965), Convenor



# All for you

A WIDE VARIETY OF SERVICES AND BENEFITS IS ON OFFER TO ALUMNI of Imperial College London to help you remain involved in the life of the College. Here we provide a brief overview of what's on offer ...

## Interactive alumni services

[www.imperial.ac.uk/alumni/interactive](http://www.imperial.ac.uk/alumni/interactive)

To date, over 8,000 alumni have signed up for the free web based services. Registering is quick and easy and through the services you can:

**Career network**\_Connect with other alumni for informal careers advice.

**Find a classmate**\_Search for classmates and friends that you've lost touch with.

**Post a Catch-up entry**\_Keep classmates and friends up to date with your news.

**Manage your database record**\_Update your contact details and mailing preferences.

## Events

[www.imperial.ac.uk/alumni/events](http://www.imperial.ac.uk/alumni/events)

There is a wide range of academic, social, and networking events to suit all alumni. Here are some of the options:

**Imperial College Association events**\_We organise an event for alumni each term. Our next event, in March 2006, is a quiz night. Check the alumni website for further details!

**Alumni reunion programme**\_If you have a decade anniversary coming up in 2006, we will be inviting you to come back to the College to celebrate at the first of our alumni reunions. Look out for more information over the coming months!

**Alumni group events**\_There are a number of special interest groups for alumni in the UK and abroad which you can also join. See pages 22-25 to find out about some of their recent activities.

**Class reunions**\_We are aware that there are many alumni out there organising their own class get-togethers and we will list all the class reunions that we hear about in our events calendar, so let us know if you are planning one or look out for any meetings of your classmates here.

**Friends of Imperial College events**\_The Friends run an events programme designed to make the work of the College accessible to non-specialists and they welcome all alumni to attend their events.

**General Imperial College events**\_In addition to events specially organised for alumni, you are also welcome to attend many of our College events. These include numerous inaugural and special lectures, seminars, and music and art events.

Details of all of the forthcoming events open to alumni can be found on the events calendar on the alumni website ([www.imperial.ac.uk/alumni/events](http://www.imperial.ac.uk/alumni/events)) or by contacting the Alumni Relations team on +44 (0)20 7594 6138/6131.

## Other alumni services

**Regular communications**\_We provide regular communications for alumni in the form of your twice-yearly alumni magazine, *Imperial Matters*, a monthly alumni e-bulletin and a dedicated website. We are always pleased to hear your ideas for articles and stories.

**Online help desk**\_Our a searchable help desk on the alumni website, provides answers to some of your most common queries. Whether you need to find out how to get hold of a copy of your degree transcript or want to find out more about services available to alumni, this is a good place to start your enquiry.

**Reunion service**\_Whether it is within the College's formal reunion programme or a smaller standalone event, we are happy to offer assistance and advice if you would like to organise a reunion for your former classmates. We can help you contact your classmates, and even advise you on the event itself.

**Alumni group directory**\_The UK-based and international alumni groups provide an excellent opportunity for alumni to stay connected through their own event programmes. Useful information about our alumni groups and links to their contact details can be found on the alumni website.

**Affinity credit card**\_The College's affinity credit card is available to alumni in the UK, subject to acceptance. A donation is made to the College's Hardship Fund for every card opened and subsequent purchases, providing financial assistance to the students who need it the most.

## Onsite use of the Central Library

[www.imperial.ac.uk/library](http://www.imperial.ac.uk/library)

As an alumnus, you can borrow up to six items at any one time, have onsite access to some of the library's e-resources and reference collection, and reserve and renew items online via the library's website. In order to receive your library membership, you must register with Interactive Alumni Services prior to your initial visit to the Library. Register for your free account at [www.imperial.ac.uk/alumni/interactive](http://www.imperial.ac.uk/alumni/interactive).

## Careers Advisory Service

[www.imperial.ac.uk/careers](http://www.imperial.ac.uk/careers)

The Careers Advisory Service at the South Kensington campus offer services to alumni. You can use the information room and reference library, and if you graduated within the last three years there are even more services available.

## Discounted conference facilities and accommodation

[www.imperial.ac.uk/conferences](http://www.imperial.ac.uk/conferences)

If you are looking for somewhere to hold your next reunion or meeting, why not check out Imperial's conference facilities? As an alumnus, you can take advantage of reduced rates for room hire, catering and technical equipment.

In addition, if you are visiting London for a few days, alumni can reserve rooms in various campus halls as well as at hotels in the area where discounted rates have been negotiated.

We hope that this has given you a useful overview of the services and benefits available to you as an alumnus of Imperial. If you have any questions or suggestions, please contact Heather Campbell or Zeba Salman in the Alumni Relations Team: [alumni@imperial.ac.uk](mailto:alumni@imperial.ac.uk); +44 (0)20 7594 6138/6131. We would love to hear from you!

# focus on alumni

## Music matters



PETER OAKES

I wonder how many former Imperial students, like me, felt influenced more by the music at Imperial College than by the science? I left the College in 1983 with a degree in mathematics, but my musical link with Imperial, begun at the Imperial College Symphony Orchestra stand of the 1980 Freshers' Fair, continues now more strongly than ever.

The Thomas Hardye School, where I teach music, is the sort of school that links well with Imperial. It is big, successful, and provides wonderful opportunities – with no small degree of expectation. On 19 November 2005, I enjoyed the immense privilege of conducting the Imperial College Symphony Orchestra with my school choir, the Thomas Hardye Singers, in a performance of Benjamin Britten's *St Nicolas*.

The orchestra is very well known in these parts. It has come to Dorchester for a weekend of rehearsals and concerts with the school choir each year since 2001.

The concerts have provided benefits for both sets of students. Imperial students have enjoyed the chance to get away from London for a couple of days and be looked after by generous hosts. Pupils at the school have been provided with a sneak preview of what it is like to be a university student and have benefited from some visits to Imperial in London to sing with the Imperial College Chorus. And both sets of



PETER OAKES

students have the chance to perform significant choral works, conducted by either Richard Dickins, Imperial's Director of Music, or myself.

The list of works we have performed together in the past four years is formidable. There are fortunate students in the school who have performed Britten's *War Requiem*, Tippett's *A Child of our Time*, Mozart's *Requiem* and *Mass in C minor*, Beethoven's *Symphony no. 9*, Mahler's *Symphony no. 2*, and Bruckner's *Te Deum* with the orchestra.

Together with the students in my school choir, I remain, twenty-five years on, very grateful for the remarkable music-making at Imperial College. Verdi's *Requiem* is our next joint performance in Lighthouse, Poole on 6 May 2006 – see the alumni website for details.

**PETER OAKES** (MATHEMATICS 1983)

## From theoretical physicist to celebrated author

When Dr Andrew Crumey graduated from the Department of Physics in 1986 and took up a postdoctoral position at the University of Leeds, it seemed that a career in academia beckoned. However, an evening class in creative writing and an appetite for exploring and communicating ideas have helped to propel Andrew onto an alternative path in the literary world.

Earning the accolade of Paperback of the Week from *The Guardian* for his most recent book *Mobius Dick* is an indication of his growing popularity as an author, in a career that began over 10 years ago and has so far produced five novels.

Andrew became a full-time writer in 1996 but his first book, *Music, In a Foreign Language*, was published in 1994 when Andrew was teaching in a secondary school in Newcastle. Maintaining that it wasn't particularly difficult to work and write at the same time, the only problem he experienced was the amusement of some of his students when they discovered that there were some rather "rude bits".

The common theme running through each of Andrew's five books is his ability to combine several stories with a broad range of subject matter including history, philosophy, music... and, it goes without saying, theoretical physics. He explains: "I am self-taught, with a magpie tendency to pick ideas from the different areas. I first think about what I want to write about and then go out to find out about it."

"My outlook is questioning and I view life from many different angles: I like the history of ideas and asking "what if?" Even when studying at Imperial, I would still find the time to sneak off to the V&A to spend a few hours away from theoretical physics.

"A lot of people who say they want to be writers actually mean that they want to have written a book. For me the enjoyable part is the writing itself, the creation of the product. Being an author is about sitting in a quiet room on your own. It is a private and personal experience."

*Mobius Dick* is published by Picador.





# focus on alumni

## New director appointed at Space Telescope Science Institute



In September 2005, Dr Mattias Mountain (Physics 1978, PhD 1981) took up a new appointment as Director of the Space Telescope Science Institute in Baltimore, USA. Described as one of the world's top jobs in space science, Matt now operates the science operations centre for NASA's Hubble space telescope and the planned James Webb space telescope.

Prior to taking up his new post, he served from 1994 as Director of the Gemini Observatory, which runs two eight-metre Gemini telescopes in Mauna Kea, Hawaii and Cerro Pachon, Chile. Both were commissioned and constructed during his tenure. This experience could prove valuable as he begins work on the construction of NASA's James Webb Space Telescope, scheduled to be launched into space in 2013.

The telescope has been named after James E. Webb, NASA's second administrator, best known for leading the Apollo lunar exploration programmes that landed the first humans on the moon. The ultimate destination for the telescope is an orbit 940,000 miles or 1.5 million kilometres into space, known as the second Lagrange point, at which the spacecraft is balanced between the gravity of the Sun and the Earth.

The telescope's infrared capabilities will help astronomers understand how galaxies first emerged out of the darkness that followed the rapid expansion and cooling of the universe just a few hundred million years after the big bang. Closer to home, the James Webb space telescope will also probe the formation of planets in disks around young stars, and study supermassive black holes in other galaxies.

Of his new appointment, Matt commented "It's an extraordinary privilege to be asked to lead such a fascinating, diverse and challenging organisation. I'm looking forward to working with the superb Institute staff, NASA, and the astronomical community – the potential of what we can collectively achieve with the Hubble and James Webb telescopes is tremendously exciting."

## Rising through the ranks

Vice Admiral Adrian Johns, CBE (Physics 1972), became the new Second Sea Lord and Commander-in-Chief Naval Home Command in October 2005 at a formal change of command ceremony on board HMS Victory, at Portsmouth Naval Base. Vice Admiral Johns was previously Assistant Chief of Naval Staff in the Ministry of Defence in London.

The handover ceremony started on the quarter deck of HMS Victory, now Vice Admiral Johns' flagship, where he inspected the 18-man guard from HMS Collingwood and the Royal Marines Band Portsmouth. He then moved to the Great Cabin with the outgoing Second Sea Lord for a signing ceremony to mark the occasion.

## Top business woman flies high at Shell

In August 2005, Loh Wai Kiew (Aeronautics 1981) was appointed the first Singaporean, and first Asian woman, to head a Shell international unit. Marine Products, which supplies more than 15 million tonnes of fuel and 200,000 tonnes of lubricants to the shipping industry worldwide, is responsible for trading 40 million tonnes of marine fuel annually and has over 1,800 staff in more than 730 ports in 85 countries.

Prior to taking up her new position in November, Ms Loh was formerly President and CEO of SembCorp Environmental Management, the largest waste management company in Singapore, and is well-known in regional industry circles. She joined SembCorp Industries to help set up the environment management arm, turning a staff of four into a work force of some 3,000 people.

## Alumnus selected for World Golf Croquet Championships

Dr Timothy King (Mechanical Engineering 1990, PhD 1994), Vice Chairman of the Ashby Croquet Club, has been selected to represent England in the World Golf Croquet Championships 2006. He is one of five players chosen to compete in the Championships, which take part in the Hawke's Bay area of New Zealand in March 2006.

Tim first appeared in the UK rankings for Golf Croquet in Summer 2004. By the end of the 2005 season he had climbed to 8th place and is currently placed 33rd internationally. Of his selection, he said, "I am delighted to have been selected for the 2006 World Championships and look forward to the top level competition that I will face against the best players in the world. The biggest challenge will be to maintain my form over the winter with limited opportunity to play croquet."

## Return to work campaign for women in science, engineering and technology

The UK Resource Centre for Women in Science, Engineering and Technology has recently launched the *Return* campaign to help up to 1,000 women return to careers in science, engineering and technology over the next three years by connecting them to free services and support, including training, courses, mentoring schemes and networking organisations.

As part of *Return*, a free online Open University course, *Science, Engineering and Technology: A Course for Women Returners (T160)* will run in February and October 2006 and February 2007. To find out more, contact the Centre on +44 (0)1274 436485 or visit [www.setwomenresource.org.uk](http://www.setwomenresource.org.uk).

# books

## Practical Strategy: Structured Tools and Techniques

Professor Geoff Coyle (Mining Engineering 1959)  
*FT/Prentice Hall*

A systematic framework of simple, non-mathematical, techniques for dealing with strategic issues in any domain; business, defence, the public service, or even personal dilemmas.

Professor Coyle is Visiting Professor of Strategic Analysis at the University of Bath

## Safe Drinking Water: Lessons from Recent Outbreaks in Affluent Nations

Steve E. Hrudehy (MSc Civil Engineering 1971) and Elizabeth J. Hrudehy  
*IWA Publishing*

Drinking water provides an efficient source for the spread of gastrointestinal microbial pathogens capable of causing serious human disease. This book explores over 60 waterborne outbreaks in 15 affluent countries over the past 30 years, detailing recurring themes and patterns and suggesting insights for more effective and individualised preventive strategies.

Steve Hrudehy is Professor of Environmental Health Sciences, Department of Public Health Sciences at the University of Alberta, Canada.

## Berlusconi's Shadow: Crime, Justice and the Pursuit of Power

David Lane (MSc Mechanical Engineering 1971)  
*Penguin*

Following years of research, using many unique documents and material, including numerous in-depth interviews with senior

magistrates, top lawyers and a former President, this book portrays Italian Prime Minister Silvio Berlusconi's life and career.

David Lane has been an Italy business and finance correspondent for *The Economist Italy* since 1994.

## Nuclear Waste: Law, Policy and Pragmatism

Peter Riley (Mining Engineering 1959)  
*Ashgate Publishing Ltd*

Using as a starting point the laws framed in the early years of the UK nuclear power programme to regulate the industry, this book compares approaches to nuclear waste management in a number of countries including the United States, France, Finland and Korea, and argues that in the future, the regulation of nuclear waste must be treated as a primary object of the law.

Peter Riley is a part-time Lecturer in Law at De Montfort Law School, Leicester, and a Chartered Engineer of 35 years' standing.

## Credit Risk Scorecards: Developing and Implementing Intelligent Credit Scoring

Naeem Siddiqi (Civil Engineering 1990)  
*John Wiley & Sons Inc*

Explains business-focused processes for the development and implementation of risk prediction scorecards, showing how risk scorecards can be a powerful tool for managers who need to improve the bottom line in their organisations.

Naeem Siddiqi is a Credit Risk Specialist with SAS Institute Inc in Ontario, Canada.



## Think, Play, Do: Innovation, Technology, and Organization

Mark Dodgson, David Gann, Ammon Salter  
*Oxford University Press*

*Think, Play, Do* is a new book on innovation techniques co-authored by Professor David Gann, Director of the Innovation Studies Centre at Imperial's Tanaka Business School; Dr Ammon Salter, Senior Lecturer at the Centre; and

Professor Mark Dodgson of the University of Queensland.

The book's launch in October 2005 at Tanaka Business School was attended by figures from industry and academia worldwide, including Michael Schrage from MIT and Catherine Livingstone, Chair of the Commonwealth Scientific and Industrial Research Organisation. Guests were welcomed by the Rector, Sir Richard Sykes, and the Booker Prize winner, Philip Pullman, attended as a special guest speaker, treating listeners to his interpretation of the book.

*Think, Play, Do* does exactly what the title suggests; it looks at the processes of thinking, playing and doing, suggesting that, when they are supported by innovation technology, they provide the ideal platform for an approach to radical innovation that produces results. It proposes that innovation is a vital source of sustainable competitive advantage and an essential process for organisations to create new value and efficiency.

Innovation is changing, due to new technologies (simulation and

modelling, visualisation and rapid prototyping) and changing organisation structures. *Think, Play, Do* presents a new way of thinking about the innovation process, moving away from traditionally linear processes, and towards a progression which creates new ideas, plays with them to see if they are practical, economical and marketable, and then makes the innovation real.

The book presents in-depth studies from a number of companies and sectors, including Procter & Gamble and Arup. It also describes how innovation technology is being used in traditional industries, such as mining, and in public projects, such as the development of London's traffic congestion charge and the stabilisation of the Leaning Tower of Pisa.

In his welcome, the Rector said that *Think, Play, Do* resulted from significant collaboration across Imperial's disciplines, and between Imperial College and Queensland University. "Most importantly, it represents many hours of detailed work in real collaboration with our colleagues in business," he added.

Philip Pullman continued the praise, stating: "I know it will make a real difference in the places where it matters. I'm sure everyone who reads it, whether in the world of business or politics, teaching or research, design or engineering, will find plenty of starting points for this fascinating and vital matter of innovation, of making things new, of thinking and playing and doing. The schema *Think, Play, Do* is something that strikes a powerful chord with me. I recognise it. It's what I do every day."



# obituaries

**PAUL ALTMANN** (Electrical Engineering 1940)

At the end of his studies at Imperial College, Paul Altmann was interned as an enemy for the rest of WWII at Hay in New South Wales. It was not until after his release in 1945 that he was able to find out whether he'd passed or failed in 1939! Paul returned to Australia and became Chief Electrical Engineer for Australian Paper Manufacturers. A great friend and a real gentleman, he is survived by his daughter, Vivian, and son, Ralph, plus grandchildren.

*Provided by David Peckham (Mechanical Engineering 1952)*

**MR NASAYAN M. ANDHARE** (Civil Engineering 1937)

On graduating Nasayan Andhare returned to India, where he joined the Government of Maharashtra Public Works Department, subsequently becoming Chief Engineer and Secretary to the government. Nasayan was a visionary planner and many of his recommendations for state-wide highways and bridges have now been realised.

He is survived by his wife, two sons, and their families.

*Provided by Rahul Andhare*

**MR ANTHONY (TONY) R. BARKER** (Mechanical Engineering 1942)

Following his degree, Tony Barker was commissioned in the Royal Navy and joined *HMS Emerald*. He was later posted to the Far East, where at the end of the war he led a reccy party to inspect damage at Nagasaki.

Tony became Managing Director for CAT dealers Blackwood Hodge. He was also a Fund Trustee of the Lighthouse Club, which helps those affected by injury in the construction business.

His great love was his family; his wife Hazel, three children, two grandchildren and three great-grandchildren.

*Provided by Tessa Snell*

**MR WILLIAM M.S. BOYD** (Electrical Engineering 1943)

After graduating, William worked at Philips designing test equipment for the production line of early TVs. William later taught maths, becoming involved in the early days of computing in schools, and sat on the exam moderating committee at Cambridge.

William was a founding member of Wolsey Chapel. He gave a lot of his time to leading activities for young people.

He was an inspiration to all who knew him, and will be greatly missed, especially by his wife, Ruth, and his family.

*Provided by Rosemary Nicholls*

**LORD BRABOURNE** (Governor of Wye College 1955–2000)

Lord Brabourne was a Governor of Wye College for 45 years. He also held positions, including Pro-Chancellor of the University of Kent and President of the Kent Trust for Nature Conservation. Additionally, Lord Brabourne was a highly successful film producer, his works including *Death on the Nile* and *Murder on the Orient Express*.

Lord Brabourne is remembered as someone who dedicated an extraordinary amount of his time in service to others. He was always held in the highest regard and affection by members of the College. He is survived by his wife, four sons, two daughters and 20 grandchildren.

*Source: Reporter, Imperial College London*

**MR BEN H. BRADFORD** (Agricultural Sciences 1950)

Following graduation, Ben Bradford worked as an agricultural officer for the Sudan Government. He lived in Sudan for a number of years

with his wife, Ann, whom he had met at Wye. After leaving Sudan, Ben spent many years working for Shell International.

Relaxation came with sailing, he also became a great supporter of the Lifeboat Association, community life in Farnham and the Church.

He is survived by wife, Ann, son and daughter, and five grandchildren.

*Provided by Lesley Thompson*

**PROFESSOR (WILLIAM) JOHN BRAY, CBE, FENG, FIEE, FCGI**

(Electrical Engineering 1933, MSc 1934)

John Bray's interest in engineering developed through his childhood Meccano set and his father, who encouraged him to study the engineering world around him. After graduating in 1934, John embarked on a career with the Post Office Engineering Department. His work led to an agreement that set the standards for telephone, television and microwave radio-relay systems throughout the world.

During his career, John contributed to a large number and range of projects. He regarded two of these, as monuments to his life's work; the large dish aerial at Goonhilly (Arthur) and the BT Tower.

John was a man of considerable intellect and engineering ability, with a powerful personality and great personal charm. He leaves a gap that will not easily be filled.

*Provided by Professor David Cheeseman (Electrical Engineering 1961)*

**DR MARGARET CURTIS, NÉE FISHER** (Charing Cross and Westminster Medical School 1952)

Margaret Curtis worked as a psychiatrist on the professorial unit at the Warneford Hospital, running the day hospital for many years. Following her retirement she worked part-time as a psychiatrist for Oxford Victim Support and the Medical Foundation for Victims of Torture. Margaret's humanity and warmth shone through in everything she did.

She leaves her husband, three children and three grandchildren.

*Provided by Alan and David Curtis*

**DR RONALD HALMSHAW, MBE, PHD, CPHYS, FINSTP** (Physics 1940)

After a short spell in teaching, Ronald joined the Ministry of Supply in 1941. Various promotions followed, culminating in Senior Principal Scientific Officer (Special Merit) in the MoD, Royal Armament Research and Development Establishment. Almost the whole of Ron's career was in the field of non-destructive testing, mainly associated with radiography.

Ron was awarded an MBE in 1985 for services to publishing in the field of non-destructive testing.

*Source: Insight, Journal of the British Institute for Non-destructive Testing*

**MR RUSSELL HARRIS** (Earth Resources Engineering 1996)

Following graduation, Russell Harris moved to Farmington, New Mexico to work for BHP, where he met and married Jennifer. He took advantage of all that the area had to offer; walking the Grand Canyon twice and regularly cycling in the Utah mountains. He and Jennifer also learnt to dive, which became their favourite pastime.

Russell and Jennifer moved to Groote Eylandt, a tiny island off the coast of Darwin, Australia, and it was here, on one of their favourite snorkelling trips with their best friends, that Russell was attacked and killed by a crocodile. His had been a life less ordinary in many ways, living life to the full, but it is still so very hard to accept the loss of such a wonderful human being.

*Provided by Georgina Harris*

**MR PAUL K. HUGHES** (Chemical Engineering 1989)

Follow the rainbow and work hard, aim high. Goodnight, God bless.

*Provided by Lynne Ashcroft*

**MISS JEANNE M.A. INGRAM** (Wye College 1948, Lecturer Wye College)

Jeanne Ingram gave 41 years of service to Wye College and as a lecturer in soil science and a Senior Warden at Withersdane. She continued her teaching and tutorial work for many years after her retirement and has a lasting place in the affections of successive generations of students.

Jeanne was elected to Honorary Life Membership of Wye College in 1989. She will be sadly missed.

*Source: Wye Week*

**MR FRANCIS (FRANK) G. IRVING** (DIC Aeronautics 1946)

Frank Irving was born and bred in sight of the River Mersey but air, rather than water, was his passion. In 1946 Frank arrived in the Department of Aeronautics as a Demonstrator, rising through the academic ranks and retiring 45 years later. Frank's love of gliding also led him to revive the College Gliding Club.

He is remembered with great affection and respect by numerous aeronautics students, members of the Gliding Club and those who came under his influence during his years as a Warden in Beit Hall.

*Source: Citation, 1999 Postgraduate Awards Ceremony*

**MR KASHI N. KUMAR** (MSc Mechanical Engineering 1954)

After graduating Kashi Kumar acquired technical experience in the UK, before returning to India in 1956. He joined the Machinery Manufacturing Corporation, Calcutta, and then in 1973 founded his own consultancy.

Kashi was an active alumnus of the Imperial College Alumni Association of India, taking over the responsibilities of the Honorary Secretary of the Calcutta Chapter of the Association in the mid-sixties, continuing until his death. The alumni of Imperial College in India will miss him; he has left a void which will be difficult to fill.

*Provided by (Jag) Mohan Puri (Mechanical Engineering 1958)*

**MR STEPHEN G. LANKESTER** (Physics 1938)

As a student, Stephen Lankester represented the College at rowing, winning the Junior Sculls in 1937 and the Senior Sculls in 1938.

After graduating, Stephen joined Rolls-Royce in Derby, where he met his wife Beryl. At the beginning of the war he joined the Navy, becoming First Lieutenant and, for a short time Commanding Officer, of a barquentine in the Mediterranean. Two hundred years after the Battle of Trafalgar he claimed to be the last surviving officer of the Royal Navy to have commanded a square rigged sailing vessel on active service!

He is survived by his wife and three sons; John, Roger and Nicholas.

*Provided by John Lankester*

**EMERITUS PROFESSOR JOHN F. LEVY, BSC, DSC, ARCS FIWSC** (Botany 1945)

Professor John Levy was diverted from his PhD in plant pathology to lecture civil engineering students on timber and its properties in construction. He became Imperial's first Professor of Wood Science.

John spent the Second World War coxing Imperial's crews on the Thames tideway where his booming voice was often keenly heard by several College eights who used the Thames regularly for practice. He remained a rowing stalwart for his whole life as cox and then Captain of Thames Rowing Club. John is survived by his wife, Hazel, their sons, Martin and Tim, and daughters, Jain and Wendy.

*Source: The Guardian*

**MR LEONG G. LIM** (MSc Civil Engineering 1965)

Leong Lim was one of Singapore's top transport planners and rail experts. He was appointed Executive Director of Mass Rapid Transport Corporation, and subsequently made Managing Director.

Leong received three National Day Awards from the Singapore Government – the Public Administration Medal (Silver) in 1971, the Public Administration Medal (Gold) in 1976 and the Meritorious

Service Medal in 1998.

Mr Lim is survived by his wife, daughter, son and seven grandchildren.

*Provided by Mrs C. Lim*

**MR JOHN H. LINGARD** (Materials 1958)

John Lingard took a job with Davy British Oxygen after graduating, a job that interested him all his life.

John had many interests, including music, reading, motorcycling and countryside walking. Very much a family man; he regarded his family as his finest achievement. He is greatly missed by his wife Morag, his three children, six grandchildren and by all who knew him.

*Provided by Morag Lingard*

**MR IAN A. LIVESEY** (MSc Mechanical Engineering 1971)

Ian Livesey obtained a first class Honours degree in electronics from the University of Sussex and MScs at Imperial College and Birmingham University. He worked in the UK and the Middle East for the Ministry of Defence and then Deloitte.

Ian had keen interests in electronics, computers and narrow gauge railways, and with his companion Myfanwy, foreign travel and the arts.

*Provided by J. and A. Livesey*

**MR DAVID A. LOVESEY** (Electrical Engineering 1961)

David Lovesey worked in the electricity supply industry for the whole of his career. Initially with London Electricity, finally becoming Managing Director of Seeboard.

In retirement, David and his wife, Jackie, travelled widely and both studied history of art at Birkbeck College. Despite being diagnosed with cancer in the last year of his course, David successfully completed his studies and with Jackie was awarded his degree.

David is greatly missed by Jackie, his son Jonathan, daughter Catherine and his many friends.

*Provided by Terence Boley (Electrical Engineering 1957)*

**MR TIMOTHY E. MACHEMEDZE** (Agricultural Development 1996)

Timothy Machededze entered the field of agriculture in the late 1970s as a teacher in Mashonaland Central Province, Zimbabwe, where farming became his way of life.

At the time of his death, he was the District Agricultural Extension Officer for the Goromonzi/Seke District. Timothy is deeply missed and fondly remembered by his colleagues, friends and family.

*Provided by Tapiwa Machededze*

**MR RICHARD H. MOSSIP** (Electrical Engineering 1965)

Richard Mossip joined the Marconi Company, working on integrated circuit design. In 1969 he joined Bailey Instruments, later becoming President of Dianachart. Richard then joined the State University of New York, subsequently becoming President of the Faculty Senate and receiving the New York State Chancellor's Award for Excellence in Teaching in 2003.

He had many interests, including antique scientific instruments, cross-country skiing, and summer biathlon. Richard is survived by his wife, Caroline, son, Paul, and daughter-in-law, Emmanuelle, two sisters, and four nephews and nieces.

*Provided by Caroline Mossip*

**MR DAVID C. RODGER** (Civil Engineering 1969)

After graduating from Imperial College, David Rodger joined the petroleum industry in exploration and development.

His involvement in decommissioning in the North Sea and extended range drilling beneath Poole Harbour won him the Queen's Award for the Environment. He was known by his colleagues as a gentleman engineer.

He had a love for most sports and a passion for motor racing. He will be greatly missed for his laughter and love of life by his wife Rae Anne, son Jody, daughter Amy, family and friends.

*Provided by Rae Anne Rodger*



## association\_obituaries

### **DR KEITH B. ROGERS** (St Mary's Hospital Medical School 1934)

Dr Keith Rogers was a research assistant under Sir Almroth Wright and Sir Alexander Fleming. He was probably the first patient to be treated with penicillin ointment when he developed severe conjunctivitis, it enabled him to captain the London University rifle team to victory. Keith was a founding Fellow of the Royal College of Pathologists and had a varied career as a pathologist, and as a consultant microbiologist at Birmingham's Children's Hospital. Keith had two daughters, Barbara and Carol, a son, David, and six grandchildren.

*Provided by Yvonne Rogers*

### **MR CHARLES A. SATTERTHWAITE** (MSc Aeronautics 1951, Mechanical Engineering 1967)

Charles emigrated to New Zealand in 1956, to work on the Government's geothermal power project, before taking up a position lecturing in mechanical engineering at the University of Canterbury.

He was involved in the formation of the Sumner lifeboat and a founder member of the Outward Bound School at Anakiwa in the early 1960s.

Charles is survived by his three children, seven grandchildren and four great grandchildren and will be sadly missed.

*Provided by Ann Satterthwaite*

### **MR KIRANKUMAR (KIRAN) R. SHAH** (Biotechnology 1986)

Kirankumar Shah was a wonderful husband, father, brother and son, much missed by all.

*Provided by Mehul Shah*

### **MR ROMAN S. SIDOROWICZ** (DIC Electrical Engineering 1952)

Born in North Eastern Poland in 1923, Roman Sidorowicz was a lecturer in the Department of Electrical Engineering from 1964 to 1990.

Roman was committed to teaching and will be remembered by many undergraduate and postgraduate students for his help and encouragement.

He is survived by a son, two daughters and a granddaughter.

*Provided by Mr Stefan Sidorowicz*

### **PROFESSOR SIR THOMAS (RICHARD) R.E. SOUTHWOOD, FRs** (Zoology 1952)

Richard Southwood's interest in insects and plants became apparent to his family at just three years old and by the age of 16 he had published his first research articles in *Entomologist's Monthly* magazine.

Following his PhD, Richard returned to Imperial College as a research assistant and lecturer, subsequently becoming Dean of Science and Chair of the Division of Life Sciences. In 1979 Richard took up the Linacre Chair of Zoology at Oxford, and it was here that he spent the rest of his career.

Richard's contributions to ecological research and public policy led to a knighthood, honorary degrees and elections to fellowships and academies around the world.

He is survived by his wife, Alison, and their two sons.

*Source: The Times*

### **DR GRAHAM H. TUTTLE** (Physics 1971, PhD 1974)

After graduating Graham Tuttle moved to Hampshire to take up a position with IBM, remaining there for nearly all his working life. He headed the team which created MQ Series and started the Java Technology Centre, and at the time of his death, Graham was a Director of Software Development, one of the company's most respected and trusted leaders.

He will be greatly missed by his wife, Jenny, his daughter and son, his parents and his many relations, friends and colleagues.

*Provided by Jenny Tuttle and IBM*

### **THE CHARLOTTE WILSON MEMORIAL FUND**

On 28 December 2000, Charlotte Wilson (Biochemistry 1995, PhD Biology 1999) and her fiancé, Richard, died after their bus was ambushed by Hutu extremist rebels in Burundi. At the time, Charlotte was teaching science in an impoverished rural school in Rwanda.

Charlotte's friends and family set up the Charlotte Wilson Memorial Fund (CWMF). The fund has created a bursary scheme for students at the school in Rwanda, funded books, laboratory equipment, AIDS-awareness workshops and peace building projects.

The trustees of CWMF would like to thank the many Imperial College alumni who have helped us make this work possible. For more information please visit [www.cwmf.org.uk](http://www.cwmf.org.uk).

Also sadly deceased

**EMERITUS PROFESSOR JOHN M. ALEXANDER** Mechanical Engineering 1950, PHD 1952

**DR DEREK W. ATHERLEY** St Mary's Hospital Medical School 1955

**MR DEREK F. BARKER** Mechanical Engineering 1945

**DR H.B. BARKER** St Mary's Hospital Medical School 1931

**MR CHRISTOPHER H. BARWISE** Mining Engineering 1951

**MR PETER BIBBY** Chemical Engineering 1977

**MR JOHN R. BOTTOM** Electrical Engineering 1956

**CANON P. BUCKLER** Wye College 1938

**MR R.J. BURCHILL** Wye College 1973

**MR DONALD J. CAMPBELL-LITTLE** Civil Engineering 1951, DIC 1952

**MR PETER B. COAKER** Mathematics 1948, DIC Meteorology 1949

**DR BARBARA P. COPPEN** Westminster Medical School 1953

**MR PETER M. CROSBY** Mechanical Engineering 1980

**MR RONALD C. DANIELS** DIC Mechanical Engineering 1961

**MR GLYNNE C. DAVIES** Physics 1984

**DR BERTRAM W. DUCK** Charing Cross Hospital Medical School 1953

**DR PETER G.M. GAFFIKIN** Westminster Medical School 1950

**MR LUAN GERVESH** Chemical Engineering 1975

**DR J.J. GOGGIN** St Mary's Hospital Medical School 1953

**MR MALCOLM C. GOLDFINCH** Management 1978

**DR HENRY GRAHAM** Westminster Medical School 1952

**DR HENRY G. GREEN** PhD Mechanical Engineering 1986

**MR ALFRED A. GRONDIJS** Mining Engineering 1948

**MR JOHN HARDING** Animal Science 1974, Agriculture 1976

**MR DONALD B. HARPER** Physics 1960

**MR WILLIAM C.E. HARRIES** Electrical Engineering 1944

**MR ERIC T.C. HARRIS** Civil Engineering 1938

**MR STANLEY P. HAWES** Mechanical Engineering 1941, DIC Aeronautics 1942

**PROFESSOR PETER V. HOBBS** Physics 1960, PhD 1963

**MRS E.M. HUDSON** Wye College 1949

**DR GEORGE E. HYSON** St Mary's Hospital Medical School 1940

**MR RAY E. JONES** Electrical Engineering 1951

**DR D.M. KERSLAKE** St Mary's Hospital Medical School 1946

**DR STUART S. LAWSON** PhD Electrical Engineering 1975

**DR JOHN LAWSON-MATTHEW** St Mary's Hospital Medical School 1950

**MR DUDLEY R. LESTER** Civil Engineering 1939

**MR THOMAS W. LEVERMANN** Wye College 1994

**PROFESSOR KLAUS J. LEWIN** Charing Cross and Westminster Medical School 1959

**DR R. LEWIS** St Mary's Hospital Medical School 1948

**MRS MARJORIE LOVEDAY** Harlington Sports Ground

**MR GORDON F. MARGRETTs** Geology 1961

**MR THOMAS H.A. MASCALL** Electrical Engineering 1935

**MR GARNETT MCLEAN** Civil Engineering 1951, DIC 1952

**DR MICHAEL L. MEADE-KING** Westminster Medical School 1934

**MR ERIC E. MILKINS** MSc Mechanical Engineering 1967

**DR CHARLES R. NORMAN** St Mary's Hospital Medical School 1968

**MR CHEONG L. NG** Civil Engineering 1937

**MR DENNIS B. O'NEILL** Physics 1964

**MR DEREK A.F. PENNELL** Chemistry 1960

**MR GERALD M.C. PERKIN** Chemistry 1944

**DR EDMUND C. POTTER** Chemistry 1950

**DR KENNETH J. REED** Chemistry 1942, PhD 1943

**DR DAVID S. SHARP** St Mary's Hospital Medical School 1966

**MR FREDERICK B. SHORROCKS** Electrical Engineering 1948

**MR STANLEY SEROTA** Civil Engineering 1938

**MR RODNEY F. SOWDEN** Electrical Engineering 1961

**MR ANDREW ST JOHNSTON** Electrical Engineering 1943

**MR BARRY T. THOMAS** Physics 1970, PhD 1973

**MR J.D. THOMAS** Wye College 1951

**MR J.P. WATERER** Wye College 1949

**MRS CATHLEEN WIFFEN, NÉE ISHERWOOD** Wye College 1955

# honours

## Birthday Honours 2005

**PROFESSOR SIR GORDON CONWAY, KCMG, FIC, FRS**  
Professor of International Development, Imperial College London  
*Knighted for services to international development, science and agriculture*

**DR ANTHONY J. GILLHAM, MBE** (Chemical Engineering 1961)  
Chairman, Safe in Tees Valley  
*MBE for services to the police and partner agencies*

**PROFESSOR SIR PETER KNIGHT, FRS**  
Principal of the Faculty of Natural Sciences, Imperial College London  
*Knighted for services to optical physics*

**SIR DAVID LI KWOK-PO, OBE** (Mathematics 1954–55)  
Chairman and CEO of the Bank of East Asia  
*Knighted for services to education in the UK*

**PROFESSOR MARTIN N. MARSHALL, CBE** (Charing Cross and Westminster Medical School 1987)  
Professor of General Practice, University of Manchester  
*CBE for services to healthcare*

**DR BRIAN H. MAY, CBE** (Physics 1968)  
Composer, guitarist and singer  
*CBE for services to the music industry*

**MR JOHN M.M. NANCE, OBE** (Physics 1981)  
Head of Education, British Council, India  
*OBE*

**DR KEITH E. SEAL, MBE** (Physics 1963, PhD Chemical Engineering 1967)  
Principal Scientist, Atomic Weapons Establishment  
*MBE for services to the defence industry*

**MR DAVID E. SOUTHWARD, MBE**  
(Civil Engineering 1972)  
*MBE for services to the community in Beckermert, Cumbria*

**DR RICHARD J. STOCKLEY MBE, MBBS, DTM&H**  
(St Mary's Hospital Medical School 1976)  
*MBE for services to healthcare in Uganda*

**PROFESSOR DAVID M. WINTER, OBE**  
(Rural Environment Studies 1977)  
Professor of Rural Policy and Director, Centre for Rural Research, University of Exeter  
*OBE for services to rural affairs*

## Fellows of the Academy of Medical Sciences 2005

**PROFESSOR ERIC W.F.W. ALTON, FMedSci**  
(School of Medicine at the National Heart and Lung Institute 1996)  
*Professor of Respiratory Medicine and Gene Therapy, Imperial College London*

**PROFESSOR NEIL FERGUSON, OBE, FMedSci**  
*Professor of Mathematical Biology, Imperial College London*

**PROFESSOR STEVEN V. LEY, CBE, FRS, FMedSci**  
(DSc Chemistry 1983)  
*Professor of Organic Chemistry, University of Cambridge*

**PROFESSOR PATRICK MAXWELL, FMedSci**  
*Chair in Nephrology, Imperial College London*

## Fellows of the Royal Academy of Engineering 2005

**PROFESSOR (IAN) DAVID BOGLE, FREng**  
(PhD Chemical Engineering 1983)  
*Professor of Chemical Engineering, University College London*

**DR PETER A. CUNDALL, FREng**  
(Electrical Engineering 1966, PhD Mineral Technology 1971)  
*Principal and Senior Consultant, Itasca Consulting Group Inc*

**PROFESSOR BRIAN L. DAVIES, FREng**  
(PhD Mechanical Engineering 1995)  
*Founder and Technical Director, Acrobot Co Ltd; Professor of Medical Robotics, Imperial College London*

**PROFESSOR NICHOLAS JENKINS, FREng**  
(Electrical Engineering 1983, PhD 1986)  
*Professor and Group Leader, Electrical Energy and Power Systems Group, University of Manchester*

**PROFESSOR PATRICK E. O'CONNELL, FREng**  
(PhD Civil Engineering 1972)  
*Professor of Water Resources Engineering and Director of Water Resource Systems Research Laboratory, University of Newcastle-upon-Tyne*

## Honorary Fellow of the Royal Academy of Engineering 2005

**SIR CHRISTOPHER EVANS, OBE DSc**  
(Biology 1979)  
*Founder and Chairman of Merlin Biosciences Limited*

## Foreign Member of the Royal Academy of Engineering 2005

**PROFESSOR KEMAL HANJALIC, FREng**  
(PhD Mechanical Engineering 1970)  
*Professor Emeritus, Delft University of Technology; Guest Professor, Technical University of Darmstadt*

## Fellows of the Royal Society 2005

**PROFESSOR JAMES BARBER, FRS**  
*Ernst Chain Professor of Biochemistry, Imperial College London*

**DR LUCA CARDELLI, FRS**  
*Visiting Professor in the Department of Computing, Imperial College London*

**DR JULIAN DOWNWARD, FRS** (PhD Biochemistry 1986)  
*Principal Scientist, Cancer Research UK London Research Institute, Signal Transduction Laboratory*

## Other awards and appointments

**PROFESSOR EMORY L. KEMP**  
(DIC Civil Engineering 1955, MEng 1957)  
*Director of the Institute for the History of Technology and Industrial Archaeology, West Virginia University. Awarded Honorary Membership of the American Society of Civil Engineers.*

**PROFESSOR ANDREW POLLARD**  
(PhD Mechanical Engineering 1978)  
*Queen's Research Chair, Queen's University, Ontario. Appointed as a Queen's Research Chair in the Department of Mechanical and Materials Engineering, in recognition of his work in the fields of computational fluid dynamics and high performance computing.*

**PROFESSOR RICHARD C. SELLEY**  
(PhD Geology 1963)  
*Senior Research Fellow, Imperial College London. Awarded Honorary Membership of the Wine Guild of the UK, for contributions to British geoviticulture.*

**PROFESSOR J.N. OLEAP FERNANDO**  
(PhD Chemistry 1971)  
*Honorary Dean of the College of Chemical Sciences and Chairman of the Academic Board of the Institute of Chemistry Ceylon. A lecture hall in the recently opened headquarters of the Institute of Chemistry Ceylon at Rajagiriya has been named the J.N.O. Fernando Hall in recognition of Professor Fernando's outstanding contribution in the field of chemistry to the Institute of Chemistry, to the field of tertiary education and to Sri Lanka.*

**JOHN M. MARIS** (Aeronautics 1979)  
*President, Marinvent Corporation. Awarded Canada's oldest aviation award, the 2005 Canadian Aeronautics and Space Institute's Trans Canada (McKee) Trophy, for outstanding achievement in the field of air operations.*

**DR ALAN ROBERTSON** (Physics 1962, PhD 1966)  
*Lately Head of the Photometry and Radiometry Group and of the Chemical and Mechanical Standards Section, Canadian National Research Council's Institute for National Measurement Standards. Awarded the 2005 Godlove Award by the Inter-Society Color Council. It was given in recognition of a lifetime of distinguished service to the colour community.*

**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](mailto:matters@imperial.ac.uk).**



Imperial College  
London

