



HONORARY FELLOWS

BELL, Professor Sir John

President of the Academy of Medical Sciences and Regius Professor of Medicine at Oxford University

IBRAHIM, Dr Mohamed

Founder and former Chairman of Celtel International. Founder of the Mo Ibrahim Foundation

ROSE, Sir John

Chief Executive of Rolls-Royce

SORRELL, CBE, Sir John

Co-founder of Newell and Sorrell, co-Chair of the Sorrell Foundation, Chairman of the London Design Festival, Chair of the Commission for Architecture and the Built Environment

FELLOWS

ANDERSON, Ross John

Professor of Security Engineering, University of Cambridge

APPLEBY, Roger

Senior Fellow, Technical Leader Passive Millimetre Wave Imaging, QinetiQ

ASKEW, Timothy Edward Arthur

Managing Director, Atkins Middle East & India Region; Group Executive Board Director, Atkins plc

BURNS, Alan

Professor of Computer Science and Head of Department, University of York

BURROUGHES, Jeremy Henley

Chief Technology Officer, Cambridge Display Technology Ltd

COLLINS, Brian Stanley

Chief Scientific Advisor for Dept for Transport and Chief Scientific Advisor for BIS and Professor of Information Systems, Cranfield University

COWAN, Colin Frederick Nathaniel

Research Director for Digital Communications and Chair of Telecommunications Systems Engineering, Queen's University Belfast

CRONIN, Donal Gerard

Head, Global Engineering and Technology, AstraZeneca

ELLIOTT, Stephen John

Director, Institute of Sound and Vibration Research, University of Southampton

FISHER, John

Deputy Vice-Chancellor, Director of Institute of Medical and Biological Engineering and Professor of Mechanical Engineering, University of Leeds

GOLBY, Paul

Chief Executive, E.ON UK plc

GROOM, John Douglas Graeme

Head of Safety, Health and Environment, Anglo American PLC, London

HARRIS, Robert William

Director, Ove Arup and Partners Ltd.

HOBBS, Graeme Nigel

Chairman, Motorola Ltd

IMREGUN, Mehmet

Director, Rolls-Royce University Technology Centre and Professor of Computational Engineering Dynamics, Imperial College London

JOHN, Philip

Professor of Systems Engineering and Head of Department of Human Factors and Systems Engineering, Cranfield University

MASON, Sir Peter

Chairman, Thames Water, Senior Independent Director, BAE Systems plc and Director, Acergy S.A.

MATHEWS, Andrew

Chief of Materiel Fleet, Ministry of Defence

McCANN, Hugh

Professor of Industrial Tomography, University of Manchester

McLAUGHLIN, Stephen

Professor Electronic Communications Systems, University of Edinburgh

MUGHAL, Hamid Ghafoor

Executive Vice President, Manufacturing Engineering, Rolls-Royce plc

NICHOLLS, John

Professor of Coating Technology and Head of Surface Science and Engineering and Director of the National High Temperature Surface Engineering Centre, Cranfield University

ORR, David Malcolm

Corporate Services Director, Department of Finance and Personnel, Government of Northern Ireland

PARINI, Clive

Director of Research, School of Electronic Engineering and Computer Science, Queen Mary, University of London

PEPPER, Sir Michael

Pender Professor of Nanoelectronics, University College London; Senior Advisor, Cambridge Research Laboratory, Toshiba Research Europe Ltd

POWRIE, William

Professor of Geotechnical Engineering and Director of Knowledge Transfer, University of Southampton

RICHARDSON, David John

Deputy Director, Optoelectronics Research Centre, University of Southampton

SHORE, Paul

Professor of Ultra Precision Technologies and Head of Precision Engineering Centre, Cranfield University

SMITH, Robert Anthony Charles

Engineering Director Typhoon Mission Systems and International Programmes, BAE Systems

SPRINGMAN, Sarah Marcella

Professor of Geotechnical Engineering, Eidgenössische Technische Hochschule Zurich (ETHZ)

THORNHILL, Nina

ABB/RAEng Research Chair in Process Automation, Imperial College London

TOMLINSON, David Joseph

President and Chief Executive, Davy Process Technology Limited

WERNICK, Jane Melville

Director, Jane Wernick Associates Ltd

WHITEHEAD, Nigel

Group Managing Director, Programmes and Support, BAE Systems

WILLIAMS, John Austin

Professor of Engineering Tribology, Cambridge University

WILSON, Sophie Mary

Broadcom Corporation Director, IC Design and Distinguished Engineer

WOODLEY, John

Professor, Technical University of Denmark

WYLLIE, Andrew

Chief Executive, Costain Group Plc

INTERNATIONAL FELLOWS

CIOFFI, John M (USA)

Chief Executive Officer and Chairman, ASSIA Inc; Hitachi America Professor Emeritus, Stanford University

POOR, Harold Vincent (USA)

Dean of Engineering and Applied Science, Princeton University

RAMAKRISHNA, Seeram (Singapore)

Vice-President (Research Strategy) National University of Singapore and Co-Director (Founder) of NUS Nanoscience & Nanotechnology Initiative, NUSNNI

HONORARY FELLOWS

Professor Sir John Bell FRS PMedSci

Sir John Bell is President of the Academy of Medical Sciences and Regius Professor of Medicine at Oxford University. He went to Oxford as a Rhodes Scholar to train in medicine and undertook postgraduate training in London and at Stanford University. At Stanford he developed research interests in the area of immunology and genetics with a particular focus on characterising the molecular events associated with susceptibility to autoimmune diseases. He returned to Oxford as a Wellcome Trust Senior Clinical Fellow in 1987 and was elected to the Nuffield professorship of Clinical Medicine in Oxford in 1992. In 2002, he became the Regius Professor of Medicine.

Sir John Bell has been extensively involved in the development of research programmes in genetics and genomics and in the development of clinical research programmes across the UK. He was Founder of the Wellcome Trust Centre for Human Genetics and has led a significant expansion in biomedical research activities in the genetic determinants of susceptibility in type 1 diabetes and rheumatoid arthritis and also of the molecular interaction on the surface of the T-lymphocyte associated with immune activation. He has helped to pioneer a large number of high-throughput genomic methodologies applied to biomedical science, including programmes in structural genomics, ENU mutagenesis and genetics.

He sits on a wide range of advisory panels for public and private sector bodies responsible for biomedical research in Canada, Sweden, Denmark, France, Singapore and the UK. He sat on the Scientific Advisory Board for AstraZeneca from 1997 to 2000 and has sat on the Scientific Advisory Board of the Roche Palo Alto facility since 1998. He is a non-executive director of Roche AG (since 2001). He is founding director of three biotechnology start up companies. Professor Bell has been a member of Oxford University Council and MRC Council; he is a Board Member of the UK Clinical Research Collaboration and UK Biobank and is Chairman of the Oxford Health Alliance, a private public partnership that sponsors Oxford 2020 vision. He chairs both the Partnership Board of the Oxford Centre for Diabetes, Endocrinology and Metabolism, and the Management Committee of the Richard Doll Building for Trials and Epidemiology in Oxford. Professor Bell is also Chair of the Office for Strategic Coordination

of Health Research (OSCHR) set up to coordinate the efforts of both the National Institute for Health Research and the Medical Research Council. This includes a greater emphasis on translating research into patient benefit whilst maintaining a health science base.

He was knighted in the 2008 New Year Honours.

Mohamed Ibrahim

Dr Mohamed (Mo) Ibrahim is a global expert in mobile communications with a distinguished career in international business and philanthropy. He is one of Africa's most articulate and effective advocates.

A British citizen but Sudanese by birth, Dr Ibrahim earned a Bachelor of Science from the University of Alexandria and a Master's degree from the University of Bradford, both in electrical engineering. He then moved to the University of Birmingham where he was awarded a PhD in mobile communications. He subsequently worked for Sudan Telecom, and later became the technical director for Cellnet, a subsidiary of British Telecom.

In 1998, Dr Ibrahim founded MSI Cellular Investments (later Celtel International). The company now operates in 15 African countries, under licences that cover more than a third of the continent's population. The company has invested over US\$ 750 million in Africa, helping to bring the benefits of mobile communications to millions of people across the continent. In 2005, Celtel International was sold to MTC Kuwait for \$3.4 billion, making it one of Africa's most successful commercial ventures.

In 2006, he set up the Mo Ibrahim Foundation to support and recognise excellent African leadership. The Foundation focuses on two major new initiatives to stimulate debate around, and improve the quality of, governance in Africa. The Ibrahim Prize for Achievement in African Leadership – the world's largest prize at more than US\$ 5 million – recognises and celebrates excellence in governance; and the Ibrahim Index of African Governance provides civil society with a comprehensive and quantifiable tool to hold governments to account. The Ibrahim prize is awarded annually: the first prize was awarded in 2007 to the former President of Mozambique, Joaquim Chissano, and the second in 2008 to the former President of Botswana, Festus Mogae.

Dr Ibrahim's achievements have been recognised by many awards and honours. In 2007, Dr Ibrahim was awarded the GSM Association Chairman's Award, the telecommunication industry's highest

accolade, for 'helping the world to hear Africa's voice'.

In 2008, he was presented with the BNP Paribas Prize for Philanthropy and listed by TIME Magazine as one of the hundred most influential people in the world. In October 2008, he was named by a panel assembled by The Observer as the most influential black man in Britain.

In November 2008, Dr Ibrahim delivered the Academy's ERA International Lecture.

Sir John Rose

Sir John Rose was born in 1953 in Blantyre, Malawi and educated at Charterhouse School.

He graduated in 1975 with an MA in Psychology from St Andrews University, before pursuing a banking career, initially with First National Bank of Chicago then Security Pacific.

He joined Rolls-Royce plc in 1984 and subsequently held a number of leadership roles. He served as Director of Corporate Development from 1989 to 1994 and was first appointed to the Board of Directors in January 1992. In February 1993 he assumed the role of President and Chief Executive of Rolls-Royce Inc, responsible for Rolls-Royce activities in North America. On 1 January 1995, he became Managing Director of the Aerospace Group until assuming the role of Chief Executive of the company on 1 May 1996, after serving on the Board of Directors for just four years.

In the subsequent 12 years at the top of the company, Sir John Rose has successfully steered Rolls-Royce to become the world's second-largest engine maker, investing billions into the research and development of the next generation of more fuel efficient machines.

Although not educated as an engineer, Sir John Rose is an Honorary Fellow of the Institution of Mechanical Engineers and a Fellow of the Royal Aeronautical Society.

He is a member of the JP Morgan International Council, the CBI International advisory Board, the Englefield Advisory Board, the Advisory Board of the Economic Development Board of Singapore, the European Round Table of Industrialists and is a Trustee of the Eden Project.

He has previously held the offices of president of the European Association of Aerospace Industries (AECMA), President of the Society of British Aerospace Companies and Chairman of The Prince's Trust.

He received a knighthood in the 2003 New Year's Honours List and became a Commandeur de la Legion d'Honneur in 2008.

Sir John Sorrell CBE

John Sorrell was born in London in 1945. He went to Saturday morning classes at Hornsey College of Art when he was 14 and later studied art and design there full time. He set up his first business when he was 19 and during his career of over more than 40 years he has created one of Europe's biggest and most successful design businesses, chaired both of the UK's public design bodies, originated the London Design Festival and set up a Foundation which inspires creativity in young people.

He co-founded Newell and Sorrell with Frances Sorrell (nee Newell) in 1976. The company grew to become one of Europe's biggest and most successful design and identity businesses, working for clients around the world. John Sorrell was Chairman until 2000 when he and Frances sold the company and set up their foundation.

He was appointed Chair of CABE (Commission for Architecture and the Built Environment) in 2004. CABE is the Government's advisor on architecture, urban design and public space. Previously John chaired the UK Design Council from 1994 to 2000 after carrying out a major review which created a blueprint for the transformation and future strategy for the organisation.

He is the Chairman of the London Design Festival which he devised and founded in 2003 with the purpose of celebrating and promoting London and the UK's creativity. Now in its fifth year, the Festival brings 200 events to an international audience each September.

He is Co-Chair of the Sorrell Foundation, which aims to inspire creativity in young people and improve quality of life through good design. For the last eight years the Foundation has worked with thousands of pupils in primary and secondary schools, as well as with university students and professional designers to give young people vital life and work skills, and to champion their involvement as clients in the schools refurbishment and rebuilding programme.

Sir John Sorrell holds a number of other appointments including, Chair, Infrastructure Group DCMS Creative Economy Programme; member of the Home Office Design and Technology Alliance; Member DCMS Chairs Group and Member of the High Level Stakeholders Group, Foresight Project on Sustainable Energy Management and the Built Environment.

Sir John Sorrell was appointed CBE in 1996 and was awarded the Royal Society of Arts Bicentenary Medal in 1998. He holds an Honorary doctorate from London Metropolitan University and was elected an Honorary Fellow of the Royal Institute of British Architects in 2002. John was awarded a Knighthood in the 2008 New Year Hours List 'for services to the Creative Industries'.

Sir John Sorrell is a regular speaker and broadcaster on design, creativity and identity, appearing on television and radio and at conferences around the world. His book, 'Creative Island' (Laurence King Publishing, 2002), features inspired design from Great Britain. He co-authored 'Joinedupdesignforschools' (Merrell, 2005) with Frances Sorrell.

FELLOWS

Ross John Anderson FIET FIMA CEI BA(Cantab) MA(Cantab) PhD(Cantab) (52)
Internationally outstanding as a leading authority on security engineering, Ross Anderson has helped found a succession of disciplines that are important for keeping systems dependable in the face of malice, error or mischance. Most recently he pioneered the study of security economics; previous contributions to interface analysis, hardware tamper-resistance, emission security and information hiding also helped to establish these fields as subjects of serious academic research. Professor Anderson's life work is to turn security, and in particular information security, into a proper engineering discipline.

Roger Appleby MIEEE FInstP CEng BSc PhD (65)

Distinguished for his personal contribution to the development and practical application of passive millimetre-wave imaging, for security and defence.

Timothy Edward Arthur Askew FICE FStructE CEng BSc (61)

Distinguished for his outstanding contributions in contracting and consulting engineering, where he has been responsible for the design and financial success of some of the world's most pioneering structures in recent times. He has also contributed to the profile of the profession in the broadest sense, including work with UK and overseas governments.

Alan Burns FIET FBCS SMIEEE CEng BSc DPhil (56)

Distinguished for his contributions to research on real-time systems which have been extensively published, disseminated and used in practical applications. His research has been used by industry including BAE Systems and Honeywell, and has resulted in a spin-out company, Rapita, set up by York University to market systems for the analysis and simulation of real-time embedded systems to determine worst-case execution time for software used in avionic, automotive and telecommunications applications. He led York's involvement in the very successful EPSRC-funded Dependability Interdisciplinary Research Collaboration (DIRC) from 2000 to 2006.

Jeremy Henley Burroughes MIET BSc PhD(Cantab) (48)

Jeremy Burroughes is distinguished for his pioneering work in the field of polymer semiconductor devices. His discovery in 1989 of polymer light-emitting diodes created a new field of research and technology. At Cambridge Display Technology he has led the engineering of this all the way to a fully-commercial display technology, with excellent control of colour, efficiency and durability.

Brian Stanley Collins CITP CEng FIOP FIET FBCS RCDS DPhil(Oxon) MA(Oxon) (63)

Brian Collins is distinguished for the breadth of his engineering contribution spanning from laser rangefinders and Doppler velocimeters to software systems for a major law firm. He has provided leadership in RSRE, GCHQ, Clifford Chance and now is doing so as Chief Scientific Advisor to the Departments for Transport (DfT) and for Business, Innovation and Skills (BIS).

Colin Frederick Nathaniel Cowan FIET SMIEEE BSc PhD (53)

Distinguished for fundamental research contributions in adaptive signal processing specifically with reference to applications in digital communications. Early contributions to the understanding of linear adaptive filters were followed by pioneering research in non-linear non-Gaussian signal processing which underpin modern, high bandwidth radio and wire line digital communications. His research activities have contributed very significantly to the establishment of two major international research institutes in Northern Ireland. In particular, the Sonic Arts Research Centre (SARC) is a unique, interdisciplinary facility with global significance.

Donal Gerard Cronin CEng CSci FICHEM PhD MSc PG Dipl. Dipl. Chem. Tech (48)

Donal Cronin is an outstanding chemical engineer who is using his engineering skills to bring innovation in engineering and technology to AstraZeneca, one of the world's largest international pharmaceutical companies. He is responsible for engineering and technology development and exploitation across all AstraZeneca's Research, Development and Manufacturing operations, responsible for the provision and maintenance of sustainable and compliant processes and facilities.

Stephen John Elliott FIET FASA FIOA CEng BSc PhD (55)

Distinguished for the development of adaptive filtering algorithms widely used in the active control of sound and vibration. The analysis and implementation of these multichannel algorithms has contributed to the commercial development of systems for the control of sound and vibration in aircraft, cars and helicopters.

John Fisher FIMechE CEng CSci FIPEMB BSc PG Dip PhD DEng (53)

Distinguished for pioneering research in mechanical and biomedical engineering that has had global impact in application in prosthetics and regenerative medicine.

Paul Golby CEng FIET FEI FIMechE BSc PhD (58)

Dr Golby is a distinguished businessman with a passion for positioning the UK at the forefront of low carbon energy technology development and application. Through his pivotal role in establishing the UK Energy Research Partnership and his commitment to the Energy Technologies Institute he has re-established the UK as a real force in low carbon energy.

John Douglas Graeme Groom FIMMM CEng MA(Cantab) PhD(Cantab) (62)

As the person with specific responsibility for Safety, Health and Environment issues for one of the largest mining companies in the world, John Groom has had to deal with many difficult engineering and environmental issues. Also, as the prime mover in promoting sustainability in Anglo's mining business and in the wider international mining scene, he is well known and well respected for his knowledge and for his leadership in the difficult engineering and technical issues that affect Safety, Health and Environment in the mining Industry.

Robert William Harris FIOA CEng BSc MSc (54)

Rob Harris is Britain's leading performing arts acoustics engineer. He founded Arup's world-renowned Acoustics Division and is the designer of choice for theatres, concert halls, opera houses and other public spaces across the world. He is distinguished for deriving practices leading to UK and US public address and voice alarm standards.

Graeme Nigel Hobbs FIET CEng Eur Ing BSc MSc DMS (53)

Distinguished for his leadership of the engineering of complex radio communications systems including, most recently, Airwave, the world's largest public safety radio communications network. The implementation of Airwave, covering mainland UK and involving 3,500 base stations, required the development under his technical leadership of new engineering techniques which are now being adopted internationally.

Mehmet Imregun FIMechE CEng BSc MSc PhD (53)

Distinguished primarily for his work in vibration and aero elasticity, he has led the Rolls-Royce Vibration UTC in Imperial College to be the world leader in the field of aero elasticity. His expertise and his codes have become essential to Rolls-Royce in the design and development of its engines.

Philip John BSc PhD MINCOSE (53)

Distinguished for his outstanding achievements in the development of systems engineering techniques for the design and delivery of products in a complex industrial context and of subsequently establishing a nationally significant academic base for the further development of these techniques and their dissemination into a wider industrial base.

Sir Peter Mason KBE, FICE CBIM BSc (62)

Sir Peter Mason is an outstanding British Engineer and industrialist. His 10-year leadership of AMEC plc transformed it from a UK focused construction company to an international project management and services business offering world-class engineering capability to energy, transport and process sector customers across the globe. As CEO of AMEC and Balfour Beatty

before it, Sir Peter has delivered some of the most significant and challenging infrastructure projects of recent times and in doing so has enhanced the reputation of British engineering across the world.

Andrew Mathews CB, CEng MIMechE FINucE BSc PG Dip MSc (51)

Vice Admiral Andrew Mathews is Chief of Materiel Fleet: responsible for delivery and support of all the Royal Navy's ships and equipment, which includes management of the three major Naval Bases. A member of the Admiralty Board, he has unique experience of nuclear submarine engineering and is an outstanding programme manager.

Hugh McCann FIET MInstP SMIEEE CEng CPhys BSc PhD (54)

Eminent for the invention and application of measurement techniques for difficult and extreme environments with emphasis on tomographic imaging, notably the invention of high-speed all-opto-electronic Chemical Species tomographic imaging, applied in automotive engines, and the exploitation of electrical Tomography for topics ranging from sub-sea-oil-gas separation to neuroscience.

Stephen McLaughlin FRSE MIET CEng SMIEEE BSc PhD (49)

Professor McLaughlin is internationally recognised for his contributions to statistical signal processing and applications thereof. He built from scratch an internationally leading activity on characterising the impulsive noise statistics DSL systems. The work is fundamental, ground breaking and commercially significant and was adopted by the European Telecommunications Standards Institute (ETSI). Snell and Wilcox applied his techniques directly to achieve improved video filtering of TV signals in standards converters and the Swedish Defence Research Agency (FOI) in Sweden used his results to construct higher performance sonar detectors.

Hamid Ghafoor Mughal FIET CEng BSc MSc BA EngD (54)

Exceptional for world-class manufacturing engineering innovation. Examples include: the design of a high volume non-turbulent engine block foundry at Rover, integrating BMW's 4x4 design and manufacturing; and introducing new integrated practices and plant investment, giving Rolls-Royce a significant competitive edge.

John Nicholls CEng FIMMM BSc (60)

John Nicholls is distinguished internationally for his innovative research, design, development, manufacturing and analysis work, leading to commercial implementation of coating systems to resist corrosion in very hostile environments. His work has enabled advanced gas turbine engine components to operate reliably at well above the melting point of their base iron-nickel alloys.

David Malcolm Orr FICE FIAE FIHT CEng CEnv BSc MSc (55)

David Orr is a noted civil engineer, distinguished for his excellence in the delivery of major infrastructure projects in Northern Ireland in the areas of road transport and procurement. His exceptional leadership skills, political acumen and ability to manage change led to major and vital improvements in the 25,000 km road network in Northern Ireland. Appointed as Director of Central Procurement for the Government of Northern Ireland in 2006, David is now responsible for the delivery of the Government's capital investment programme covering prison refurbishment, stadia, and public realm and education projects.

Clive Parini FIET CEng BSc PhD (57)

Distinguished for outstanding contributions to the measurement and characterisation of microwave and millimetre wave antennas as used in both civil and military applications including mobile communications, radar and remote sensing. He has established and maintained a comprehensive millimetre test facility which is unique within the UK, and there is only one other in Europe. The European Space Agency and Matra Marconi Space have derived major benefits from his research, with antennae based on his work in service on satellites.

Sir Michael Pepper FRS FInstP BSc MA PhD ScD(Cantab) (66)

Sir Michael Pepper is distinguished for research using advanced semiconductor technology for creating new areas of physics and technology and starting the new field of semiconductor nanostructures with enormous impact on solid state physics. The advances which he has pioneered have covered an exceptionally wide range of disciplines from the emerging quantum technologies to new methods of imaging now being deployed commercially.

William Powrie CEng FICE BA(Cantab) MA(Cantab) MSc (49)

Distinguished for his internationally recognised research outputs in groundwater control, retaining walls and landfill engineering

and the impact of his research on construction industry design guidelines and major civil engineering projects, including design of excavations for the Jubilee Line and low level nuclear waste repositories at Drigg.

David John Richardson FIET CEng BSc PhD (45)

Outstanding contributions to the field of optical fibre technology most notably in the areas of high power fibre lasers and their applications in industrial, aerospace and scientific applications; the fabrication, modelling and engineering applications of holey optical fibres; and the development of devices for high speed optical fibre communications systems.

Paul Shore CEng FIED MSc PhD (46)

Outstanding, dynamic engineer, internationally recognised for his skills and achievements in high precision engineering and nanotechnology, notably in the design and development of ultra-precision and mass production systems, associated metrology equipment and novel process technologies, establishing and leading a new UK national facility for ultra-precision and structured surfaces.

Robert Anthony Charles Smith FIET CEng BSc (59)

Bob Smith is the distinguished and leading engineer on the UK's largest and most complex engineering programme. Through his thirty-nine year career he has made significant innovative engineering contributions into ground testing of complex systems, production of airborne software and new tools and techniques for Design for Production. He has a significant international profile through his lead role on major European programmes from Jaguar to Eurofighter Typhoon. Hundreds of young engineers have also benefited from Bob's passion for helping to develop others.

Sarah Marcella Springman OBE, FICE CEng MInstRE SIA MA(Cantab) MPhil(Cantab) PhD(Cantab) (52)

Professor Sarah Springman is an internationally eminent academic civil engineer, based at the renowned ETH in Zurich. She is distinguished for her outstanding research achievements in physical modelling and her innovative teaching methods in the field of soil mechanics. She is recognised for her excellence in research and teaching and for her work in promoting women into engineering. She is distinguished as an accomplished public speaker on the engineering profession and for her role as an international sportswoman.

Nina Thornhill FIET FICHEM CEng
BA(Oxon) MSc PhD (56)

Nina Thornhill has made outstanding contributions to process automation and control and has brought forward academic thinking into useful industrial applications. She was responsible for the first reported refinery-wide roll-out of control loop performance monitoring that was undertaken within BP in 1994, for plant-wide oscillation detection and diagnosis in 2001-3 in collaboration with Eastman Chemical Company and for the commercialisation of the Plant Disturbance Analysis approach for rapidly detecting the root-cause of plant-wide disturbances, by ABB. She holds the RAEng-ABB Chair in Process Automation at Imperial College.

David Joseph Tomlinson FICHEM CEng
BSc PhD MBA (63)

As President of Davy Process Technology Limited, David Tomlinson has made an outstanding contribution to the continued growth and international reputation of the UK's premier chemical process technology and licensing company. Through his enthusiasm, excellent technical experience gained from running large multi-disciplinary engineering and construction organisations, and his natural management skills, he has greatly increased the range of Davy Processes' technology and patents, ultimately being responsible for the commercial success of the company.

Jane Melville Wernick FIStructE FICE CEng
HonFRIBA BSc (55)

Outstanding for her engineering achievements, she has specialised in the design of structures which play a large role in enabling the total architecture of the building. She has wide experience of working with irregular and complex geometries, and of light weight structures. Her many award-winning projects include the London Eye and Young Vic Theatre.

Nigel Whitehead FRAeS CEng BSc (46)

Nigel Whitehead is making an outstanding contribution to the engineering capability of the UK through his leadership of the BAE Systems Military Air Solutions business. As an engineer he is a role model for the profession and an influential proponent of engineering as a career of choice for young people. His personal leadership has led to many outstanding engineering accomplishments in the fields of aerospace and defence including, for example and most recently, the world's most advanced application of autonomous system technologies to unmanned aerial vehicles.

John Austin Williams FIMechE AMInstP
CEng MA(Cantab) PhD(Cantab) (61)

He is distinguished as the originator of the spiral groove pumping seal which has greatly extended the performance envelope of mechanical face seals and is widely used in the oil and gas handling industries. He has worked in close collaboration with the suppliers of transmission fluids in the development of traction fluids for the current generation of infinitely variable ratio vehicle transmissions. His textbook on "Engineering Tribology" has been reprinted several times and adopted by a number of engineering schools worldwide. It was recently cited by the American Society of Mechanical Engineers as one of the three most influential books in this field.

Sophie Mary Wilson FBCS CIP MA(Cantab)
(52)

Sophie Wilson is a renowned computer and microprocessor engineer. Her easy-to-use software was crucial to the success of the BBC Microcomputer, Acorn Archimedes and Acorn Replay; and her enduring instruction set is central to the architecture of the ARM microprocessor, which has become a major UK success story with over 10 billion shipped by the end of 2007. She is distinguished for design and implementation of market-leading, high-performance digital subscriber line processors.

John Woodley FICHEM CEng BSc DEng
PhD (48)

John Woodley is distinguished for his pioneering research and his leadership in the application of biocatalysts to industrial synthesis, especially of pharmaceuticals. He has ensured translation to outcome by leading collaborative work with industrial partners in the UK, Europe, the USA and Japan and is in demand as a speaker and consultant in both companies and the research community.

Andrew Wyllie FICE CEng BSc MBA (46)

Andrew Wyllie is one of the outstanding engineers of his generation. As CEO of Costain plc, the international engineering, construction and land development group, he is an industry leader who has transformed business performance through the successful application of innovation and technology.

INTERNATIONAL FELLOWS

John M Cioffi BS MS (Stanford) PhD
(Stanford) MIET FIEEE NAE (US)

World renowned for his pioneering work on Asymmetric Digital Subscriber Line (ADSL) technology used for transforming copper pair phone lines into ultra-fast Internet access. He is regarded by many as the father of ADSL. He founded the company Amati, which was subsequently sold to Texas Instruments for \$440 million. His outstanding achievements include introducing Dynamic Spectrum Management to reduce and eliminate crosstalk between DSL phone lines that are close together. Recently he founded a new company, Assia, to provide centralised management of DSL services for telecommunications companies.

Harold Vincent Poor BEE MS MA PhD FIEEE

Distinguished as a world-leading engineering researcher and educator in signal processing, wireless communications and related fields. His fundamental advances in robust statistical signal processing, multi-user detection and non-standard signal processing have underpinned research in these fields for decades. His award-winning writings, innovative courses, and legendary mentoring have brought these fields alive to a generation of research specialists and students, while his research contributions have been instrumental in advancing industrial development.

Seeram Ramakrishna PhD (Cantab) TGMP
(Harvard)

Distinguished for leadership of engineering education both in Singapore and internationally. He is credited with directing the ascent of the Faculty of Engineering at the National University of Singapore (NUS) to become one of the top engineering schools in the world. He was instrumental in securing the \$132 million Solar Energy Research Institute of Singapore – a partnership of NUS and corporate engineering companies. He has achieved significant global recognition through contributions to novel processing and functional behaviour of composites, biomaterials and nanomaterials and has successfully commercialised his innovations on biocomposites through the companies Biomers International and MECC Ltd.