The Royal Academy of Engineering

New Fellows 2010

HONORARY FELLOWS

BEAR, Alderman Michael
Managing Director, Balfour Beatty Property Ltd

FELLOWS

ATKINSON, Jane Victoria
Vice-President, Utilities Operation, SembCorp Utilities UK Ltd

BALMOND, Cecil Hugh Ignatius
Consultant, Arup Group Ltd

BENN, Jeremy Richard
Chief Executive, Jeremy Benn Associates Ltd

BOOTH, Edmund
Independent Consultant, Earthquake Resistant Design

BRADLEY, Andrew
Chief Engineer - Hawk
Engineering Director, Brough, BAE Systems

BRYANT, Jayne
Engineering Director (EPWG Chair), Performance Excellence, Head Office, BAE Systems

BURKE, Carol Rose
Managing Director, Unipart Manufacturing Group

CAMERON, Stuart William
Chief Engineer, Doosan Babcock

CHRISTOPOULOS, Christos
Professor of Electrical Engineering and Director of the George Green Institute for Electromagnetics Research (GGIEMR), University of Nottingham

CILLIERS, Johannes Jacobus Le Roux
Rio Tinto Professor of Mineral Processing and Director, Rio Tinto Centre for Advanced Mineral Recovery, Department of Earth Science and Engineering, Imperial College London

CIPOLLA, Roberto
Professor of Information Engineering, Cambridge University. Managing Director, Toshiba Cambridge Research Laboratory

COOK, Allan Edward
Chairman, W S Atkins

COOK, Michael John
Director of Buildings, Buro Happold Ltd

DAY, Ivor
Senior Rolls-Royce Research Fellow, Whittle Laboratory, University of Cambridge

DIGBY, Roger Paul
Head of Materials and Processes, Airbus UK

DUBOIS, Edward
Owner, Chief Engineer and Principal Naval Architect at Dubois Naval Architects

DUNNE, Fionn Patrick Edward
Professor of Engineering Science, University of Oxford

EASTON, Murray
Director of Murray & Roberts Limited

GOBLE, Carole Anne
Professor of Computing Science, School of Computer Science, University of Manchester

GOW, David James
Head of Rehabilitation Engineering, NHS Lothian

GRANT, Patrick
Cookson Professor of Materials, University of Oxford

HACKITT, Judith Elizabeth
Chair, Health and Safety Executive

HALL, James William
Professor of Earth Systems Engineering, Newcastle University

HOLBOURN, Paul Edwin
Vice President, Capability and CTO, Radar and Advanced Targeting, SELEX Galileo

HOLLIDAY, Steven John
Group Chief Executive, National Grid plc

HOLT, Nic Peter
Distinguished Engineer and Systems Architect, Fujitsu

HOUNSLOW, Michael John
Pro Vice Chancellor - Engineering, University of Sheffield

HURFORD, Peter
Nuclear Safety Consultant. Member of the MoD Defence Nuclear Safety Committee

KEOGH, Patrick Sean
Professor of Machine Systems, Department of Mechanical Engineering, University of Bath

LESLIE, Ian
Robert Sansom Professor of Computer Science, University of Cambridge

LOW, Andrew John
Independent Consultant. Formerly, Technical Director Thales UK plc

LUDLAM, Stephen
Managing Director and Chief Executive, Australian Submarine Corporation

MAY, Michael David
Chief Technical Officer, XMOS Ltd and Professor of Computer Science, Bristol University

MUGGLETON, Stephen Howard
Royal Academy of Engineering/Microsoft Research Chair in Machine Learning, Imperial College London

NEVILLE, Anne
RAEng Chair in Emerging Technologies and Professor of Tribology and Surface Engineering, School of Mechanical Engineering, University of Leeds

PANTELIDES, Constantinos Christou
Managing Director, PSE Ltd

PERKINS, Matthew
Chief Executive, Surrey Satellite Technology Ltd

The Royal Academy of Engineering is pleased to announce that the above were elected Fellows at the AGM on 5 July 2010.

PERRY, Nigel J
Chief Executive and Director, Centre for Process Innovation, Teesside

RODGER, Albert Alexander
Vice-Principal and Head of College, College of Physical Sciences, University of Aberdeen

SANSOM, Robert D
Chairman, Cambridge Angels. Director of Azuro Inc, CRFS Ltd, Fetch Inc, Netronome Inc, Short Fuze Inc, Ubisense Ltd

SCHOFIELD, Nigel Paul
Senior Technology Manager, Edwards Ltd

SHORT, Michael
Vice President, Research and Development, Telefonica Europe/O2

STEPHENSON, Tom
Lorch Professor of Water Sciences and Head of School, School of Applied Sciences, Cranfield University

TAYLOR, Alexander Marionos Kereton
Professor of Fluid Mechanics, Imperial College London

THOMLINSON, David
Managing Director, Accenture UK & Ireland

TORERO, Jose Luis
BRE Trust/RAEng Professor of Fire Safety Engineering and Director of BRE Centre for Fire Safety Engineering, University of Edinburgh

TOWNEND, Ian Howard
Research Director, HR Wallingford

TRAVIS, Adrian Robert Leigh
Senior Scientist, Microsoft Corporation

TYLER, Andrew Oliver
Chief Operating Officer, Defence Equipment and Support, Ministry of Defence

WATSON, Jeremy Daniel McKendrick
Chief Scientific Advisor, Department of Communities and Local Government and Research Director, Arup Group Ltd

WEIGHTMAN, Michael William
HM Chief Inspector of Nuclear Installations, Head of the Nuclear Directorate of the Health and Safety Executive

WINSER, Nicholas Paul
Executive Director - Transmission, National Grid plc

YANG, Guang-Zhong
Director of Imaging & Robotics, Institute of Biomedical Engineering, Head of Visual Information Processing, Department of Computing and Professor in Medical Image Computing, Imperial College London

INTERNATIONAL FELLOWS

BRUSCHI, Howard (USA)
Executive Consultant, Previously Westinghouse Senior Vice President and Chief Technology Officer

LANGER, Robert Samuel (USA)
David H Koch Institute Professor at MIT

LEWIN, Gregory Arthur (Australia)
Executive Director of Sapphire Global Pty Ltd. Non-Executive Director, Sasol Pty Ltd

ROWE, Ronald Kerry (Canada)
Vice-Principal (Research) and Professor of Civil Engineering, Queen's University at Kingston, Canada

VEST, Charles (USA)
President Emeritus and Professor of Mechanical Engineering, Massachusetts Institute of Technology and President, US National Academy of Engineering

WILLNER, Alan Eli (USA)
Professor, Ming Hsieh Department of Electrical Engineering, University of Southern California

HONORARY FELLOWS

BEAR, Alderman Michael FRICS FICE CEng
Michael Bear is the Alderman for the Ward of Portsoken in the City of London and has served on many City Committees. He is a Liveryman of the Worshipful Companies of Engineers, Paviors and Chartered Surveyors. He was a Sheriff of the City of London for the mayoral year 2007/8 and as the nominated next Lord Mayor of London should, following the traditional election process at Common Hall in September 2010, commence his year of Office as Lord Mayor in November 2010. He will be the first engineer to hold the office of Lord Mayor of London since Sir Francis McWilliams GBE FREng in 1992/3.

Michael Bear was born in Nairobi, brought up in Cyprus and educated at Clifton College in Bristol. He studied Civil Engineering at the University of Witwatersrand in South Africa and an MBA at Cranfield University. He has held senior positions in both the property and construction industries and over the past 33 years has worked in the international construction industry including China and West Africa for Balfour Beatty. In the City of London, as Chief Executive of The Spitalfields Development Group he was responsible for bringing the development of Spitalfields to a successful conclusion. He is Regeneration Director at Hammerson plc and since 1993 also the Managing Director, Balfour Beatty Property Ltd with responsibility for new developments and PFI/PPP projects. He has supported a number of UK and overseas companies in relocating and expanding their businesses into the City of London. His voluntary work includes charity projects overseas in South Africa and Bangladesh, whilst in the UK he has a wide range of organisations in which he plays an active part including as Director of Spitalfields Market Community Trust, Governor of The Sir John Cass Primary School and London South Bank University and Cityside Regeneration.

FELLOWS

ATKINSON, Jane Victoria Eur Ing BEng MBA CEng FIChemE (38)
Distinguished for Iron and Steel troubleshooting and technology transfer. Examples include resolution of steel slab cracking, electrostatic precipitator fires in sinter plants and recycling of redundant equipment. Renowned for increasing the output of all assets she has been responsible for, including the UK's first commercial green energy biomass boiler.

BALMOND, Cecil Hugh Ignatius BSc MSc CEng FIStructE HonFRIBA (67)
Cecil Balmond is one of the world's most renowned structural engineers, responsible for numerous groundbreaking structures ranging in scale from a series of innovative designs for the Serpentine Gallery in London to the CCTV television building in Beijing. He has written books and articles on structure in architecture and has lectured and given prestigious addresses at universities in many countries. His work has been exhibited in Germany, France, USA and most recently in Denmark.

BENN, Jeremy Richard MA(Cantab) MSc CEng CWEM FICE MCIWEM (47)
Distinguished for his outstanding contributions, both as an innovator and a consultant, in the realms of flood risk and erosion management. He has led the first projects to flood map entire countries and has steered ground-breaking research into the use of grid and GPU computer technologies in computational hydraulics.

BOOTH, Edmund BA(Cantab) CEng FICE FIStructE (62)
Edmund Booth is one of the pre-eminent seismic structural engineers in the UK and is recognised for his outstanding and continuing contribution to the advancement of seismic engineering practice amongst the UK civil and structural engineering community. Seismic engineering is a vital aspect of the engineer's role in protecting society and for economic security; UK engineers require skills in earthquake protection for their work world wide and for the domestic nuclear industry. He has devoted much of his career to this most complex of subjects in both theory and practice.

BRADLEY, Andrew BSc PhD CEng FIET FRAeS (55)
Distinguished for introducing world-class systems engineering strategy and capability into the nuclear and aerospace industries, also for being the Chief Engineer for the world's most successful military jet trainer. He has led national strategic initiatives in systems engineering and influenced standards and practices in safety critical software.

BRYANT, Jayne CEng FIET (51)
With the rapidly growing importance of software and systems engineering in the development of complex airborne systems over the last 30 years Jayne Bryant's contributions to, and passion for, developing and maturing the disciplines of Systems and Software Engineering has been profound, not only within her own business but also across the UK and indeed internationally. She has gained a reputation for being both an expert in the field and a proponent and leading practitioner of a systems approach to delivering engineering across product lifecycles. Through a 30-year track record of continuous achievement and progression she is recognised as being an eminent Systems Engineer in the Aerospace Sector.

BURKE, Carol Rose BEng MSc CEng FIMechE (43)
An exceptional manufacturing engineer whose introduction of full service strategy for automotive exhaust and fuel systems has enabled Unipart to win market share from large global suppliers and low cost Asian and Eastern European competition. Outstanding for creating Unipart Manufacturing's Teaching Factory, empowering employees and developing best manufacturing practice.

CAMERON, Stuart William BSc MBA CEng FIMechE (64)
Outstanding in his role as Chief Engineer with Doosan Babcock for technical risk management and failure investigations on a worldwide basis. Distinguished for his major contribution to pressure equipment legislation, codes and standards both nationally and internationally with his expertise being acclaimed by the standardising bodies in USA, Europe and Japan.

CHRISTOPOULOS, Christos Dipl Eng MSc DPhil CEng MIET FIEEE (63)
Distinguished for his contributions to computational electromagnetics, including the modelling and simulation of complex systems and the development of the transmission-line modelling method. His work has been applied to the interaction of fields with matter, to multi-scale problems and to analysis and design for electromagnetic compatibility.

CILLIERS, Johannes Jacobus Le Roux BSc MSc PhD MBA CEng CSci FIChemE FIMMM (49)
Outstanding for optimising mineral separation using froth flotation; extending flotation science, designing, constructing and implementing new equipment and techniques, and significantly improving the process economics. Professor Cilliers' key engineering work of excellence is in mineral froth flotation, the process in which valuable minerals are separated from the mined waste rock. His work in flotation optimisation and design, and inventions for froth measurement and control has increased significantly the process efficiency, mineral resource sustainability and industry profitability.

CIPOLLA, Roberto BA(Cantab) MSE MEng DPhil(Oxon) FIET (47)
Distinguished for his contributions to computer vision, especially the recovery of 3D shape from images, and its translation into novel commercial applications, and for his leadership of the Toshiba Cambridge Research Laboratory.

COOK, Allan Edward CBE, BSc DMS CEng FIET (60)
Distinguished for his exceptionally strong and effective engineering leadership and for his contribution to manufacturing processes and supply chain management, which has led to his appointment as Chairman of the National Skills Academy for Manufacturing.

COOK, Michael John MA(Cantab) PhD CEng FIStructE (55)
Mike Cook has made an outstanding contribution to the design and construction of landmark public and commercial buildings – innovative steel frames, long span tensile and membrane structures and a range of internationally recognised steel and glass grid shell roofs. He is responsible for structural engineering development with Buro Happold Engineers Ltd worldwide.

DAY, Ivor BSc MSc PhD(Cantab) CEng FIMechE (61)
Ivor Day has contributed greatly to the gas turbine by his innovative and skilful use of engineering techniques. In the age of computation he continues to demonstrate that experiments are indispensible, tackling the problems that numerical analysis cannot reach. His work has contributed to the aerodynamic, combustion and mechanical aspects.

DIGBY, Roger Paul BEng PhD CEng FIMMM MWeldI (47)
Roger Digby is an outstanding Materials Engineer and leader who is widely recognised for technical excellence and strategic management of materials science and processes in the aircraft industry nationally and internationally. He has a strong research and publication record but is recommended for his role in developing materials and structures for world class aircraft.

DUBOIS, Edward Dip Yacht & Boat Des CEng FRINA (58)
Ed Dubois is one of the most distinguished yacht designers in the world and undoubtedly the most famous and distinguished designer of performance yachts in the UK. Dubois designed yachts have won many major competitions including the Admiral's Cup, Sydney to Hobart and Fastnet races.

DUNNE, Fionn Patrick Edward BSc MEngSc PhD CEng FIMechE (47)
Distinguished for his sustained technology transfer and industrial take-up of his scientific output by the research intensive aero engine manufacturing industry. Internationally renowned for research leadership on the integration of materials engineering with solid mechanics, leading to robust micromechanics models for cyclic plasticity of advanced materials used in aero engines. The ensuing concepts and software are used in the design/analysis of manufacturing processes, and in the lifetime prediction of engineering components.

EASTON, Murray CBE BSc MSc HonDSc CEng FRINA (59)
A figurehead of British shipbuilding, whose distinguished career includes engineering transformation of production processes in four major shipyards. He formerly led the organisation producing UK's nuclear attack and deterrent submarines.

GOBLE, Carole Anne BSc FBCS CITP (49)
Distinguished for achievements in eScience and semantic technologies, with significant contributions to both underpinning theory and engineering practice, leading to real systems that are transforming the way research is conducted, particularly in the life sciences.

GOW, David James BSc PGDip CEng FIPEM (53)
David James Gow's outstanding contributions include the invention of the design concept for the world's first artificial digit, which is the fundamental module behind the revolutionary iLimb Hand. This project won the MacRobert Award for Innovation in 2008. He is recognised as exceptional for commercially marketing his development on the world prosthetics market, reaching over 500 patients and thus transforming their lives.

GRANT, Patrick BEng DPhil CEng FIMMM (44)
Distinguished for his research into the underlying physics of complex materials processing in order to manipulate microstructure and properties for optimum component performance and economic benefit. His unique experimentation and numerical simulation are described in 130 research publications and have been used to underpin several commercial developments.

HACKITT, Judith Elizabeth CBE BSc CEng FIChemE (53)
Eminent in understanding and investigating risk in the process industries leading to developing risk and safety procedures, she has made distinguished contributions to engineering both in practice and in regulation. She conceived and led the process to develop the first set of Sustainable Development principles by the UK Chemical industry.

HALL, James William BEng PhD CEng FICE (42)
Distinguished for his contribution to the development of methods for flood risk analysis, which underpin modern approaches adopted for flood risk management in the UK and internationally.

HOLBOURN, Paul Edwin BSc MSc PhD CEng MIET (54)
Paul Holbourn has a distinguished background in system design for airborne radar - a recognised technical authority in the UK and Europe. Strong and effective leadership of a major engineering organisation resulting in Selex Galileo being positioned as European leader for airborne radar and electrooptic systems. He has comprehensive experience in European engineering having led co-operative efforts with major European companies. He is an internationally recognised, multi-lingual engineer of the highest standing who is innovative, progressive and vigorous in the cause of engineering and physical science.

HOLLIDAY, Steven John BSc FEI FRSA CIGEM (53)
A strong background of engineering contributions with Esso, including Operations Manager of the Fawley Refinery, and a Board position with British Borneo Oil and Gas which led to him joining National Grid working in gas distribution. Here he has been distinguished for transformational leadership of National Grid's electricity transmission and gas distribution business as Managing Director, before becoming CEO of National Grid Group UK & US where he is recognised as an outstanding integrator of acquired businesses.

HOLT, Nic Peter MA(Cantab) CEng FBCS (59)
An exceptional Systems Architect who has made outstanding contributions to the design of major computer systems in the public and private sectors. He was responsible for ICL's Open VME System Architecture and continues to serve as lead architect on a series on major computer applications.

HOUNSLOW, Michael John BE PhD CEng FIChemE (51)
Professor Hounslow is a distinguished chemical engineer noted in particular for his outstanding contributions to particle technology and his pioneering approach to solving the population balance equations describing the evolution of particle characteristics during industrial processing.

HURFORD, Peter BSc PGDip CEng FIMechE (63)
Peter Hurford is an outstanding mechanical engineer who made a considerable impact on the safety of the Royal Navy's nuclear submarine programme. Following a distinguished career in nuclear submarines he held a series of senior engineering and managerial positions, culminating in his role as the Royal Navy's chief nuclear regulator.

KEOGH, Patrick Sean BSc PhD CEng FIMechE (52)
Patrick Keogh has made an outstanding contribution to progress in manufacturing industry and currently in academia. Eminent for his seminal contributions to the design of high speed rotating machinery through his fundamental studies of thermoelastic contact dynamics, control and tribology. Distinguished for promoting new methods in industrial practice through UK and international professional bodies.

LESLIE, Ian BSc PhD(Cantab) FBCS (55)
Distinguished for his personal research contributions in the field of computer networks and his academic leadership of research and partnership with industry as Pro Vice Chancellor of Research for Cambridge University.

LOW, Andrew John OBE MA (Cantab) PhD CEng FIET FInstP (55)
Dr Andy Low is a highly respected and professional engineer. He has instigated far reaching and effective strategic changes in two important UK companies, Roke Manor Research and Thales UK. More recently, through his work on the MoD's Defence Scientific Advisory Council, Dr Low has been a driving force for the UK's defence industry in developing core networking systems concepts to ensure the UK's armed forces meet their 21st century challenges.

LUDLAM, Stephen HND MSc CEng FIMechE (56)
Steve Ludlam has had a career spanning 33 years in the submarine division of Rolls-Royce, starting as an engineering graduate apprentice and culminating in his position as President. His engineering achievements include the introduction of unique risk assessment procedures and the design of a new decontamination system and process for the Submarine Pressurised Water Reactor. He is now providing Technology and Engineering leadership of the next generation of Nuclear Propulsion Plant.

MAY, Michael David DSc MA FRS (59)
Celebrated as the father of the transputer. Exceptional for a career interweaving senior academic and high-technology business roles, creating real engineering focus and attracting talent as Head of Computer Science at Bristol University, and developing and commercially exploiting revolutionary microprocessor technology at XMOS.

MUGGLETON, Stephen Howard BSc PhD FBCS FIET (50)
Distinguished for contributions to the field of Inductive Logic Programming and its application to automated scientific

discovery: the Progol system, widely used by industry, and the Robot Scientist system, a key component of Microsoft's 2020 scientific discovery programme and Syngenta's Systems Biology programme.

NEVILLE, Anne BEng PhD FRSE FIMMM FIMechE MICorr CEng (40)
Distinguished for leadership and pioneering new fundamental and applied research in corrosion, surface engineering and tribology for applications in the mechanical, petrochemical and medical engineering sectors.

PANTELIDES, Constantinos Christou BSc MSc(MIT) PhD CEng FIChemE (50)
Distinguished for his academic work at the leading edge of dynamic modelling software and particularly for the invention of the world's leading process modelling software, Proms, and for its commercialisation through his founding and leadership of Process Systems Enterprise Limited which won the 2007 MacRobert Award on the 10th anniversary of the company.

PERKINS, Matthew BSc PhD CEng FIET (47)
Distinguished as a business leader in the cellular wireless industry, he was central to Filtronic Comtek growing from a new entrant to the largest supplier of radio-frequency technology for mobile phones in the world. More recently he has shown the same outstanding management skill in building a new team at SSTL, stabilising and preparing this business for a new role in the international satellite community, having won the bid in 2010 to deliver the new European GPS system Galileo.

PERRY, Nigel J BA(Oxon) MA(Oxon) CEng FIChemE MIMechE FIET MBCS (53)
Distinguished for making a real difference to the future of the UK's process industries by leading the creation and development of the Centre for Process Innovation (CPI). Nigel Perry is recognised for his eminent leadership of CPI both as a catalyst for advanced innovation and as a centre for sustainable spin out businesses.

RODGER, Albert Alexander BSc PhD CEng FICE FGS (59)
Outstanding contribution to the advancement of engineering education and interdisciplinary research in engineering and allied disciplines. Highly distinguished contribution to research in geotechnical dynamics through invention and technology transfer, leading to commercialisation.

SANSOM, Robert D MA(Cantab) PhD FIET (50)
Distinguished for founding FORE Systems and pioneering the development of Asynchronous Transfer Mode protocols in local area networks. His entrepreneurial leadership in founding the Cambridge Angels has resulted in more than 20 successful start-up companies.

SCHOFIELD, Nigel Paul BSc CEng FIMechE (42)
Nigel Schofield is distinguished for creative and innovative engineering of the majority of the vacuum pumping technology underpinning BOC Edwards's development and exploitation of highly successful export opportunities. The first to master complete pump predictive performance simulation he was awarded a Royal Academy of Engineering Silver Medal for designing the industry game changing IPX aerodynamic vacuum pump.

SHORT, Michael BA CEng FIET FBCS (56)
Distinguished for his contribution to the Mobile Communications Industry and outstanding in his technology leadership in the transition from Digital GSM to 3G (UMTS). Highly influential in the development of mobile communications worldwide, through senior industry association and government advisory roles.

STEPHENSON, Tom BSc PhD CEng FIChemE FCIWEM FHEA (52)
Outstanding, enterprising engineer with established pre-eminence in water process engineering. His dynamic and entrepreneurial skills have delivered internationally recognised research in wastewater treatment and water re-use together with significant numbers of skilled Master graduates to the sector and the founding of a spin-out company to commercialise research.

TAYLOR, Alexander Marionos Kereton BSc ACGI PhD MInstP (55)
Professor Taylor is distinguished for his leading roles in developing and commercialising Phase & Shadow Doppler Sizing Anemometry, with which he has advanced fundamental understanding of single- multi-phase, non-reacting and reacting flows. His practical applications of optical techniques have led to major design improvements in diverse areas.

THOMLINSON, David BEng CEng MIStructE MICE (53)
David Thomlinson combined exceptional talents as a creative designer with an equally outstanding competence to manage and realise his designs during his time at Arup. His distinction as a leader is reflected in his current role as Senior Managing Director responsible for Accenture's Global Strategy and Operations, as Managing Director of Accenture's UK and Ireland operations, and as a member of the company's Executive Leadership team.

TORERO, Jose Luis BSc MSc PhD CEng MIFE ASME AIAA (46)
He is internationally recognised for research advances in tunnel fire safety, structural behaviour in fire, material flammability, post fire remediation and sensor driven emergency response, as evidenced by several prize awards. As advisor to industry and governments he has influenced engineering practices worldwide. He is an enthusiastic ambassador for his discipline, not least in the media.

TOWNEND, Ian Howard BSc CEng FICE FIMarEST MCIWEM CMarSci (56)
Distinguished for his outstanding contributions in coastal engineering and to business development in the field.
His work in coastal zone management has been pioneering, both in the UK and internationally, and has been instrumental in shaping Defra policy. His business development as Managing Director of ABPMer is acclaimed widely across the profession.

TRAVIS, Adrian Robert Leigh BA PhD FIET (47)
Dr Travis is an outstanding engineering inventor creating award winning applications in defence and security. Major proven inventions are 3D TV without glasses and optical wedge technology which provides lightweight TV and notice board displays only millimetres thick. Inverse operation of this technology creates cameras for exploring thin crevice-like areas.

TYLER, Andrew Oliver BSc PhD MBA CEng CMarSci FIMarEST MRICS RCNC (43)
An outstanding practitioner of Maritime Engineering, Andrew Tyler has conducted ground-breaking research in environmental engineering and managed its delivery into successful software products. As Chief Operating Officer of Defence Equipment and Support in the Ministry of Defence, he is responsible for all UK defence procurement and support projects.

WATSON, Jeremy Daniel McKendrick BSc DPhil CEng FIET (58)
Dr Watson joined Arup in 2006 as Research Director and raised the profile of technical excellence demonstrated through research, from an already high level to exceed most other organisations in similar fields. Prior to this he led BOC Edward's Technology Department where he was responsible for innovative control of complex synchronised servo systems, motor drives and power converters and for instrument engineering in areas including robotics and biomedical. Skilled in applying technology to manufacturing, he is distinguished for creative collaboration and technology transfer between academe and industry,

engineering in areas including robotics and biomedical. Skilled in applying technology to manufacturing, he is distinguished for creative collaboration and technology transfer between academe and industry, leading to commercial advantage.

WEIGHTMAN, Michael William BSc MSc DPhil CEng CPhys MInstP MIMMM (61)
Dr Weightman is an outstanding engineer making a significant contribution to nuclear safety management on a national and international level. As HM Chief Inspector of Nuclear Installations, he is responsible for the regulation of the UK nuclear industry often dealing with complex engineering issues with far reaching societal implications. During his distinguished career of over 30 years his impact on engineering excellence in the nuclear industry has been significant.

WINSER, Nicholas Paul BSc CEng FIET FIGEM (59)
Nick Winser is the Managing Director of National Grid's gas and electricity transmissions businesses in the UK and USA. He has a global reputation as an expert in the efficient operation and engineering of electricity transmission systems. His outstanding contribution has been in technical innovation to increase capacity of networks, and in the forecasting of national demand and supply of energy.

YANG, Guang-Zhong BSc PhD CEng FIET (45)
Distinguished for innovations and clinical applications of MR imaging and flow quantification. He is a pioneer of Body Sensor Networks for pervasive healthcare, life-long health and wellbeing; and eminent for robotic assisted minimally invasive surgery focusing on technological innovation with a strong emphasis on clinical translation and direct patient benefit.

INTERNATIONAL FELLOWS

BRUSCHI, Howard BEE(Cornell) MSEE(Cornell) MBA PMD(Harvard) NAE (70)
Howard Bruschi is an outstanding nuclear engineer. In his long and distinguished career with Westinghouse, culminating with his appointment as the Senior VP and Chief Technology Officer, he has shown exceptional leadership and ingenuity in the design, development and licensing of the advanced passively safe Westinghouse AP600 and AP1000 nuclear power plants.

LANGER, Robert Samuel BSc(Cornell) ScD(MIT) FNAE (US) FBSE FAIMBE FAAPS (61)
Robert Langer, Institute Professor at MIT, is one of the most outstanding and eminent engineers in the United States. He is a pioneer in the field of biomaterials, particularly celebrated for his impact on the development of controlled drug delivery systems and tissue engineering technologies. He is one of a select few who have been elected Fellows of all three US National Academies: the National Academy of Engineering, the National Academy of Sciences and the Institute of Medicine. In 2008 he was awarded the Millennium Technology Prize, the world's most prestigious prize for technological innovation.

LEWIN, Gregory Arthur BE MBA FIChemE CEng CSci (57)
Greg Lewin has had a distinguished international career with Shell spanning 34 years, and is currently the President of Shell Global Solutions. During his time at Shell, he has combined a strong technical anchor and competence with highly successful business achievement. He has worked in all parts of Shell's supply chain and has played a major role in the establishment and development of Shell Global Solutions, the key focus for the delivery of Shell's engineering competence worldwide. In 2006/7 he was President of the Institution of Chemical Engineers. During this period he guided the IChemE with outstanding commitment.

ROWE, Ronald Kerry BSc BE PhD DEng FCAE FRSC FEIC FIE(Aust) FCSCE FASCE (58)
Kerry Rowe has made outstanding contributions to engineering research and practice in geotechnical and geoenvironmental engineering, provided exceptional academic leadership and contributed greatly to the profession overall. The hallmark of his research has been to combine theoretical analysis, laboratory studies and field studies to solve practical engineering problems that pose hazards to the safety of public infrastructure. He is recognised internationally as one of the most distinguished Civil Engineers of his generation.

VEST, Charles BSME MSE PhD FNAE (US) (68)
Dr Charles Vest is a most distinguished engineer and engineering leader who served as an outstanding President of the Massachusetts Institute of Technology from 1990 until December 2004. During his presidency, he placed special emphasis on enhancing undergraduate education, exploring new organisational forms to meet emerging directions in research and education, building a stronger international dimension into education and research programmes, developing stronger relations with industry, and enhancing racial and cultural diversity at MIT. He has also played a key role in providing advice on science and engineering to successive US administrations and in 2006 was awarded the National Medal of Technology.

WILLNER, Alan Eli BA MS(Columbia) PhD(Columbia) FIEEE FOSA (47)
Distinguished by advanced engineering solutions to some of the most challenging, critical and fundamental problems in optical communications, directly underpinning the development of the field and the growth of the internet. Also distinguished for his leadership roles in the international optical communications community. International and MECC Ltd.

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