



The Royal Academy
of Engineering

BAE SYSTEMS

The 2011 Academy Awards Dinner

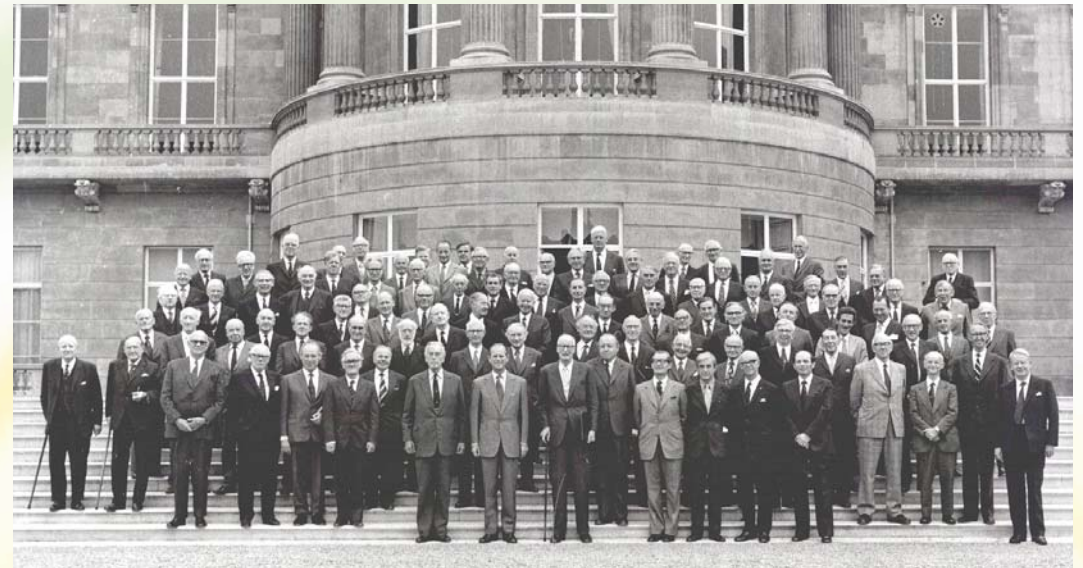
Sponsored by BAE Systems

Monday 6 June 2011, 6.30pm

Guildhall
Gresham Street
London
EC2V 7HH



Celebrating 35 years of Leadership in Engineering



Photograph: Founder Fellows at Buckingham Palace on 11 June 1976, at the inaugural meeting of The Fellowship of Engineering

Conceived in the late 1960s, during the excitement of the Apollo programme and the buzz of Harold Wilson's 'white heat of technology', the Fellowship of Engineering was born in 1976, the year of Concorde's first commercial flight.

The Fellowship met for the first time on 11 June 1976 at Buckingham Palace where 126 of the UK's finest engineers were enrolled, including jet engine genius Sir Frank Whittle, design guru Sir Ove Arup, bouncing bomb inventor Sir Barnes Wallis and the Fellowship's first President, Lord Hinton, who had driven the UK's supremacy in nuclear power.

The Fellowship began its work to champion excellence in all fields of engineering. Its increasing level of influence – both in engineering and education policy – was recognised when it was granted a royal title and became The Royal Academy of Engineering in 1992. Since then, it has grown both in authority and in size, with nearly 1,400 Fellows in 2011.

It is not just the Academy that has flourished. Engineering itself has made progress that could not have been dreamed of 35 years ago. For example, Sir Peter Mansfield performed the first MRI scan of a human finger in 1976; now there are 30,000 systems worldwide. Automated genome sequencing has driven the development of an entirely new field, synthetic biology. Motorola had patented a portable mobile phone in 1973 but NTT created the first cellular network in Tokyo in 1979 and the UK's first mobile phone call was not made until 1985. Since then the mobile communications industry has expanded globally and exponentially.

Despite so many impressive engineering innovations over the past 35 years, engineers still have many grand challenges to address: secure and sustainable energy to power the world; providing clean water and sufficient food; tackling the scourge of disease and poverty. There has never been a better time or a more compelling reason to become an engineer and the Academy continues to expand its role encouraging young people to take up engineering as a career.

Our prestigious prizes and medals are an important way of promoting the excitement and inspiration of engineering to a new generation.

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THALES

Foreword

BAE SYSTEMS



Welcome to the 2011 Academy Awards Dinner.

BAE Systems is one of the world's largest defence and security companies and engineering is at the heart of everything we do. We remain passionate about ensuring that engineering receives the recognition it deserves and raising awareness about its importance to the British economy. The Academy Awards have a key role to play in this and remains a key element in rewarding the very best of British engineering talent.

We are proud to be sponsoring these prestigious awards which recognise reward and promote the very best of engineering across the UK.

Nigel Whitehead FREng

Group Managing Director - Programmes and Support

The 2011 Academy Awards



The Royal Academy of Engineering MacRobert Award

comprising a gold medal for the company and £50,000 for the engineers, is the UK's premier Award for innovation in engineering. Presentation of the Award recognises the important role of engineers and engineering in wealth creation, national prosperity and international prestige. It is awarded annually to an individual or small team for demonstrating excellence in innovation, proven by commercial success and benefit to the community.



The Royal Academy of Engineering President's Medal

is awarded, biennially, to an organisation or individual, that has contributed significantly to the Academy's aims and work through 'initiative in promoting excellence in engineering'.



The Royal Academy of Engineering Silver Medals

recognise outstanding and demonstrated personal contribution to British engineering, which is resulting in successful market exploitation, by engineers working in the United Kingdom, with less than 22 years in full time employment or equivalent.

**The ERA
Foundation**

The Royal Academy of Engineering ERA Foundation Entrepreneurs Award

is awarded to entrepreneurial researchers working in UK universities in the field of electro-technology, who are at an early stage in their career. The award is presented to an individual or small team demonstrating considerable entrepreneurial promise and the potential to benefit the UK's future prosperity.



The Royal Academy of Engineering Rooke Medal for the Public Promotion of Engineering

is awarded to an individual, small team or organisation who has contributed to the Academy's aims and work through their initiative in promoting engineering to the public.



The Bosch Technology Horizons Award

The Bosch Technology Horizons Award is a national essay-writing competition aimed at young people aged between 14 and 24 years old and run by Bosch in partnership with The Royal Academy of Engineering.



The Royal Academy of Engineering Rising Stars Award Supported by Shell

Early career engineers from each of the sponsoring companies will be recognised at the Awards Dinner.

The Rising Star will be at an early stage in their engineering career, they will have made a significant and positive impact for the organisation in an engineering capacity and they will have made this contribution within the last 12 months.

Programme

6.30pm Drinks reception

Viewing of 2011 MacRobert Award finalist exhibitions

Defence Science & Technology Laboratory (Dstl) & NP Aerospace

Jaguar Cars

Microsoft Research, Cambridge

Radio Design Ltd

7.30pm The Academy Awards Ceremony and Dinner

Masters of Ceremonies

Sarah Montague

Presenter, Radio 4 Today Programme

Welcome

Lord Browne of Madingley FEng FRS

President, The Royal Academy of Engineering

9.10pm Loyal Toasts

Proposed by

Lord Browne of Madingley FEng FRS

10.00pm Closing Remarks

Sarah Montague

Post Dinner Drinks

10.30pm Carriages

Presentations

The MacRobert Award Finalists' Certificates

Sir Garth Morrison KT CBE, Chairman, The MacRobert Trust

The Silver Medals

Mr Nigel Whitehead FEng, Group Managing Director - Programmes and Support,
BAE Systems

The ERA Foundation Entrepreneurs Award

Sir Alan Rudge CBE FEng FRS, Chairman, The ERA Foundation

Rising Stars Award

Mr John Bullock, Executive Vice President Retail, Shell

The Rooke Medal for the Public Promotion of Engineering

Professor Dame Julia Higgins FEng FRS, Chair, Awards Committee,
The Royal Academy of Engineering

The Bosch Technology Horizons Award

Dr Peter Fouquet, President, Robert Bosch Ltd

The President's Medal

Lord Browne of Madingley FEng FRS, President, The Royal Academy of Engineering

The MacRobert Award Winner

The Rt Hon Dr Vincent Cable MP, Secretary of State for Business, Innovation and Skills

The 2011 Academy Awards

The Royal Academy of Engineering MacRobert Award 2011

The UK's premier award for innovation in engineering

Finalists



Defence Science & Technology Laboratory (Dstl) & NP Aerospace for Segmented Ceramic Armour

This is a ceramic protection system, developed and patented by Dstl and exploited by NP Aerospace as CAMAC®. The armour system is being used to protect troops in a range of military vehicles from the threat of improvised explosive devices (IEDs) as well as machine gun fire.

Unlike conventional ceramic tiles, the new system consists of thimble-sized hexagonal segments held together by a moulding resin, then packaged in a polymer composite with high ballistic performance. Like a ceramic chain mail, the armour performs better than a single ceramic tile, a critical component of CAMAC®.

The CAMAC® armour is lightweight and modular, reducing the logistic burden of shipping entire armour kits to remote patrol bases for repair. It is in use in Afghanistan and has already saved the lives of UK troops and local people. The segmented technology is being further developed for related projects, such as the recently procured Foxhound Light Protected Patrol Vehicle (LPPV).

Team members: Team Leader **Tom Stuart**, Principal Engineer **Dr Andrew Baxter**, Principal Scientists **Ross Jones** and **Dr Mike Dalzell** all based at DSTL Porton Down in Wiltshire, and **Roger Medwell**, Chairman of NP Aerospace

Jaguar Cars for the XJ Light Weight Vehicle concept

Jaguar's unique lightweight aluminium body for the new XJ series is 200 kg lighter than a comparable steel-bodied model, and gives the XJ a more environmentally friendly production process than any other car in the world.

The original XJ was the last car designed by Jaguar founder Sir William Lyons and the new model is just as innovative and beautiful as its famous predecessor. Twelve years in development, the new 'Body in White' is the first production car body to be built using aerospace cold joining techniques for the whole assembly, eliminating fusion welding from the body shop. This reduces electricity consumption by up to 90 per cent and avoids using extra water to cool the weld guns. Up to half the aluminium used to make the body is also recycled.

Jaguar's engineers used computer aided engineering to optimise the design before building any prototypes and their aim on future projects is to get to zero prototypes. Over half a million analysis runs were done on the XJ Light Weight Vehicle, which equates to saving 27,000 real car tests.

The XJ is also amongst the world's safest cars, the body being a lightweight strong platform for passive & active safety systems, designed to meet all legal & consumer safety tests around the world with a single body derivative. Lighter weight assists both steering and braking and helps to reduce the impact of any collision. Jaguar is the first vehicle manufacturer to offer a deployable bonnet across the whole vehicle range, this reduces head and upper body injuries to a pedestrian in the event of an accident.

Team members: Team Leader and Chief Technical Specialist - Body Engineering **Mark White**, Principal Engineer - Body Structures **Steve Gowland**, Principal Engineer - Closures **Trevor Laight**, Senior Engineer - Materials Engineering **Robert Crow** and Resident Engineer - Novelis **Alan Carr**, all based at Jaguar Land Rover Cars in Gaydon, Warwickshire



The 2011 Academy Awards



Microsoft Research for the Human motion-capture system for Xbox Kinect

Microsoft's Kinect represents a significant advance in technology for "Natural User Interface" between man and machine. It was launched in November 2010 as "Kinect for Xbox 360", enabling controller-free games and entertainment in a new way. Movies and music can be controlled with the wave of a hand or the sound of your voice. Effectively, the user's body is the controller. A major breakthrough in Kinect is the use of machine learning to classify parts of the body.

The Kinect sensor provides a stream of 3D "depth images". This is analysed by software to give a moving interpretation of the human skeleton, at 30 frames per second. Before Kinect, equipment for motion-capture was already available commercially but required instrumentation of the moving human subject, in the form of retro-reflective markers, placed on all body joints. For user interfaces, however, it is imperative that motion capture be markerless. The Microsoft Research Cambridge laboratory applied machine learning techniques to build a capability to analyse depth images independently, classifying pixels in each depth image as belonging to one of 31 body parts. The classifier is trained and tested using a very large database of pre-classified images, covering varied poses and body types. It is engineered so efficiently that it uses only a fraction of the total available computing capacity - essential to the practical success of Kinect.

Kinect for Xbox 360 has secured a position in the Guinness Book of World Records as the fastest selling consumer electronics device, with 8 million sold in the first two months after launch.

Team members: Team Leader Professor **Andrew Blake** FREng FRS, Research Scientist **Dr Jamie Shotton**, Principal Research Scientist **Dr Andrew Fitzgibbon**, Software Development Engineer **Mat Cook** and Senior Research Software Development Engineer **Toby Sharp**, all based at Microsoft Research in Cambridge

Radio Design Ltd for the Universal Combiner for Cellular Network Sharing

The Universal Combiner Unit is a radio frequency filter system that allows up to three mobile phone operators to combine the outputs of one 2G and two 3G base stations onto a single antenna system. The combiner has extremely low signal loss but still provides sufficient isolation between the base stations connected to it to stop them interfering with each other. Although there are significantly fewer cell sites in the shared network it actually has better coverage and significantly higher data capacity than the original independent networks.



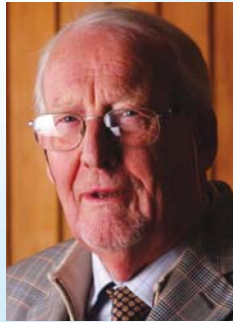
Introducing the universal combiner has no measurable effect on the way the networks perform and no additional antenna infrastructure is required - the universal combiner is installed at ground level, eliminating the need for any mast climbing. Existing mast & antenna systems can be used to support multiple base stations from more than one operator at minimal cost. It has been estimated that phone companies can save up to £100 million a year by sharing their networks. This means they can continue to support the ever growing demand for "smart phone" data services at a competitive price for consumers.

Over the last two years, Radio Design's technology has been deployed in the UK in over 10,000 cell sites (using over 30,000 combiners). It was adopted as the standard product for MBNL Ltd (the 50/50 joint venture between T-Mobile and Three) to enable their UK network share. Everything Everywhere (the new joint venture between T-Mobile and Orange) will continue to use the system.

Team members: Team Leader and Managing Director **Eric Hawthorn**, Systems Expert **Martin Gostling**, Filter Expert **Liz Phillips** and Programmes Director **Paul Trigg**, all based at Radio Design Ltd in Shipley, West Yorkshire

The 2011 Academy Awards

The President's Medal



Professor Anthony Kelly CBE DL FEng FRS
Fellow, Churchill College Cambridge

Recognising him for having founded and developed the field of strong solids made from composite materials, now extensively used in industry. He is widely regarded as the "Father of Composite Materials".



Doug King
Principal of King Shaw Associates

Recognising him for his company King Shaw Associates, which was set up to integrate a high level of research and teaching with a commercial design consultancy. While running the company, he continued to lecture at the University of Bath, tutoring architecture and civil engineering students on the sustainable aspects of their projects. Doug is now a much sought after advisor to the industry.

The Silver Medals



Dr Shaun Fitzgerald
Managing Director, Breathing Buildings Ltd

Recognising him for applying his research to patent e-stack technology, which uses the principles of natural mixing ventilation in winter and natural upward displacement ventilation in the summer. His expertise in natural ventilation has helped make his company, Breathing Buildings Ltd, the UK's leading low energy ventilation company and a multi-million pound success.



Dr Karin Hing
Senior Lecturer in Biomaterials, Queen Mary, University of London

Recognising her for being the "technical linchpin" and founding scientist for ApaTech Ltd, an orthobiologics company. She used her research into the bioactivity of bone graft substitutes to develop the hypothesis that bone healing could be enhanced through optimisation of both graft pore structure and chemistry, and invented a novel production route for the manufacture of these pore structures.



Professor Eric Yeatman
*Professor of Micro-Engineering, Imperial College London and
Chairman, Microsaic Systems plc*

Recognising him for co-founding one of the UK's first research groups into micro-electrical-mechanical systems (MEMS) at Imperial College London. He went on to invent a number of new research methods, helping to position the university as a world-leader in the field. He and his colleagues used their wide portfolio of technologies and intellectual property to found Microsaic Systems Ltd, a company which offers MEMS-based mass spectrometers and a desktop sized instrument for liquid analysis.

The 2011 Academy Awards

The ERA Foundation Entrepreneurs Award



**Dr Sithamparanathan Sabesan
and Dr Michael Crisp**

Director and Founder, PervasID

Recognising them for their ground breaking radio tagging system, the Real Time Location System (RTLS). This will allow businesses such as high street retailers and airlines, which use tagging on high-end goods and passengers luggage, to cheaply and effectively monitor the location of these items to within one metre.

Current systems only allow for around 60 per cent of tagged items to be detected and are not able to locate tags accurately in real time, while the new system could be 100 per cent accurate.

The Rooke Medal for the Public Promotion of Engineering



Professor Christopher Bishop FREng FRSE

*Distinguished Scientist, Microsoft Research and
Vice President, The Royal Institution*

Recognising him for his "persistent drive" in engaging members of the public in the vital work of engineers and their contribution to society. He is a regular speaker at the major UK science festivals. He continually pursues and tests new ways to promote computer science engineering, through novel demonstrations, interactive web sites and video. He has also presented the Royal Institution Christmas Lectures, broadcast to a prime-time national television audience of five million people.

The Bosch Technology Horizons Award

The Bosch Technology Horizons Award is a national essay-writing competition aimed at young people.



Felicity Harer

University of Leicester (18 years old)

Winner of BTHA young age group

Felicity came first in the 14 to 18 age group. Her essay was clearly structured and finished with a very strong conclusion that summed up her essay perfectly.

With clear evidence of research, Felicity chose to write about how the implementation of closed-loop processes within the manufacturing industry would be essential in creating a greener world. She drew on relevant examples throughout her essay and wrote in a clear and confident way that was a pleasure to read.



Norman KK Ng

Imperial College London (22 years old)

Winner of BTHA older age group

Norman was chosen as the overall winner of the 19 to 24 age group because his unique approach to the essay question really set him apart from others in his age group. Rather than answering the question in a standard essay format, Norman chose to write in the style of a story. His creative writing featured Captain Samuel, a driver of a futuristic twenty-section train set in 2136, which really helped to bring his answer to life.

His creative and original approach to the question was backed up with his own research into the topic, and showed a lot of thought into the role that engineering can play to create a greener world.

In addition to being exceptionally well written, his essay was a really interesting read.

The 2011 Academy Awards

Rising Stars Award Supported by Shell



BAE SYSTEMS

Russell Davison
Systems Engineer

Russell started his career with BAE Systems as an Industrial Placement Student in 2005 whilst he was studying to complete his MEng Systems Engineering degree at Loughborough University. He spent fifteen months working in a variety of departments at BAE System's Brough site before returning to Loughborough, where he was sponsored by the company during the remaining two years of his degree. Russell graduated with a first class honours and a University Prize for 'Most Improved Student'. He joined

BAE Systems Graduate Development Framework, choosing to start work in the Military Aircraft area of the business. After about eighteen months working as a Mission Systems Engineer on Hawk Advanced Jet Trainers, Russell applied to join the Sigma Leadership Programme.

The world is changing fast, but the skills Russell gained through his Systems Engineering degree are helping him keep up. Sigma is a unique, fast tracked scheme designed specifically to develop future leaders of BAE Systems. The greatest benefits of the scheme are the freedom to move across the business and experience a truly diverse and challenging range of programmes and projects, coupled with the flexibility and support to undertake any form of training that Russell deems necessary in order to progress.

Russell spent the first eight months of Sigma working as a Programme Manager in BAE System's Global Combat Systems - Vehicles business, responsible for leading the embodiment of a series of Urgent Operational Requirements on to the Warrior armoured vehicle, and delivering the upgraded vehicles direct to Afghanistan. Since then, he has moved on to his next challenge where he currently leads Combat System Acceptance onboard three Khareef-class Corvettes being built for the Royal Navy of Oman.

There are very few industries where you can live and breathe the same environment as the people you serve, whilst working in some of the most cutting-edge and complex 'system of systems' environments. The credibility of working in such an open partnership was a massive draw for Russell, as was the ability to gain a broad Engineering experience by moving around different areas of the business.



ARUP

Paul Wong
Structural Engineer

Paul Wong attained a first class degree in Civil Engineering at Imperial College London and won three academic prizes before joining Arup upon graduation. Prior to university, Paul carried out two and a half years National Service in the Singapore Armed Forces, with the combat engineers division.

Paul has worked on several prestigious projects, ranging from the futuristic skyscraper in the City of London, "The Cheese grater" to a geometrically complex, yet inspiring museum in Qatar. His responsibilities on the skyscraper include analysing the nodes of the mega-frame, taking a leading role in the analysis and design of the north core structure and site monitoring the construction of the 2.7m thick basement raft. His skills in 3D modelling software, such as Rhinoceros 3D and Tekla, and analysing complex structures were extensively developed during his time working on the museum in Qatar. He has also been involved in several institution-run competitions and was a finalist for Teambuild 2009, which involved designing a mixed use development.

During his undergraduate course, he participated in a twelve-strong group of students who financed and organised a seven week trip to El Salvador to aid the construction of schools, latrines and a community radio station in rural areas that have been affected by hurricanes, earthquakes and a brutal civil war.

Paul has a passion for engineering and loves to share this enthusiasm. This has led to him taking a lead role in creating and facilitating the Sports Venue Design Competition 2010. It was a very successful London-wide school competition that inspired 12-14 year olds to design their own stadium, supported by The Royal Academy of Engineering, ICE, SportsAid and Arup. The success of the competition has spawned two nationwide competitions led by the ICE and EDT called Create Sport Challenge 2011.

The 2011 Academy Awards



Steven Keeley

Manufacturing Controls and Planning Engineer

Steven Keeley has made a significant contribution to Worcester, Bosch Group in his role as a Manufacturing Controls and Planning Engineer. He has demonstrated high technical ability, innovation and leadership, especially when he successfully identified a method to measure quickly and with increased accuracy, the key component gasses emitted from the boiler.

Every appliance manufactured in Worcester is tested and set to achieve maximum efficiency. Steven identified that the previous gas analysis method was slow to produce a stable reading. In addition, the equipment also required constant attention and a considerable quantity of expensive bottled calibration gases.

Steven has designed and installed the Laser System Solution which boosts the production system in many ways, including reducing the testing time by 10 percent or 45 seconds per boiler. The reduced test time leads to a reduction of 227 tonnes CO₂ per annum, which is equivalent to approximately 1000 employees driving to work each year.

The laser based system is now in full time use at our Worcester site, and other plants within the thermo-technology group have also started to adopt this new technology. Steven is exploring further development opportunities for the solution, including the possibility of using the system within on-board engine management systems to use real time data to optimise exhaust emissions whilst reducing fuel costs.

Steven is an ambitious engineer who has from an early age been passionate about engineering and technology. He has a BSc in Computer Science and a HND in Electronic Engineering. He has several years' experience of working in the engineering sector, including eight years as System Development Engineer for Automotive Electronics and four years as Designer of custom engineered manufacturing solutions for all industries.



Mark Northcott

Mark Northcott exemplifies a "Rising Star". This is demonstrated both by his career achievements to date and his being recognised as one of Kwinana refinery's high potential employees.

Mark's selection reflects his role as an Operations Engineer who is able to provide strong leadership to his teams and apply his deep professional engineering insight into supporting the process safety of a major refinery.

Mark started with BP at the Kwinana refinery in 2005, after graduating from Curtin University of Technology in Western Australia, with first class honours in Chemical Engineering. His six years at the refinery have included a number of roles, focusing on Technical support and Process Safety. Over this period Mark also became one of the youngest engineers at the site to receive his Engineering Chartership through the IChemE.

Mark has recently moved to the Operations department as Superintendent for the North processing area, where he holds Operations accountability for approximately half of the refinery's process units, including the FCC. This promotion is a tribute to Mark's drive and ability.

Mark's move to the Process Safety team in 2010 saw him as lead for the site-wide QRA project, focusing on analysis and evaluation of a broad range of risks across the refinery. Mark's expertise in this area will prove valuable to him as he progresses his career, providing increased exposure to an excellent cross section of operations knowledge and risk awareness.

Mark's ability to consistently deliver results to further strengthen the operation and safety of the Kwinana site, has placed him as one of Kwinana's high potentials, and this is illustrated by his career achievements to date.

The 2011 Academy Awards



e-on

Jon Periselneris

Demonstration Project Manager, E.ON New Build & Technology


E.ON is pleased to nominate Jon Periselneris as E.ON's Rising Star. In his career to date Jon has made a significant and positive contribution to several of E.ON's new technology lower carbon developments, including Carbon Capture and Storage and Integrated Gasification Combined Cycle plant.

Most recently, Jon has delivered the UK's largest low carbon vehicle demonstration project - CABLED. Jon's determination, dedication and commitment helped to ensure that E.ON was the first organisation in the CABLED consortium to install their allocation of 36 public Electric Vehicle charging points in Birmingham and Coventry city centres. The strong relationships that he has developed with the project's stakeholders have also led to new opportunities in this area.

In pioneering this project, Jon has shown creativity when solving problems as well as enthusiasm, and has developed a best practice model for this emerging market which is now being shared across the UK.

Jon is an ambitious engineer passionate about new technologies and a role model for creative, innovative thinking, resilience and determination.



Petrofac 

Sami Hassouneh

Process Engineer

Sami joined Petrofac after graduating in Chemical Engineering in 2004. As a Process Engineer based in Petrofac's Sharjah office, Sami is responsible for detailed design engineering for oil & gas processing facilities.

Within this role Sami has gained a wide ranging skill set and knowledge base working on process simulation, equipment sizing and specification, PFDs/P&ID development, instrument data sheets, thermal design of heat exchangers, process design for two-phase and three-phase separators, cause and effect matrix, HAZOP studies, material selection diagrams, pre-commissioning and commissioning manuals, preparation of operation and maintenance manuals, package engineering, technical bid evaluation, vendor data review, hydraulic study reports and flow assurance studies.

Sami has demonstrated leadership and entrepreneurial thinking having taken the responsibility of setting up a Flow Assurance Group within the Process Department in Sharjah. Consisting originally of himself alone, Sami took the initiative of providing internal training to the process engineers in his department to familiarise them with Flow Assurance, including hands on training on different projects.

To date, Sami has trained more than 30 engineers in the familiarisation of Flow Assurance, and is conducting monthly training sessions; with the aim of providing introductory training to all process engineers in Sharjah and other satellite offices.

Within two years of Sami's efforts the Flow Assurance capacity has been transformed. The benefits have been significant, including risk reduction, considerable cost savings and improvements to project schedules by performing these studies in-house. In addition, this has enabled Petrofac to perform an unlimited amount of studies at a very low cost and therefore ensure the technical integrity of design. All of these benefits have enhanced the Company's reputation and service offering to customers.

The 2011 Academy Awards



Robert Barrie

Rotating Equipment Engineer

Robert Barrie joined Shell as a Rotating Equipment Engineer in 2006 having completed a combined Masters Degree in Mechanical and Electrical engineering with First Class Honours at the University of Edinburgh, where he also received the IMechE Best Student Award. He followed the accelerated development programme for rotating equipment engineers known as Launchpad, where he combined his

academic knowledge, and strong practical background, to rapidly develop into an effective Rotating Equipment Engineer.

His first project for Shell was to analyse the gas turbine fleet of approximately 100 machines installed on North Sea platforms. His work resulted in changing the operating modes on a number of installations, thereby reducing total atmospheric emissions. It was the first time that such a fleet-wide project had been completed. Rob co-authored a paper on this subject, which was presented at the IMechE Fluid Machinery Congress in 2010.

Rob has since worked for a further two years in the UK offshore sector, and subsequently on three major projects as part of the Shell International Projects group in Aberdeen. Rob's work has been well beyond the normally expected level of a new technical professional.

Rob's experience has seen him working on projects such as Qatargas 3&4 in Dubai, where he was a system owner for Mechanical Completion, and supported activities such as pigging, drying/cleaning and welding of the main export pipeline. He has also worked on the improvement of the environmental performance and reliability of a propane refrigeration system at the Bacton gas treatment facility in Norfolk. Here, he had a key role in liaising with suppliers and operators of similar equipment in the USA to produce detailed work scopes.

Rob is currently working as Lead Rotating Equipment Engineer for a major gas gathering/flare reduction project in Southern Swamp, Nigeria.

He is in the final stages of his Monitored Professional Development programme, leading to Chartered Engineer with IMechE, having recently completed his Professional Review interview.

THALES

Daniel Constable

Engineering Rail Signalling London

Our rising star is Daniel Constable. He is a Systems Engineer within our Rail Signalling business. A 2008 graduate, Daniel has been influential in the implementation of a number of successful projects and programs within this important and high profile Thales business segment. It is a great honour to recommend Daniel as a Thales Rising Star.

The 2011 Academy Awards – Sponsors

BAE SYSTEMS

BAE Systems is a global defence and security company with approximately 100,000 employees worldwide. The company delivers a full range of products and services for air, land and naval forces, as well as advanced electronics, security, information technology solutions and support services. In 2010 BAE Systems reported sales of £22.4 billion (US\$ 34.6 billion).

With over 18,000 engineers, BAE Systems are the biggest employer of engineers in the UK and remain committed to ensuring the UK retains its technological lead and engineering capability. As part of this commitment, the company invests over £50M per annum in UK education, training and skills related activities, working with over 100 universities worldwide including 30 in the UK.

BAE Systems is proud to support the Academy's Engineering Engagement Project, helping to enable investment in a range of education activities. This has ranged from training for school Science and Engineering Ambassadors to the production of high quality education resources for teachers and Ambassadors to give young people a practical insight into engineering. Bringing engineering to life has been central to the development of these resources and has included, for example, the engineering behind the Bob Skeleton sled that brought Amy Williams a gold medal in the 2010 Winter Olympics.

With an eye to the future, BAE Systems launched its Skills 2020 programme in July last year. Skills 2020 will help to ensure that they have the skills to compete successfully for the future and will encompass all education, skills and training-related activity in the UK. Working with The Royal Academy of Engineering on the Technician Council further illustrates BAE Systems' commitment to helping address the UK's future skills requirements.

ARUP

Arup is proud to be supporting The Royal Academy of Engineering Awards Dinner. Arup has a long and distinguished collaboration with The Royal Academy of Engineering, both through its work as a corporate supporter and through the active participation of its many Fellows of the Academy.

Arup is an independent firm of designers, engineers, planners and business consultants with offices around the world. Founded in 1946 with an initial focus on structural engineering, Arup first came to the world's attention with the structural design of the Sydney Opera House, followed by its work on other iconic projects such as the Centre Pompidou in Paris. Arup has since grown into a truly multidisciplinary organisation, with a global reputation for delivering innovative and sustainable designs that reinvent the built environment. Arup is a proud winner of the 2009 MacRobert Award for its work on the visionary Beijing Aquatic Centre, known as the Water Cube.

The 2011 Academy Awards



The Bosch Group is a leading global supplier of technology and services. In the areas of Automotive and Industrial Technology, Consumer Goods, and Building Technology, some 283,500 associates worldwide generated sales of 47.3 billion Euros in 2010.

The company spends considerable amount on R&D every year. In 2010, its Research and Development expenditure came to 4 billion Euros, approximately 45 percent of this spending went into the development of products that protect the environment and conserve resources. These environmentally friendly products now account for 40 percent of the company's total sales.

Today, Bosch continues to pursue the customer-oriented business philosophy expressed by its corporate slogan "Invented for life." It does so by developing innovative products and practical solutions designed to improve quality of life for people everywhere.

Engineering is the key, not only to finding innovative and energy-efficient ways, for example, to generate electricity to heat homes and power cars, but to find long-term solutions to many of the ecological problems, such as global warming, CO2 emissions and the current dependence on fossil fuels.

Worcester, Bosch Group is one of the UK's leading manufacturers of heating and hot water appliances for the home and is at the forefront of providing energy efficient and environmentally sustainable solutions for the consumers.

This year the Rising Star award went to Steven Keeley, Manufacturing, Controls and Planning Engineer at Worcester, Bosch Group. Every appliance manufactured in Worcester is tested and set to achieve maximum efficiency. With the help of a new Laser System technology, Steven has successfully identified a method to measure the key component gasses emitted from the boiler quickly and with increased accuracy.

The Bosch Technology Horizons Award has been running for six successful years now. The success of the competition is due to the strong partnership with The Royal Academy of Engineering to inspire a fascination in young people with modern technology. Their ambition is for this to lead them to a future career in engineering. This year Bosch have received a record number of entries, in total 815 and the quality of the essays has been outstanding.

This year is the 125th anniversary of the company's founding and the 150th anniversary of the birth of the founder, Robert Bosch. The company continue to strive for sustained economic success and a leading market position in all that it does, and particularly its social and environmental responsibility.



BP is one of the world's largest energy companies, providing its customers with fuel for transportation, energy for heat and light, retail services and petrochemicals products for everyday items.

The President of the Academy is the former CEO of BP and the Group Head of Engineering is a Fellow of the Academy.

BP has been sponsoring the Academy Awards Dinner for a number of years in recognition of the importance of these prestigious engineering awards to the promotion of excellence in UK engineering.

The 2011 Academy Awards



E.ON is one of the UK's leading power and gas companies, generating electricity and retailing power and gas. It is also part of the E.ON Group, one of the world's largest investor-owned power and gas companies employing around 12,000 people in the UK and more than 85,000 worldwide.

The company is addressing some of the energy industry's greatest challenges head-on. Such as how to go about meeting tomorrow's energy demands in a sustainable way or how changes in technology will affect the way E.ON work, from providing an even better service to customers, to selling their products at an affordable price.

E.ON is investing millions of pounds in Research and Development to find the best ways to bring forward low carbon energy and energy efficiency technologies. The aim is to maximise day-to-day power plant operation as well as identifying the most workable and commercially viable steps to longer-term energy related carbon reduction.

E.ON's Engineering Academy is leading the way by providing the training, qualifications and professional development that engineers need to build successful careers in the utility, manufacturing and heavy industry sectors. E.ON is actively promoting careers in engineering to school, college and university students by encouraging the next generation of engineers into the industry and helping to tackle the future skills gap.

E.ON is proud to support The Royal Academy of Engineering's Awards, highlighting the best of British engineering achievement.



Petrofac is a leading international provider of facilities solutions to the oil & gas production and processing industry. This year Petrofac turned 30. In three decades the company has grown from a Texas-based producer of modular plant to a leading FTSE100 company with around 14,000 staff in 26 countries worldwide, providing integrated facilities solutions across the life cycle of oil & gas assets.

Petrofac designs and builds oil & gas facilities; operates, maintains and manages facilities and trains personnel; enhances production; and, where it can leverage its service capability, develops and co-invests in upstream and infrastructure projects.

The group delivers these services through seven business units: Engineering & Construction, Engineering & Construction Ventures, Engineering Services, Offshore Engineering & Operations, Training Services, Production Solutions and Energy Developments. In their individual development these businesses are enabling Petrofac to become active across the entire value chain of the oil & gas industry, in support of our diverse customer portfolio which includes many of the world's leading integrated, independent and national oil & gas companies.

Engineering is at the heart of Petrofac's operations. Engineers account for around 28 percent of total staff. Without engineering the world simply could not function, so recruiting top engineering talent both into industry generally and Petrofac specifically, is a critical component of the company's continuing success. This is an area that Petrofac has been focused on for a number of years and is the reason Petrofac is in partnership with The Royal Academy of Engineering.

The partnership started in 2009 with the shared objective of engaging some of the UK's top engineering talent, and then enabling these individuals to hone their skills through a year-long Masters programme. In addition to funding the Fellowships, Petrofac is also providing case study materials and placements within their operations in the UK. Each individual is assigned a senior Petrofac mentor to provide technical support and guidance throughout the year. Petrofac hope this will promote and encourage an eventual career in engineering.

Elaine Donegan, who was one of the first graduates to embark on the Petrofac Royal Academy of Engineering (RAEng) Enhanced Graduate Fellowship programme, spoke about the benefits she had gained from completing the programme: "The RAEng Enhanced Graduate Fellowship has been a key turning point in my career so far. The main benefit was being assigned a mentor from Petrofac from the beginning of my studies at Cranfield. This enabled me to establish close links with Petrofac from the onset and receive support and guidance from such an experienced person in the oil & gas industry."

The 2011 Academy Awards



Shell is a global group of energy and petrochemicals companies with around 100,000 employees in more than 90 countries and territories.

Shell's businesses include oil and gas exploration and production; production and marketing of liquefied natural gas and gas to liquids; manufacturing, marketing and shipping of oil products and chemicals, and renewable energy projects.

The company makes a major contribution to the UK, not just through products and services for our customers, but also employment, dividends, tax revenues and investment that boost the economy, employing around 8,600 people directly in the UK.

Shell is a key provider of the energy that millions of people use for heating and powering the UK. Producing almost 15 percent of UK oil and gas on behalf of Shell and its co-venturers, and their Upstream business has been a leading player in the North Sea for over 30 years.

Shell's Downstream business has about 900 Shell-branded service stations serving half a million customers each day, with products such as Shell FuelSave, developed to help customers save up to one litre of fuel per tank.

Shell seeks to reinforce its position as a leader in the oil and gas industry, while helping to meet global energy demand in a responsible way. Shell is playing its part to meet the challenge of climate change.

THALES

Thales is a global technology leader for the defence & security and the aerospace & transport markets. In 2010, the company generated revenues of £11.2 billion (€13.1 billion), with 68,000 employees in 50 countries. With its 22,500 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners.

Thales UK employs 8,000 staff based at 40 locations. In 2010 Thales UK's revenues were around £1.5 billion.

Menu

Ballotine of salmon and Dublin Bay prawn
with trout fillet and apple tubers

Dolcelatte and roasted squash cheesecake
with caramelised fig purée and New Forest mushrooms (v)

Carta Vieja Sauvignon Blanc, 2010, Chile



Braised shoulder of Welsh hill lamb
with baby vegetables and pomme purée

Fried haloumi goujons on artichoke risotto
and chilled gazpacho dressing (v)

Willowglen Shiraz, Cabernet, 2007, Australia



Roasted peach and yellow plum tarte tatin
with Madagascar vanilla and bourbon cream

Skeffington Port

Napoleon Brandy

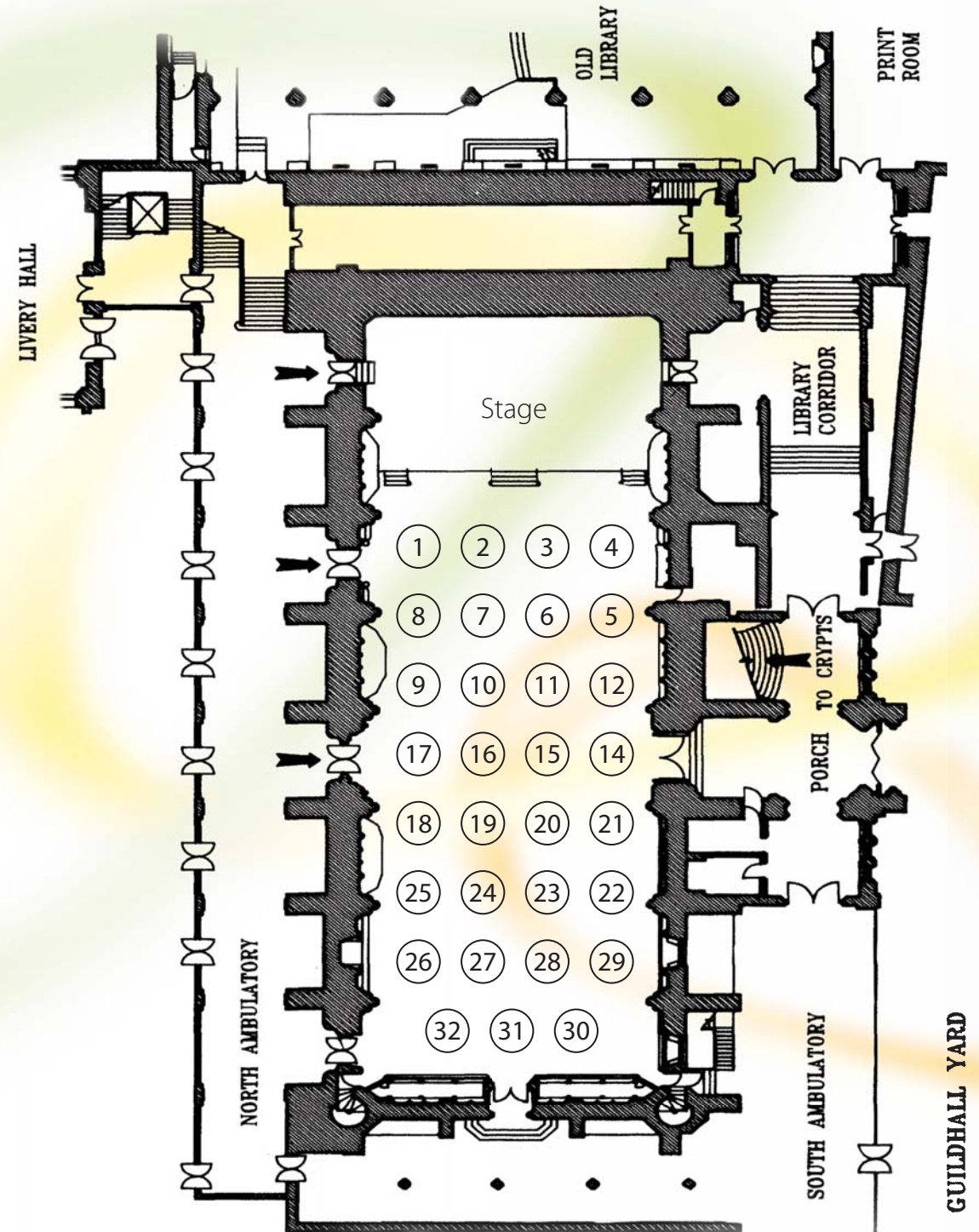


Selection of traditional British cheeses



Coffee, tea and
homemade petits fours

Table Plan



The 2011 Academy Awards

	Table		Table
Dr Frederic Cegla <i>Lecturer</i> <i>Imperial College London</i>	7	Mr Nick Collings FEng <i>Professor of Applied Thermodynamics</i> <i>University of Cambridge</i>	26
Dr Jaimini Cegla <i>Clinical Research Fellow</i> <i>Imperial College London</i>	7	Mr George Collings <i>Strategist</i> <i>WCRS and Co</i>	26
Mr Anthony Chadwick <i>Sales Director</i> <i>Radio Design Ltd</i>	26	Dr Peter Collins <i>Director of the Royal Society Centre for</i> <i>History of Science</i> <i>The Royal Society</i>	17
Mrs Dawn Chadwick	26	Mr Daniel Constable <i>Engineering Rail Signalling London</i> <i>Thales UK</i>	17
Miss Selina Chan <i>Events and Awards Assistant</i> <i>The Royal Academy of Engineering</i>	31	Mr Howard Cook <i>Chief Engineer, Subsea and Floating Systems</i> <i>BP plc</i>	22
Mr Stylli Charalampous <i>Joint Manager, 16+ Teaching Programme</i> <i>The Royal Academy of Engineering</i>	20	Mr Mat Cook <i>Developer</i> <i>Microsoft Research, Cambridge</i>	27
Mr Martin Charlton <i>Programs Director</i> <i>Black and Veatch Ltd</i>	12	Mr Mark Cooper <i>Head of Engineering, Asset Operations and Technology</i> <i>RWE npower</i>	4
Mr Victor Chavez <i>Chief Executive</i> <i>Thales UK</i>	17	Dr Chris Coulter <i>Fellowship Manager</i> <i>The Royal Academy of Engineering</i>	23
Professor Peter Cheung <i>Head, Department of Electrical and Electronic</i> <i>Engineering</i> <i>Imperial College London</i>	12	Ms Lucy Cranston	27
Dr David Clark OBE <i>Executive Secretary</i> <i>The ERA Foundation</i>	5	Dr Michael Crisp <i>Director and Founder</i> <i>PervasID</i>	7
Mrs Suzanne Clark	5	Mr Robert Crow <i>Project Engineer, Materials Engineering</i> <i>Jaguar Land Rover</i>	23
Sir Anthony Cleaver	5	Mr Peter Crush <i>Freelancer</i> <i>HR Magazine</i>	16
Dr John Cleaver <i>Graduate Tutor</i> <i>Fitzwilliam College</i>	8		
Mr Richard Coackley <i>Senior Vice President</i> <i>Institution of Civil Engineers</i>	25		

Fellows of the Academy can be identified with FEng on badges

	Table		Table
D			
Air Chief Marshal Sir Stephen Dalton KCB BSc FRAeS RAF <i>Chief of the Air Staff</i> <i>Ministry of Defence</i>	6	Mr Alex Dickson <i>Project and Sector Development Officer</i> <i>Coventry City Council</i>	21
Dr Michael Dalzell <i>Principal Scientist, Physical Protection Group</i> <i>Dstl</i>	29	Professor Yulong Ding <i>Professor of Chemical Engineering and</i> <i>Chair of Nanoparticle Engineering</i> <i>The University of Leeds</i>	22
Mr Cuong Dang <i>Assistant Manager, International</i> <i>The Royal Academy of Engineering</i>	31	Ms Elaine Donegan <i>Graduate Mechanical Engineer, Woking</i> <i>Petrofac Ltd</i>	9
Professor Richard Darton FEng <i>University of Oxford</i>	15	Mr Martin Donnelly <i>Permanent Secretary</i> <i>Department for Business, Innovation and Skills</i>	17
Mrs Diana Darton	15	Mr Lambert Dopping-Heppenstall FEng <i>Engineering Director, Systems and Strategy, MAI</i> <i>BAE Systems plc</i>	11
Mr Chris Davies <i>NP Aerospace</i>	28	Mr Alex Dorrian CBE FEng <i>Chairman</i> <i>Thales UK</i>	17
Dr Gavin Davies	19	Lord Drayson <i>House of Lords</i>	2
Mr Keith Davis <i>Trustee</i> <i>The MacRobert Trust</i>	8	Mr Robert Dudley <i>Group Chief Executive</i> <i>BP plc</i>	2
Mrs Jenny Davis	8	Mr Bill Dunnett <i>Managing Director, OE&O</i> <i>Petrofac Ltd</i>	9
Ms Charlotte Davis	9		
Mr Russell Davison <i>Combat System Acceptance Manager – Oman</i> <i>BAE Systems plc</i>	6	E	
Miss Kristien De Clercq <i>PhD Student</i> <i>University of Cambridge</i>	7	Mr Christopher Earnshaw FEng <i>Managing Director</i> <i>Oakleigh Ventures</i>	22
Mrs Maryse de Lalouviere Brown	30	Mr William Edgar CBE FEng FRSE <i>Chairman</i> <i>European Marine Energy Centre</i>	28
Professor David Delpy FEng FMedSci FRS <i>Chief Executive</i> <i>EPSRC</i>	29	Professor David Edmonds FEng <i>Emeritus Professor</i> <i>The University of Leeds</i>	32
Mrs Margaret Delpy	29		
Ms Liesel Detemple <i>Process Engineer, Woking</i> <i>Petrofac Ltd</i>	9		

The 2011 Academy Awards

	Table		Table
Dr Jenny Edmonds <i>Honorary Curator, Biology The University of Leeds</i>	32	Ms Louise Ferguson <i>Head of Learning and Development, Aberdeen Petrofac Ltd</i>	9
Mr Mark Elborne <i>President and Chief Executive GE UK, Ireland and Benelux</i>	3	Mr Joe Fewtrell <i>Finance Director Cobham Technical Services</i>	5
Mr Ian Elgy <i>Principal Scientist Dstl</i>	28	Mrs Valerie Fewtrell Mr Peter Fielder <i>Managing Director, Performance Excellence BAE Systems plc</i>	5 11
Mr Peter Elliot <i>EH Process Safety and FVC Engineering Authority BP plc</i>	22	Ms Sue Fisher <i>Director of Development The National Museum of Science and Industry</i>	29
Dr Christopher Elliott FREng FRS <i>Director Pitchill Consulting Ltd</i>	20	Dr Shaun Fitzgerald <i>Managing Director Breathing Buildings Ltd</i>	14
Mrs Penny Endersby <i>Physical Sciences Department Manager Dstl</i>	29	Dr Rebecca Fitzgerald Dr Andrew Fitzgibbon <i>Principal Researcher Microsoft Research, Cambridge</i>	14 27
Dr Lyn Evans <i>Project Leader, Large Hadron Collider European Organisation for Nuclear Research</i>	17	Ms Gwen Folland <i>Group Head of CSR Petrofac Ltd</i>	9
Mr Mel Ewell <i>Chief Executive Amey plc</i>	3	Dr Peter Fouquet <i>President Robert Bosch Ltd</i>	10
Mr Jon Excell <i>Editor The Engineer</i>	23	Ms Fiona Fox <i>Director Science Media Centre</i>	25
F		Mr Peter France <i>Chief Executive Rotork plc</i>	1
Professor Graham Fairhall <i>Chief Science and Technology Officer National Nuclear Laboratory</i>	17	Sir William Francis CBE FREng	25
Professor Roger Falconer FREng <i>Halcrow Professor of Water Management Cardiff University</i>	30	Mr Anthony Frayling <i>Software Engineer i2 Ltd</i>	24
Mr Daniel Ferenzi <i>Photographer Charles Glover Photography</i>	32	Dr Cecil French FREng	30
		Mrs Shirley French	30
		Ms Elaine Fullerton	29

Fellows of the Academy can be identified with FREng on badges

	Table		Table
G		Mrs Helen Gowland	23
Mr Roy Gambardella <i>Chairman REG Consultants Ltd</i>	31	Professor Mino Green <i>Emeritus Professor of Electrical Device Science Imperial College London</i>	12
Mrs Shelia Gambardella	31	Mr Philip Greenish CBE <i>Chief Executive The Royal Academy of Engineering</i>	3
Dr Stephen Garwood FREng <i>Director of Engineering and Technology, Submarines Rolls-Royce Group plc</i>	18	Mrs Wendy Greenish <i>Marie Curie Cancer Care</i>	5
Sir Peter Gershon CBE FREng <i>Chairman Tate and Lyle plc</i>	19	Rear Admiral Nigel Guild CB FREng <i>New Chairman Engineering Council</i>	11
Miss Joanna Gilbert <i>Lead Co-ordinator UKIERI Project Brough Primary School</i>	6	Professor Syamal Gupta FREng	1
Mr Philip Gilks <i>Aerospace and Defence Industry Architect IBM</i>	4	Dr Douglas Gurr <i>Chairman, Board of Trustees The Science Museum</i>	24
Ms Debbie Gillatt <i>Deputy Director, Economic Policy Co-ordination Cabinet Office</i>	8	H	
Mr Charles Glover <i>Photographer Charles Glover Photography</i>	32	Ms Kate Hall <i>Director Arup Group Ltd</i>	19
Dr Paul Golby FREng <i>Chairman and Chief Executive E.ON UK plc</i>	2	Professor Alison Halstead <i>Pro Vice Chancellor Learning and Teaching Innovation Aston University</i>	21
Dr Dougal Goodman FREng <i>Chief Executive The Foundation for Science and Technology</i>	15	Mr Ben Hamer <i>Regional Director, Europe Halcrow</i>	30
Mr Charles Goodyear	3	Ms Rachael Hamilton	15
Mr Martin Gostling <i>Technical Director Radio Design Ltd</i>	26	Miss Sylvia Hampartumian <i>Manager, Awards The Royal Academy of Engineering</i>	8
Mr Mike Goulette FREng <i>Former Director of Operations, Engineering and Technology Rolls-Royce Group plc</i>	18	Ms Felicity Harer <i>Winner of the Bosch Technology Horizons Award 14-18 age group</i>	16
Mr Steve Gowland <i>Principal Engineer XJ Body Structures Jaguar Land Rover</i>	23	Ms Sian Harrington <i>Editor HR Magazine</i>	16

The 2011 Academy Awards

L	
Mr Trevor Laight <i>Group Leader, BIW Doors Jaguar Land Rover</i>	23
Ms Barbara Lane <i>Director Arup Group Ltd</i>	19
Mr John Lazar <i>Chairman MetaSwitch</i>	4
Mr John Leggate CBE FREng <i>Venture Partner Vantage Point Capital Partners</i>	4
Mr John Leitch <i>Director of Engineering BP plc</i>	22
Professor Ian Liddell CBE FREng <i>WI Liddell Engineering Ltd</i>	20
Mrs Susan Liddell	20
Mr Brian Lidgard <i>Senior Manager, Glasshouse and Lids Jaguar Land Rover</i>	23
Rear Admiral Simon Lister <i>Chief Engineer, Royal Navy Director Submarines DE&S Ministry of Defence</i>	11
Lt Col Merfyn Lloyd OBE <i>Scientific Advisor to Chief of Material, Land DE&S Ministry of Defence</i>	11
Professor Adrian Long OBE FREng	20
Mr Edward Lowe <i>Chief Operating Officer Thales UK</i>	17

M	
Mr Will Machin <i>Lead Engineer National Nuclear Laboratory</i>	17
Mr David MacIver <i>Creative Director Sarah Shuter Productions</i>	30
Professor Jeff Magee <i>Principal of the Faculty of Engineering Imperial College London</i>	12
Professor Geoffrey Maitland FREng <i>Professor of Energy Engineering Imperial College London</i>	25
Ms Natasa Malic-Frayling <i>Principal Researcher Microsoft Research, Cambridge</i>	24
Mr Peter Marsh <i>Industry Correspondent The Financial Times</i>	10
Ms Sarah Marshall <i>Communications Adviser Shell</i>	15
Sir Peter Mason KBE FREng <i>Chairman Thames Water plc</i>	6
Professor Dr Gordon Masterton OBE FREng FRSE <i>Vice President Jacobs</i>	4
Ms Sabrina Mayeen <i>Corporate Communications Robert Bosch Ltd</i>	16
Professor Ronald McCaffer FREng FRSE <i>Emeritus Professor Loughborough University</i>	31
Mrs Margaret McCaffer	31
Dr Natasha McCarthy <i>Head of Policy The Royal Academy of Engineering</i>	18

N	
Mr Shane McHugh <i>Head of International Activities The Royal Academy of Engineering</i>	18
Mr Eoin McManus <i>Editor Installer Magazine</i>	10
Mr Neil Mead <i>Managing Editor Datateam Business Media Ltd</i>	10
Mr Roger Medwell <i>Chairman NP Aerospace</i>	29
Mr Andrew Miller MP	3
Mrs Dervilla Mitchell FREng <i>Director Arup Group Ltd</i>	19
Ms Sarah Montague <i>Presenter Radio 4 Today Programme</i>	3
Mr Terry Morgan CBE FREng <i>Chairman Crossrail Ltd</i>	1
Dr Rhys Morgan <i>Head of Secretariat for E4E The Royal Academy of Engineering</i>	27
Sir Garth Morrison KT CBE <i>Chairman The MacRobert Trust</i>	8
Lady Morrison	8
Mr George Moss-Winterbottom	16
Mr John Moylan <i>Business Reporter BBC Economics and Business Unit</i>	24
Mr Bob Murdoch <i>Manufacturing Director Worcester, Bosch Group</i>	10
Dr Mel Murphy <i>Physical Sciences Chief Scientist Dstl</i>	28
Mr Roderick Muttram FREng <i>Vice President, Quality and Safety Bombardier Transportation (UK) Ltd</i>	31

O	
Mr Pelle Neroth <i>Freelancer Engineering and Technology</i>	16
Air Vice-Marshal Charles Ness FRAeS RAF <i>Technical Director Military Aviation Authority, Ministry of Defence</i>	6
Mr Mark Northcott <i>BP plc</i>	22
Mr Dick Olver FREng <i>Chairman BAE Systems plc</i>	2
Ms Chi Onwurah MP <i>Shadow Minister for Business, Innovation and Skills</i>	1
Mr Paul Oram <i>Chief Engineer, ICE BP plc</i>	22
Professor Sir John O'Reilly FREng <i>Vice Chancellor Cranfield University</i>	5
Lady O'Reilly MBE	5
Professor Bill O'Riordan FREng	7
Mrs Val O'Riordan	7
Mr John Panter	32
Professor Ric Parker FREng <i>Director of Research and Technology Rolls-Royce Group plc</i>	18
Sir John Parker FREng <i>Chairman National Grid plc</i>	2

Fellows of the Academy can be identified with FREng on badges

The 2011 Academy Awards

	Table		Table		Table		Table
Mr Derek Parkin <i>Managing Director, Business Services E.ON UK</i>	21	Mr Jon Prichard <i>Chief Executive Engineering Council</i>	6	S	Ms Victoria Smend <i>Corporate Communications Robert Bosch Ltd</i>	7	16
Ms Beverley Parkin <i>Director, Policy and Public Affairs The Royal Academy of Engineering</i>	22	Professor Anthony Purnell	23	Dr Sithamparanathan Sabesan <i>Director and Founder PervasID</i>	Mr Colin Smith FEng <i>Director of Engineering Rolls-Royce Group plc</i>	14	18
Dr Lesley Paterson <i>Head of Public Engagement The Royal Academy of Engineering</i>	14	R		Dr Gill Samuels CBE <i>Cheltenham Festivals Ltd</i>	Professor Sarah Spurgeon FEng <i>Head of School University of Kent</i>	29	14
Colonel John Pelton <i>Business Development Director, UK Government Infrastructure CH2MHill Europe</i>	29	Mr David Rawcliffe <i>Parliamentary Researcher for Lord Browne</i>	8	Dr Frances Saunders <i>Chief Executive Dstl</i>	Dr Christopher Spurgeon	25	14
Professor Richard Penty <i>University of Cambridge</i>	7	Dr Andrew Rickman OBE <i>Chairman Rockley Group</i>	4	Mr Terry Scuoler <i>Chief Executive EEF</i>	Dr Andrew Spurr <i>Managing Director, Existing Nuclear EDF Energy</i>	20	4
Mr Jon Periselneris <i>Demonstration Project Manager E.ON New Build and Technology</i>	21	Mr Keith Riley <i>Managing Director, Technology Veolia Environmental Services</i>	1	Professor Peter Selway FEng <i>Research Fellow Imperial College London</i>	Dr Scott Steedman CBE FEng <i>Director BRE</i>	20	25
Ms Sarah Philbrick <i>Director, Development The Royal Academy of Engineering</i>	1	Mr Ian Ritchie CBE FEng FRSE <i>Chairman Iomart plc</i>	20	Mrs Simone Selway	Mr Paul Stein FEng <i>Chief Scientific Officer Rolls-Royce Group plc</i>	20	18
Mrs Christine Phillips	32	Mr Patrick Robb <i>Commercial Manager, Rail Signalling Solutions Thales UK</i>	17	Mr Graham Sharp <i>Settlor Racing Steps Foundation</i>	Mr Tom Stuart <i>Group Capability Adviser, Physical Protection Group Dstl</i>	27	28
Mr Neil Platt <i>VP Production Solutions Project Delivery Petrofac Ltd</i>	9	Mr John Robinson FEng <i>Chair, MacRobert Award Committee The Royal Academy of Engineering</i>	20	Mr Toby Sharp <i>Senior Software Engineer Microsoft Research, Cambridge</i>	Mrs Jane Sutton <i>Manager, Communications The Royal Academy of Engineering</i>	27	25
Professor Ian Poll OBE FEng <i>Chairman Defence Scientific Advisory Council</i>	22	Mrs Doreen Robinson	20	Mrs Donna Sharp	Mr Mark Swan <i>CAA Director Airspace Policy Directorate of Airspace Policy</i>	20	6
Mrs Elizabeth Poll	22	Mr Chris Rofe <i>Chief Executive Officer The Royal Institution of Great Britain</i>	8	Mr Ian Shott CBE FEng <i>Director Shott Consulting Ltd</i>	Ms Antonia Szigeti <i>Imperial College London</i>	27	12
Dr Rebecca Poole <i>Science and Technology Journalist</i>	16	Sir Alan Rudge CBE FEng FRS <i>Chairman The ERA Foundation</i>	5	Dr Jamie Shotton <i>Researcher Microsoft Research, Cambridge</i>	Mrs Bertilla Shotton	27	
Mr Giles Price <i>Group Engineering Director BAA Heathrow</i>	4	Mr Phil Ruffles CBE RDI FEng FRS <i>Former Director, Engineering and Technology Rolls-Royce Group plc</i>	18	Ms Sarah Shuter <i>Managing Director Sarah Shuter Productions</i>	Dr Hayaatun Sillem <i>Director, Strategy and Planning The Royal Academy of Engineering</i>	19	
Mr Chris Price OBE FEng <i>Chairman UPS2 IKC</i>	18	Ms Nicola Rzeznik <i>Communications Officer Jaguar Land Rover</i>	23				

Fellows of the Academy can be identified with FEng on badges

The 2011 Academy Awards

T

Mr Richard Taylor Chief Engineer National Nuclear Laboratory	17
Dr John Taylor Inventor John C Taylor Group	20
Major Richard Taylor Military Advisor Dstl	29
Mr Stephen Tetlow Chief Executive Institution of Mechanical Engineers	25
Mr Ian Thomas Managing Director Fluor Ltd	3
Ms Alexandra Tomkinson	26
Rear Admiral John Trewby CB FREng Chairman Southampton University Hospitals Trust	28
Mr Paul Trigg Programmes Director Radio Design Ltd	26
Mrs Deborah Trigg	26
Mr Keith Trilloe Head of Engineering Proposition E.ON UK	21
Ms Kim Turner Head of Executive Services The Royal Academy of Engineering	32

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V

Dr John van Griethuysen FREng Chief Engineer and Safety Director, Submarines DE&S Ministry of Defence	11
Mrs Luxmi Vijayakumar	7
Professor Richard Vinter FREng Dean, Faculty of Engineering Imperial College London	31
Professor Donna Vinter Programme Director, London Grinnell College, IOWA	31

Table

W

Ms Faith Wainwright FREng Director Arup Group Ltd	19
Mr Edmund Wallis FREng	22
Ms Emma Walsh Corporate Partnerships Manager The Royal Academy of Engineering	4
Mr Derek Walters Administrator Racing Steps Foundation	26
Rear Admiral Rees Ward CB Chief Executive ADS Group Ltd	8
Mr Jeremy Webb Editor in Chief New Scientist	28
Mr Brian Welch Engineering Manager, BG Advance Petrofac Ltd	9

Professor Ian White
University of Cambridge

Table

Mr Mark White
Chief Technical Specialist
Jaguar Land Rover

Mr Nigel Whitehead FREng
Group Managing Director, Programmes and Support
BAE Systems plc

Professor Colin Whitehouse FREng
Deputy Chief Executive
Science and Technology Facilities Council

Dr Alvin Wilby
Vice President, Strategy and Technical
Thales UK

Ms Sarah Wilkinson
UK CIO, UBS AG

Professor John Williams FREng
Professor of Engineering Tribology
University of Cambridge

Mr Keith Williams
Managing Director
Altran Praxis

Ms Emma Williams

Professor Richard Williams OBE FREng FTSE
Pro Vice Chancellor
The University of Leeds

Mr Paul Wong
Arup Group Ltd

Ms Alexandra Wright
Communications Manager
Shell

Mr Andrew Wyllie FREng
Chief Executive
Costain Group plc

Y

Dr Ivan Yates CBE FREng
Formerly Deputy Chief Executive
British Aerospace plc

Mr Mark Yates
Formerly Head of Safety
Petrofac Ltd

Professor Eric Yeatman
Professor of Micro-Engineering
Imperial College London
Chairman, Microsaic Systems plc

Mr Paul Yeatman
Vice President
GeoSpectrum Technologies Inc.

Ms Cyndi Yeatman

Ms Kristin Yeatman

Musicians

The musicians are students at the Guildhall School of Music & Drama. They appear by kind permission of the Principal.

The 2011 Academy Awards

Table List in alphabetical order

Table 1 Mr Norman Apsley
Mr Andrew Boagey
Sir Roger Bone
Mr Steve Burgin
Mr Peter France
Professor Syamal Gupta FREng
Mr Keith Howells
Dr Richard Hutchins
Mr Terry Morgan CBE FREng
Ms Chi Onwurah MP
Ms Sarah Philbrick
Mr Keith Riley

Table 2 Professor Sir John Beddington KB CMB
Mr Samir Brikho
Lord Browne of Madingley FREng FRS
Mr Alex Burns
Rt Hon Dr Vincent Cable MP
Lord Drayson
Mr Robert Dudley
Dr Paul Golby FREng
Professor Dame Julia Higgins FREng FRS
Lady Judge CBE
Mr Dick Olver FREng
Sir John Parker FREng

Table 3 Mr Ian Barlow
Mr Mark Elborne
Mr Mel Ewell
Mr Charles Goodyear
Mr Philip Greenish CBE
Mr Steve Holliday FREng
Dr Joanna Kennedy OBE FREng
Mr Andrew Miller MP
Ms Sarah Montague
Mr Graham Sharp
Mr Ian Thomas
Mr Andrew Wyllie FREng

Table 4 Mr Filippo Abba
Dr Peter Bonfield
Mr Desmond Cecil CMG
Mr Mark Cooper
Mr Philip Gilks
Mr John Lazar
Mr John Leggate CBE FREng
Professor Dr Gordon Masterton OBE FREng FRSE
Mr Giles Price
Dr Andrew Rickman OBE
Dr Andrew Spurr
Ms Emma Walsh

Table 5 Dr David Clark OBE
Mrs Suzanne Clark
Sir Anthony Cleaver
Mr Joe Fewtrell
Mrs Valerie Fewtrell
Mrs Wendy Greenish
Mrs Marie-Clare Johnson
Professor Anthony Kelly CBE DL FREng FRS
Professor Sir John O'Reilly FREng
Lady O'Reilly MBE
Sir Alan Rudge CBE FREng FRS
Professor John Williams FREng

Table 6 Dr Andrew Bradley FREng
Mr Chris Carpenter
Air Chief Marshal Sir Stephen Dalton
KCB BSc FRAeS RAF
Mr Russell Davison
Miss Joanna Gilbert
Mr Simon Howison FREng
Mr Ted Kuriata
Sir Peter Mason KBE FREng
Air Vice-Marshal Charles Ness FRAeS RAF
Mr Jon Prichard
Mr Mark Swan
Mr Nigel Whitehead FREng

Table 7 Dr Frederic Cegla
Dr Jaimini Cegla
Dr Michael Crisp
Miss Kristien De Clercq
Professor Cyril Hilsum CBE FREng FRS
Professor Bill O'Riordan FREng
Mrs Val O'Riordan
Professor Richard Penty
Dr Sithamparanathan Sabesan
Mrs Luxmi Vijayakumar
Professor Ian White

Table 8 Miss Amy Abbott
Professor Haroon Ahmed FREng
Dr John Cleaver
Mrs Jenny Davis
Mr Keith Davis
Ms Debbie Gillatt
Miss Sylvia Hampartumian
Sir Garth Morrison KT CBE
Lady Morrison
Mr David Rawcliffe
Mr Chris Rofe
Rear Admiral Rees Ward CB

Table 9 Mr Mike Cannavina
Ms Charlotte Davis
Ms Liesel Detemple
Ms Elaine Donegan
Mr Bill Dunnett
Ms Louise Ferguson
Ms Gwen Folland
Mr Sami Hassouny
Mr Andy Heppel
Mr Andrew Inglis FREng
Mr Neil Platt
Mr Brian Welch

Table 10 Ms Pip Brooking
Dr Peter Fouquet
Mr Stephen Harris
Mr Lee Hibbert
Ms Jo Hudson
Mr Dominic Joyeux
Mrs Jan Keeley
Mr Steve Keeley
Mr Peter Marsh
Mr Eoin McManus
Mr Neil Mead
Mr Bob Murdoch

Table 11 Mr Lee Balthazor
Professor Bill Bardo FREng
Mrs Jayne Bryant FREng
Mr Lambert Dopping-Heppenstall FREng
Mr Peter Fielder
Rear Admiral Nigel Guild CB FREng
Mr David Hogan
Mr John Hudson FREng
Rear Admiral Simon Lister
Lt Col Merfyn Lloyd OBE
Dr John van Griethuysen FREng
Mr Keith Williams

Table 12 Professor Neil Alford FREng
Mr Martin Charlton
Professor Peter Cheung
Professor Mino Green
Professor Andrew Holmes
Professor Jeff Magee
Ms Antonia Szigeti
Ms Sarah Wilkinson
Ms Cyndi Yeatman
Professor Eric Yeatman
Ms Kristin Yeatman
Mr Paul Yeatman

The 2011 Academy Awards

Table 14 Mr Dermot Caulfield
Dr Rebecca Fitzgerald
Dr Shaun Fitzgerald
Dr Karin Hing
Mrs Alexandra King
Mr Doug King
Professor Richard Kitney OBE FREng
Dr Lesley Paterson
Dr Gill Samuels CBE
Dr Christopher Spurgeon
Professor Sarah Spurgeon FREng
Ms Emma Williams

Table 15 Ms Lee-Anne Barraclough
Mr Robert Barrie
Mr John Bullock
Mrs Diana Darton
Professor Richard Darton FREng
Dr Dougal Goodman FREng
Ms Rachael Hamilton
Mr Paul Jackson
Mr Stewart Kempself
Ms Sarah Marshall
Ms Alexandra Wright

Table 16 Professor Helen Atkinson FREng
Mr Peter Crush
Ms Felicity Harer
Ms Sian Harrington
Professor Matthew Harrison
Mr Nigel Kheng
Mr Norman KK Ng
Ms Sabrina Mayeen
Mr George Moss-Winterbottom
Mr Pelle Neroth
Dr Rebecca Poole
Ms Victoria Smend

Table 17 Mr Victor Chavez
Dr Peter Collins
Mr Daniel Constable
Mr Martin Donnelly
Mr Alex Dorrian CBE FREng
Dr Lyn Evans
Professor Graham Fairhall
Mr Edward Lowe
Mr Will Machin
Mr Patrick Robb
Mr Richard Taylor
Dr Alvin Wilby

Table 18 Dr Stephen Garwood FREng
Mr Mike Goulette FREng
Mr Harry Holt
Mr Graham Hopkins
Dr Mike Howse OBE FREng
Dr Natasha McCarthy
Mr Shane McHugh
Professor Ric Parker FREng
Mr Chris Price OBE FREng
Mr Phil Ruffles CBE RDI FREng FRS
Mr Colin Smith FREng
Mr Paul Stein FREng

Table 19 Mr Tristram Carfrae RDI
Dr Gavin Davies
Sir Peter Gershon CBE FREng
Ms Kate Hall
Mr Terry Hill FREng
Professor Tim Ibell
Ms Barbara Lane
Mrs Dervilla Mitchell FREng
Dr Hayaatun Sillem
Ms Faith Wainwright FREng
Mr Paul Wong

Table 20 Mr Stylli Charalampous
Dr Christopher Elliott FREng FRS
Professor Ian Liddell CBE FREng
Mrs Susan Liddell
Professor Adrian Long OBE FREng
Mr Ian Ritchie CBE FREng FRSE
Mrs Doreen Robinson
Mr John Robinson FREng
Professor Peter Selway FREng
Mrs Simone Selway
Mr Ian Shott CBE FREng
Dr John Taylor

Table 21 Mr John Armstrong
Mr Simon Balmer
Mr Amarjit Basi
Mrs Helen Blunden
Mr Martin Carter
Mr Alex Dickson
Professor Alison Halstead
Dr Chris Horne
Professor Allan Jones
Mr Derek Parkin
Mr Jon Periselneris
Mr Keith Trilloe

Table 22 Mr Howard Cook
Professor Yulong Ding
Mr Christopher Earnshaw FREng
Mr Peter Elliot
Mr John Leitch
Mr Mark Northcott
Mr Paul Oram
Ms Beverley Parkin
Mrs Elizabeth Poll
Professor Ian Poll OBE FREng
Mr Edmund Wallis FREng
Professor Richard Williams OBE FREng FTSE

Table 23 Mr Simon Black
Dr Alan Carr
Dr Chris Coulter
Mr Robert Crow
Mr Jon Excell
Mr Steve Gowland
Mrs Helen Gowland
Mr Trevor Laight
Mr Brian Lidgard
Professor Anthony Purnell
Ms Nicola Rzezniak
Mr Mark White

Table 24 Professor Chris Bishop FREng FRSE
Dr Gail Cardew
Mr Anthony Frayling
Dr Douglas Gurr
Dr Andrew Herbert OBE FREng
Professor Sir Antony Hoare FREng FRS
Mr Ed Holmes
Mrs Rachel Howard
Ms Natasa Malic-Frayling
Mr John Moylan

Table 25 Dr David Brown
Mr Richard Coackley
Ms Fiona Fox
Sir William Francis CBE FREng
Professor Geoffrey Maitland FREng
Mr Terry Scuoler
Dr Scott Steedman CBE FREng
Mrs Jane Sutton
Mr Stephen Tetlow
Dr Ivan Yates CBE FREng
Mr Mark Yates

The 2011 Academy Awards

Table 26 Mr Anthony Chadwick
Mrs Dawn Chadwick
Mr George Collings
Mr Nick Collings FREng
Mr Martin Gostling
Mrs Catriona Hawthorn
Mr Eric Hawthorn
Ms Alexandra Tomkinson
Mrs Deborah Trigg
Mr Paul Trigg
Mr Derek Walters
Professor Colin Whitehouse FREng

Table 27 Dr Liz Barry
Mr Alistair Blake
Professor Andrew Blake FREng FRS
Dr Fiona Blake
Mr Mat Cook
Ms Lucy Cranston
Dr Andrew Fitzgibbon
Dr Rhys Morgan
Mrs Donna Sharp
Mr Toby Sharp
Mrs Bertilla Shotton
Dr Jamie Shotton

Table 28 Ms Hazel Abel
Dr Andrew Baxter
Dr Abigail Bond
Mr Chris Davies
Mr William Edgar CBE FREng FRSE
Mr Ian Elgy
Ms Karen Herne
Professor Michael Kelly FREng FRS
Dr Mel Murphy
Mr Tom Stuart
Rear Admiral John Trewby CB FREng
Mr Jeremy Webb

Table 29 Brigadier Mark Armstrong
Dr Michael Dalzell
Professor David Delpy FREng FMedSci FRS
Mrs Margaret Delpy
Mrs Penny Endersby
Ms Sue Fisher

Ms Elaine Fullerton
Mr Ross Jones
Mr Roger Medwell
Colonel John Pelton
Dr Frances Saunders
Major Richard Taylor

Table 30 Mr Charles Beaumont
Professor Steven Beaumont OBE FREng FRSE
Professor Chris Binnie FREng
Professor Stephen Brown OBE FREng
Mrs Maryse de Lalouviere Brown
Professor Roger Falconer FREng
Dr Cecil French FREng
Mrs Shirley French
Mr Ben Hamer
Mr David MacIver
Ms Sarah Shuter

Table 31 Miss Helen Berrington
Miss Selina Chan
Mr Cuong Dang
Mr Roy Gambardella
Mrs Shelia Gambardella
Mr Brian Kent FREng
Mrs Margery Kent
Mrs Margaret McCaffer
Professor Ronald McCaffer FREng FRSE
Mr Roderick Muttram FREng
Professor Donna Vinter
Professor Richard Vinter FREng

Table 32 Ms Yvonne Baker
Professor David Edmonds FREng
Dr Jenny Edmonds
Mr Daniel Ferenzi
Mr Charles Glover
Mrs Margaret Hughes
Mr Nigel Hughes FREng
Mr John Panter
Mrs Christine Phillips
Ms Kim Turner

Guildhall



Guildhall has been the City powerhouse since the twelfth century. In an era when the Lord Mayor of London rivalled the monarch for influence and prestige, this was where he and the ruling merchant class held court, fine-tuned the laws and trading regulations that helped create London's wealth.

Today, 800 years on, Guildhall is still home of the City of London Corporation, and acts as a grand setting for glittering banquets in honour of visiting Heads of State and other dignitaries, royal occasions, and receptions for major historical anniversaries.

Situated in the heart of the City of London, the world's leading financial and business centre, this rare and magnificent medieval Grade I listed landmark offers a spectacular backdrop for corporate events and banquets. With a clientele that includes leading international companies, charities, organisations, professional and academic bodies, Guildhall offers a unique combination of an esteemed historical setting whilst being fully equipped with excellent facilities for modern business requirements.

The Royal Academy of Engineering

As Britain's national academy for engineering, we bring together the country's most eminent engineers from all disciplines to promote excellence in the science, art and practice of engineering. Our strategic priorities are to enhance the UK's engineering capabilities, to celebrate excellence and inspire the next generation, and to lead debate by guiding informed thinking and influencing public policy.

The Academy's work programmes are driven by three strategic priorities, each of which provides a key contribution to a strong and vibrant engineering sector and to the health and wealth of society.

Enhancing national capabilities

As a priority, we encourage, support and facilitate links between academia and industry. Through targeted national and international programmes, we enhance – and reflect abroad – the UK's performance in the application of science, technology transfer, and the promotion and exploitation of innovation. We support high quality engineering research, encourage an interdisciplinary ethos, facilitate international exchange and provide a means of determining and disseminating best practice. In particular, our activities focus on complex and multidisciplinary areas of rapid development.

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Excellence breeds excellence. We celebrate engineering excellence and use it to inspire, support and challenge tomorrow's engineering leaders. We focus our initiatives to develop excellence and, through creative and collaborative activity, we demonstrate to the young, and those who influence them, the relevance of engineering to society.

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Using the leadership and expertise of our Fellowship, we guide informed thinking, influence public policy making, provide a forum for the mutual exchange of ideas, and pursue effective engagement with society on matters within our competence. The Academy advocates progressive, forward-looking solutions based on impartial advice and quality foundations, and works to enhance appreciation of the positive role of engineering and its contribution to the economic strength of the nation.



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