

Annual **Review** Annex  
2015/2016





# Annex to the Annual Review

## Contents

Fellows elected in 2015 . . . . .	2	Engineering Leadership Advanced Awards . . . . .	27
International Fellows . . . . .	2	Ingenious Public Engagement Awards . . . . .	30
Fellows . . . . .	2	Visiting Professors . . . . .	31
Trustee Board . . . . .	4	Sainsbury Management Fellowships . . . . .	32
Academy Governance Committees . . . . .	5	Aerospace MSc Bursary Scheme . . . . .	33
Academy Operating Committees . . . . .	8	Petrofac Fellowships . . . . .	34
Awards . . . . .	11	Panasonic Trust Fellowships . . . . .	34
Grants, fellowships and programmes. . . . .	12	Hertha Marks Ayrton Fellowship . . . . .	34
Research Chairs. . . . .	12	Sir Angus Paton Bursary . . . . .	34
Research Chairs in Emerging Technologies. . . . .	14	Queen Elizabeth Prize for Engineering . . . . .	35
Senior Research Fellowships . . . . .	14	Panel of judges . . . . .	35
RAEng/EPSRC Research Fellowships . . . . .	14	Queen Elizabeth Prize for Engineering Foundation Trustees . . . . .	35
Leverhulme Trust Senior Research Fellowships. . . . .	15	Donors . . . . .	36
Daphne Jackson Trust Fellowships. . . . .	15	Search group . . . . .	36
RAEng Research Fellowships . . . . .	16	Development and fundraising . . . . .	37
RAEng/Lloyd's Register Foundation Research Fellowship . . . . .	18	Development Advisory Board . . . . .	37
RAEng/Ministry of Defence Research Fellowship . . . . .	18	Contributors to Academy programmes. . . . .	37
Enterprise Fellowships . . . . .	18	Royal Academy of Engineering 2015 Annual Fund . . . . .	38
Blavatnik Family Foundation Enterprise Fellowship Alumni Awards . . . . .	19		
Pathways to Growth . . . . .	19		
Launchpad Competition . . . . .	19		
RAEng-ERA Foundation Entrepreneurs Award . . . . .	20		
Distinguished Visiting Fellowships . . . . .	20		
Newton Research Collaboration Programme. . . . .	22		
Leaders in Innovation Fellowships. . . . .	25		
Africa Prize for Engineering Innovation . . . . .	25		
Industrial Secondments Scheme . . . . .	26		

# Fellows

Fellows of the Academy are leading engineers in the UK drawn from academia, industry and the not-for-profit sectors. Fellowship is a national honour, awarded for outstanding personal engineering achievements. Election to the Fellowship is managed by current Fellows of the Academy.

## INTERNATIONAL FELLOWS

### Elected in 2015 were:

**Dr Robert Care**

Principal, ACT and Strategic Geographies  
Leader, Arup Australasia

**Professor Manfred Morari**

Professor of Automatic Control,  
Department of Information Technology  
and Electrical Engineering, ETH Zurich

**Professor Scott Sloan**

Director, ARC Centre of Excellence for  
Geotechnical Science and Engineering,  
Newcastle University, Australia

## FELLOWS

### Elected in 2015 were:

**Professor Claire Adjiman**

Co-Director, Institute of Molecular  
Science and Engineering; Professor  
of Chemical Engineering, Imperial  
College London

**Chris Allam**

Engineering and Programme  
Management Director, BAE Systems,  
Military Air and Information

**Timothy Burnhope**

Chief Innovation and Growth Officer,  
JCB Group

**Professor David Butler**

Professor of Water Engineering,  
University of Exeter

**Professor Darwin Caldwell**

Research Director and Director,  
Advanced Robotics Department, Italian  
Institute of Technology

**Ivor Catto**

Independent consultant

**Peter Chapman**

Barrister and arbitrator

**Professor Anthony Cohn**

Professor of Automated Reasoning,  
University of Leeds

**Professor Paul Collier**

Head, Beams Department, CERN

**Professor Bob Cryan**

Vice-Chancellor and CEO, University of  
Huddersfield

**Professor John Daugman**

Professor of Computer Vision and  
Pattern Recognition, University of  
Cambridge

**Professor Rene de Borst**

Regius Professor of Civil Engineering  
and Mechanics, University of  
Glasgow; Consultant, Dassault  
Aviation, Paris

**Vincent de Rivaz**

Chief Executive, EDF Energy

**Professor Mohan Edirisinghe**

Bonfield Chair of Biomaterials,  
University College London

**Professor Colin Garner**

Caterpillar-Royal Academy of  
Engineering Chair in Applied  
Thermodynamics, Loughborough  
University

**Richard Goodwin**

Managing Director, Goodwin plc

**Steve Harridge**

Consultant, Tony Gee and Partners LLP

**Dr Chris Haynes**

Project Assurance Consultant,  
KazMinerals plc; Non-Executive  
Director, Woodside Petroleum Ltd,  
Perth and Non-Executive Director,  
WorleyParsons Ltd, Sydney

**Dr Clive Hickman**

Chief Executive, Manufacturing Technology Centre (MTC)

**Professor Karen Holford**

Pro Vice-Chancellor, Head of College of Physical Sciences and Engineering, and Professor of Mechanical Engineering, Cardiff University

**Dr Rick Jefferys**

Senior Research Director, University of Edinburgh

**Dr David Knowles**

Director, Energy, Atkins

**Bernard Looney**

Chief Operating Officer, Production, BP plc

**Paddy Lowe**

Executive Director (Technical), Mercedes Benz Grand Prix Ltd

**Jonathan Lyle**

Chief Executive, Defence Science and Technology Laboratory

**John Mair**

Technology Director, Corporate, Subsea7

**Colin Matthews**

Chairman, Highways England

**Professor Barrie Mecrow**

Head of School, School of Electrical and Electronic Engineering, Newcastle University

**Andy Mitchell**

Chief Executive Officer, Thames Tideway Tunnel Ltd

**Dr Edward Morton**

Chief Technical Officer, Rapiscan Systems Ltd

**Professor Robert Parkin**

Pro-Vice Chancellor (Research and Knowledge Transfer), University of Bradford

**John Reece**

Chairman, Reece Group; Trustee, Reece Foundation; Trustee, Springfield House Trust

**Professor Stephen Roberts**

Professor of Machine Learning, University of Oxford

**Professor Daniel Rueckert**

Professor of Visual Information Processing, Department of Computing, Imperial College London; Consultant, IXICO; Scientific Adviser, Vision RT

**Professor Mary Ryan**

Professor of Materials Science and Engineering, Imperial College London

**Richard Sadler**

Company Director, RLS Fidelis Ltd

**Professor Angela Sasse**

Professor of Human-Centred Technology and Director of the Science of Cyber Security Research Institute, University College London

**Professor Nilay Shah**

Professor of Process Systems Engineering, Centre for Process Systems Engineering (CPSE), Department of Chemical Engineering, Imperial College London

**Professor Constantinos Stavrinidis**

Head, Mechanical Engineering Department, European Space Research and Technology Centre, European Space Agency

**Patrick Thomas**

Chairman and Chief Executive, Covestro

**Professor Mark Tooley**

Head of Medical Physics and Bioengineering, Director of Research and Development, and Consultant Clinical Scientist, Royal United Hospitals Bath NHS Foundation Trust; Visiting Professor, University of Bath and University of the West of England

**Dr John Tubman**

Managing Director, Management Services and Defence, UK, Ireland and Continental Europe, AECOM

**Professor Florin Udrea**

Professor of Semiconductor Engineering, University of Cambridge; Chief Technical Officer, Cambridge Microelectronics Ltd and Cambridge CMOS Sensors

**Professor David White**

Shell EMI Chair in Offshore Engineering, University of Western Australia, Perth

**Ant Wilson**

Director, Sustainability and Advanced Design - Building Engineering, AECOM UK

**Professor Michael Wisnom**

Professor of Aerospace Structures, University of Bristol; Director, Advanced Composites Centre for Innovation and Science (ACCIS); Director, Rolls-Royce Composites UTC

**Professor Hua Zhao**

Vice Dean (Research) and Professor of Mechanical Engineering, College of Engineering, Design and Physical Sciences, Brunel University London

# Trustee Board

The Trustee Board comprises 13 Trustees elected by and from the Fellowship and is chaired by the President, Professor Dame Ann Dowling. The Trustee Board has co-opted Mr Ian Ritchie to serve as a Trustee for an additional year and to continue as Chair of the Finance Committee.

## OFFICERS AND MEMBERS OF COUNCIL

### Chair

**Professor Dame Ann Dowling OM DBE FREng FRS**, President

### Vice Presidents

**Allan Cook CBE FREng**, Vice President  
Committee Coordination

**Professor Richard Williams OBE FREng**,  
Vice President Fellowship Engagement

### Members

**Professor Helen Atkinson CBE FREng**  
**Professor Sir Michael Gregory CBE FREng**  
**Dr Andrew Harter FREng**  
**Norman Haste OBE FREng**  
**Dr Michael Howse CBE FREng**  
**Professor Elaine Martin OBE FREng**  
**Professor Richard Parker CBE FREng**  
**Ian Ritchie CBE FREng FRSE**  
**Dr Frances Saunders CB FREng**  
**Professor Martyn Thomas CBE FREng**  
**Paul Westbury CBE FREng**

### Secretariat

**Howard Beeston ACIS**

# Academy Governance Committees

## AUDIT AND RISK COMMITTEE

The purpose of the Audit and Risk Committee is to assess and improve risk management and internal processes and controls across the Academy and oversee the external audit on behalf of the Trustee Board.

Chair

**Dr Michael Howse CBE FREng**

Members

**Dr Carolyn Griffiths FREng**

**Dr Joanna Kennedy OBE FREng**

**Professor Gordon Masterton OBE  
FREng FRSE**

**Dr Michael Purshouse FREng**

**John Robinson CBE FREng**

Secretariat

**Howard Beeston ACIS**

## FINANCE COMMITTEE

The Finance Committee is responsible for and accountable to the Trustee Board for the financial management of the Academy including compliance with the Charities Act 2011 and other relevant legislation, management of Academy budgets, external investment fund managers and compliance with external financial reporting standards.

Chair

**Ian Ritchie CBE FREng FRSE**

Members

**John Baxter CBE FREng FRSE**

**Allan Cook CBE FREng**

**Norman Haste OBE FREng**

**Professor David Lane FREng FRSE**

**Professor Jim Norton FREng**

Secretariat

**Howard Beeston ACIS**

## MEMBERSHIP COMMITTEE

The Membership Committee is the guardian of excellence in determining which candidates may go forward for election to the Fellowship. The Membership Committee consists of a Chair, Chairs of each of the Membership Selection Panels, and the Chair of the International Committee. Each of the 11 Membership Selection Panels looks after a sector of engineering.

Chair:

**Dr Frances Saunders CB FREng**

Ex officio:

**The President**

Panel Chairs

**Panel 1** (Civil and Environmental)

**Professor Colin Bailey FREng**

**Panel 2** (Materials and Mining)

**Professor Jan Cillers FREng**

**Panel 3** (Chemicals and Process)

**Dr David Tomlinson FREng**

**Panel 4** (Aerospace)

**Air Marshal Sir Simon Bollom KBE CB  
FREng**

**Panel 5** (Transport and Mechanical)

**Professor Stephen Garwood FREng**

**Panel 6** (Manufacturing and Design)

**Professor Roger Benson FREng**

**Panel 7** (Electrical and Electronic)

**Dr Frances Saunders CB FREng**

**Panel 8** (Energy and Power)

**Dr Martin Grant FREng**

**Panel 9** (Medical and Bioengineering)

**Professor Liz Tanner OBE FREng  
FRSE**

**Panel 10** (Computing and  
Communications)

**Professor Alan Bundy CBE FREng  
FRS FRSE**

**Panel 11 (Special)**

**Sir Andrew Mathews KCB FREng**

**Panel Members**

**Panel 1 (Civil and Environmental)**

**Professor Muhammed Basheer  
FREng**

**Professor Nicholas Buenfeld FREng**

**Ginny Clarke CBE FREng**

**Dr Steve Denton FREng**

**Dr Peter Hansford FREng**

**Professor Oubay Hassan MBE FREng**

**Chris Hendy FREng**

**Professor Doug King FREng**

**David MacKenzie FREng**

**Michelle McDowell MBE FREng**

**Dr Toby Roberts FREng**

**Professor Peter Robery FREng**

**Professor Tom Stephenson FREng**

**Panel 2 (Materials and Mining)**

**Professor Paul Curtis FREng**

**Professor Eileen Harkin-Jones OBE  
FREng**

**Professor Chris Hall FREng FRSE**

**Professor Steve Bull FREng**

**Dr John Groom FREng**

**Professor Anthony Kinloch FREng  
FRS**

**Professor Allan Matthews FREng**

**Professor David Owen FREng FLSW  
FRS**

**Jeff Smith FREng**

**Dr Alan Turnbull OBE FREng FRS**

**Dr Paul Woollin FREng**

**Panel 3 (Chemicals and Process)**

**Professor Adisa Azapagic FREng**

**Professor Zanfeng Cui FREng**

**Professor Mike Hounslow FREng**

**Phil Tracy FREng**

**Professor Andrew Livingston FREng**

**Professor Elaine Martin OBE FREng**

**Professor Raffaella Ocone FREng  
FRSE**

**Nigel Perry MBE FREng**

**Professor Robin Smith FREng**

**Panel 4 (Aerospace)**

**Professor Sir Richard Brook OBE  
FREng**

**Dr Roger Digby FREng**

**Dr Stephen Elston FREng**

**Dr Richard Greaves FREng**

**Graham Hopkins FREng**

**Professor Andrew Keane FREng**

**Professor Tony Kinghorn FREng**

**Professor Constantinos Soutis  
FREng**

**Panel 5 (Transport and Mechanical)**

**Kenneth Burrage FREng**

**Professor David Cebon FREng**

**Dr Simon Gallimore FREng**

**Dr Willem John van Griethuysen  
FREng**

**Professor Tim Leighton FREng FRS**

**Dr Michael Purshouse FREng**

**Professor Paul Shayler FREng**

**Professor Raymond Snidle FREng**

**Professor Hugh Spikes FREng**

**Professor Paul Wrobel FREng**

**Panel 6 (Manufacturing and Design)**

**Carol Burke CBE FREng**

**Professor Stuart Cameron FREng**

**Professor John Clarkson FREng**

**Professor Jane Jiang FREng**

**Professor Patrick Keogh FREng**

**Professor Lin Li FREng**

**Panel 7 (Electrical and Electronic)**

**Professor Roger Appleby FREng**

**Professor Cliff Burrows OBE FREng**

**Professor Jonathan Chambers FREng**

**Professor Roger Goodall FREng**

**Professor Ian Hunter FREng**

**Professor Cliff Jones FREng**

**Professor Andrew Marvin FREng**

**Professor Mohamed Missous FREng**

**Professor Sir Michael Pepper FREng  
FRS**

**Professor Richard Penty FREng**

**Professor Harvey Rutt FREng**

**Dr Nicholas Waltham FREng**

**Dr Richard Wylde FREng**

**Panel 8 (Energy and Power)**

**Professor Nigel Brandon OBE FREng**

**Janice Crawford FREng**

**Ed Daniels FREng**

**David Eyton FREng**

**Dr Malcolm Kennedy CBE FREng  
FRSE**

**Dr Marcus Newborough FREng**

**Dr Win Rampen FREng**

**Professor Albert Rodger FREng FRSE**

**Nicholas Winsor CBE FREng**

**Panel 9 (Medical and Bioengineering)**

**Dr Douglas Anderson OBE FREng  
FRSE**

**Professor Serena Best FREng**

**Professor Clive Buckberry FREng**

**Dr Donal Cronin FREng**

**Professor Nicholas Medcalf**

**Professor Guang-Zhong Yang FREng**

**Panel 10 (Computing and  
Communications)**

**Professor Bashir Al-Hashimi FREng**

**Dr Steve Allpress FREng**

**Dr Andrew Fitzgibbon FREng**

**Professor Carole Goble CBE FREng**

**Nic Holt FREng**

**Dr David Watson FREng**

**Dr Richard Whittington FREng**

**Professor James Woodcock FREng**

**Panel 11 (Special)**

**Professor Graham Davies FREng**

**Professor Richard Godwin FREng**

**Commodore Peter Hurford OBE  
FREng**

**Professor Gordon Masterton OBE  
FREng FRSE**

**Professor Ian Wallace FREng**

**Dr Alan Begg FREng**

**Committee secretariat**

**Jo Ryley**



### **NOMINATIONS COMMITTEE**

The purpose of the Nominations Committee is to ensure that a sufficient number of Fellows stand as candidates in the annual Trustee election and that the candidates bring to the Trustee Board skills, knowledge, experience and diversity that would yield, among the ordinary members and vice presidents, a balanced Board. The Committee will recommend to the Board candidates for appointment as vice presidents and candidates for appointment as chairs of the Academy's committees. The Committee is also to recommend to the Trustees, and ultimately the Fellowship, the Academy's President from nominations submitted by the Fellowship.

Chair

**Professor Dame Ann Dowling OM  
DBE FREng FRS**

Members

**John Baxter CBE FREng FRSE  
Professor Dame Wendy Hall DBE  
FREng FRS  
Dervilla Mitchell CBE FREng  
Professor Sir Christopher Snowden  
FREng FRS  
Paul Westbury CBE FREng  
Professor Richard Williams OBE  
FREng**

Secretariat

**Howard Beeston ACIS**

### **REMUNERATION COMMITTEE**

The purpose of the Remuneration Committee is to establish and keep under review the remuneration policy for permanent Academy staff, which will be implemented by the Chief Executive; to consider the recommendation of the Chief Executive for remuneration of the Academy Directors and agree their remuneration; and to set the remuneration of the Chief Executive.

Chair

**Professor Dame Ann Dowling OM  
DBE FREng FRS**

Members

**Allan Cook CBE FREng  
Professor Sir Michael Gregory CBE  
FREng  
Ian Ritchie CBE FREng FRSE**

Secretariat

**Philip Greenish CBE**

# Academy Operating Committees

## AWARDS COMMITTEE

The role of the Awards Committee is to identify and recommend to the President and Trustee Board appropriate candidates for all of the Academy's relevant prizes and awards (with the exception of National Honours, the International Medal, the Queen Elizabeth Prize for Engineering and the MacRobert Award).

Chair

**Nigel Perry MBE FREng**

Members

**Dr Steve Allpress FREng**  
**Professor Adisa Azapagic FREng**  
**Professor Anthony Bull FREng**  
**Chris Hendy FREng**  
**Professor Tim Ibell FREng**  
**Professor Malcolm Macleod FREng**  
**Professor Raffaella Ocone FREng FRSE**  
**Dr Jim Ramage FREng**  
**Professor John Watts FREng**  
**Professor Jim Woodcock FREng**

Secretariat

**Philip Greenish CBE**

Committee secretariat

**Sylvia Hampartumian**

## EDUCATION AND SKILLS COMMITTEE

The Education and Skills Committee's role is to oversee and be responsible for the Academy's activities in engineering education and training, and to maintain links with other bodies working in these fields.

Chair

**Professor Helen Atkinson CBE FREng**

Members

**Chris Allam FREng**  
**Professor Graham Davies FREng**  
**Dr Paul Holbourn FREng**  
**Professor Ian Hutchings FREng**  
**Howard Mathers CBE FREng**  
**Professor Jonathan Seville CBE FREng**  
**Professor Nick Tyler CBE FREng**  
**Dr Jean Venables CBE FREng**  
**Faith Wainwright MBE FREng**

Ex officio

**Chris Earnshaw OBE FREng**  
**Professor Peter Goodhew FREng**  
**Dr Stephen Huntington OBE FREng**  
**Professor Jeff Magee FREng**  
**Professor Andrew McNaughton FREng**

Observer

**Deborah Seddon, Engineering Council**

Committee secretariat

**Dr Rhys Morgan**

## ENGINEERING POLICY COMMITTEE

The Engineering Policy Committee's role is to advise and be responsible to the Trustee Board for the engineering policy of the Academy and for all matters concerned with the application of engineering knowledge and principles (other than education and training). It should identify, monitor and promote attention to emerging and generic issues of importance to engineering in pursuit of this role.

Chair

**Professor John Loughhead OBE FREng**

Members

**Dr Peter Bonfield OBE FREng**  
**Tim Chapman FREng**  
**Dr David Clarke FREng**  
**Professor John Clarkson FREng**  
**Professor Brian Collins CB FREng**  
**Lambert Dopping-Hepenstal FREng**  
**Professor Jim Hall FREng**  
**Professor Paul Howarth FREng**  
**Dr Mike Lloyd FREng**  
**Professor Jim Norton FREng**  
**Dr Liane Smith FREng**  
**Paul Taylor FREng**  
**Steve Yianni FREng**  
**Professor Paul Younger DL FREng FRSE**

Ex officio

**Professor Serena Best FREng**

Committee secretariat

**Dr Alan Walker**

## ENTERPRISE COMMITTEE

The role of the Enterprise Committee is to provide strategic oversight and leadership of the Academy's Enterprise Hub, on behalf of the Trustee Board. The Committee oversees the development and operation of the Enterprise Hub, and supports and promotes its activities, which includes developing appropriate partnerships and funding relationships. It ensures the quality and rigour of the assessment process and selection of awards for the Academy's UK-based enterprise schemes.

Chair

**Ian Shott CBE FREng**

Members

**Professor Norman Apsley OBE FREng**

**Professor Steven Beaumont OBE FREng**

**Professor Richard Brook OBE FREng**

**Michael Carr FREng**

**Suranga Chandratillake FREng**

**Anne Glover CBE HonFREng**

**Sir David Grant CBE FREng**

**Iain Gray CBE FREng FRSE**

**Dr Hermann Hauser KBE FREng FRS**

**Professor Andrew Hopper CBE FREng FRS**

**John Leggate CBE FREng**

**Dr Michael Lynch OBE DL FREng FRS**

**Chris Mairs CBE FREng**

**Professor Alison Noble OBE FREng**

**Sir Alan Rudge CBE FREng FRS**

**Dr John C Taylor OBE FREng**

**Dr Robert Sansom FREng**

Committee secretariat

**Ana Avaliani**

## EXTERNAL AFFAIRS COMMITTEE

The role of the External Affairs Committee is to provide strategic direction for external affairs activities on behalf of the Trustee Board. It oversees all aspects of the Academy's communications, public affairs and engagement activities and events programme, ensuring that they are delivered in line with the strategic plan.

Chair

**Dame Judith Hackitt DBE FREng**

Members (Fellows)

**Janice Crawford FREng**

**Professor Robin Grimes FREng**

**Professor Doug King FREng**

**Professor Gordon Masterton OBE FREng FRSE**

**Richard Maudslay CBE FREng**

**Professor Mark Miodownik FREng**

**Dr Scott Steedman CBE FREng**

**Professor Saeed Zaheedi OBE FREng**

Members (Non-Fellows)

**Clive Cookson, *Financial Times***

**Jeremy Greaves, Airbus UK**

**Dr Roger Highfield, Science Museum Group**

Committee secretariat

**Juniour Blake**

## INTERNATIONAL COMMITTEE

The role of the International Committee is to advise and be responsible to the Trustee Board for promoting the international interests of the Academy. In pursuit of this role, the Committee's interests include the Academy's membership of the International Council of Academies of Engineering and Technological Sciences (CAETS) and the European Council of Applied Sciences and Engineering (Euro-CASE).

The Committee contributes to other international committees and study groups as appropriate and works to expand relationships with other academies of engineering and technological sciences, taking part in their activities where this is consistent with the Academy's objectives.

The Committee oversees the Academy's Newton Fund activities.

Chair

**David Thomlinson FREng**

Members

**Professor Ian Bogle FREng**

**Malcolm Brinded CBE FREng**

**Dr Andrew Chan FREng**

**Professor Muffy Calder OBE FREng**

**Dr Alastair Glass FREng**

**Professor Sir Michael Gregory FREng FRSE**

**Dr Shirley Jackson FREng**

**Dr John Lazar CBE FREng**

**Professor William Lee FREng**

**Dr Timothy Leverton FREng**

**Professor John Loughhead OBE FREng**

**Dr Stephen Myers OBE FREng**

**Professor John Perkins CBE FREng**

**Professor Hai-Sui Yu FREng**

Committee secretariat

**Shane McHugh**

## RESEARCH AND SECONDMENT SCHEMES COMMITTEE

The role of the Research and Secondment Schemes Committee is to advise and be responsible to the Trustee Board for the supervision of research and secondment schemes other than those concerned with education and training.

Chair

**Professor Ric Parker CBE FREng**

Members

**Professor Bashir Al-Hashimi FREng**

**Professor Polina Bayvel FREng FRS**

**Dr Alan Begg FREng**

**Professor Peter Cawley FREng FRS**

**David Eyton FREng**

**Professor Carole Goble CBE FREng**

**Professor Michael Hounslow FREng**

**Professor John McDermid OBE FREng**

**Professor Stephen McLaughlin  
FREng FRSE**

**Professor Andrew McNaughton  
FREng**

**Professor Lionel Tarassenko CBE  
FREng**

**Dr David Watson FREng**

**Professor Paul Younger DL FREng**

Ex officio

**Professor Neil Alford MBE FREng**

(Research Fellowships)

**Professor William Milne FREng**

(Leverhulme Trust Senior Research  
Fellowships)

**Professor Clive Parini FREng**

(Industrial secondments)

**Professor Steve Williamson FREng**

(Research Chairs)

Committee secretariat

**Dr Ian Forristal**

# Awards

## 2015 MacRobert Award

The premier award for innovation in UK engineering, with a £50,000 prize, awarded annually to a team of engineers for an exceptional engineering innovation that has been both commercially successful and delivers benefits to society. The MacRobert Award is supported by the Worshipful Company of Engineers.

*Awarded to:*

**Artemis Intelligent Power for its Digital Displacement power system using digitally controlled hydraulics**

## 2015 President's Medal

Awarded to an Academy Fellow who has contributed significantly to the Academy's aims and work through initiative in promoting excellence in engineering.

*Awarded to:*

**Sir Richard Olver FEng**

## 2015 Colin Campbell Mitchell Award

For an engineer or small team of engineers who have made an outstanding contribution to the advancement of any field of UK engineering.

*Awarded to:*

**Optical Networks Group, University College London:**

**Professor Polina Bayvel FEng FRS**

**Dr Lidia Galdino**

**Dr Robert Killey**

**Dr Robert Maher**

**Dr Seb Savory**

**Dr Benn Thomsen**

## 2015 Silver Medals

For an outstanding personal contribution to UK engineering by an early- to mid-career engineer resulting in market exploitation. Up to four medals may be awarded in any one year.

*Awarded to:*

**Dr Susannah Clarke, Founder and Director, Embody Orthopaedic**

**Dr Don Syme, Principal Researcher, Microsoft Research UK**

**Dr Andy Ward, Chief Technology Officer, Ubisense**

## 2015 Major Project Award

The award recognises the contribution of a team of up to five UK-based engineers who have delivered a major engineering project that has had a substantial impact on society.

*Awarded to:*

**The Highlands and Islands Superfast Broadband Project, Atkins:**

**Neil Watt, John Jennow, JD Olliero and Chris Bond**

## 2015 RAEng-ERA Foundation Entrepreneurs Award

Awarded to early-career UK university researchers working in electro-technology, who demonstrate considerable entrepreneurial promise.

*Awarded to:*

**Matthew Murray, University of Leeds**

## 2015 Rooke Award

The prize is awarded to an individual, small team or project based in the UK that has supported the Academy's aims and work through their initiative in promoting engineering to the public.

*Awarded to:*

**Dr Hugh Hunt, Reader in Engineering Dynamics and Vibration, University of Cambridge**

## 2015 Sir Frank Whittle Medal

Awarded to an engineer resident in the UK whose achievements have had a profound impact upon their engineering discipline.

*Awarded to:*

**Professor Peter Clarricoats CBE FEng FRS, Emeritus Research Professor, School of Electronic and Computer Science, Queen Mary, University of London**

## 2015 Sir George Macfarlane Medal

The award recognises the potential of engineers working in the UK who have demonstrated excellence in the early stage of their career.

*Awarded to:*

**Dr Matthew Cole  
Oppenheimer Research Fellow at the Centre for Advanced Photonics and Electronics, University of Cambridge**

## 2016 RAEng Armourers and Brasiers Company Prize

A biennial prize awarded to an individual for excellence in materials engineering demonstrated by the successful application of novel materials science and technology in practical engineering systems. The prize is supported by the Worshipful Company of Armourers and Brasiers.

*Awarded to:*

**Professor Judith Driscoll, Professor of Materials Science, University of Cambridge**

# Grants, fellowships and programmes

## RESEARCH CHAIRS

The Research Chairs programme provides funding, together with industry and other research organisations, to support strategically important research in UK universities. The Academy provides funding for an initial period of five years.

Name	Co-sponsor	Subject	University
Professor Guglielmo Aglietti	Surrey Satellite Technology	Space engineering	University of Surrey
Professor Robert Akid	BP	Corrosion and materials	University of Manchester
Professor John Andrews	Network Rail	Infrastructure asset management	University of Nottingham
Professor Matthew Angling	Defence Science and Technology Laboratory (Dstl)	Space environment and radio frequency engineering	University of Birmingham
Professor Ashraf Ayoub	Pell Frischmann	Nuclear infrastructure engineering	City University London
Professor Luke Bisby	Arup	Fire and structures	University of Edinburgh
Professor Richard Butler	Rolls-Royce	Experimental studies of next generation gas-turbine combustion system aerothermal processes	University of Loughborough
Dr Jon Carrotte	Rolls-Royce	Next generation gas-turbine combustion system aerothermal processes	University of Loughborough
Professor Jonathan Cooper	Airbus	Integrated design of advanced novel wing architectures	University of Bristol
Professor George Constantinides	Imagination Technologies	Energy-efficient high performance embedded processing in an uncertain world	Imperial College London
Professor Yulong Ding	Highview Power Storage	Cryogenic energy storage	University of Birmingham
Professor Steve Dixon	Elster	Industrial ultrasonic	University of Warwick
Professor Fionn Dunne	Rolls-Royce	Integrative mechanistic design	Imperial College London
Professor Daniel Esser	SELEX Galileo	Laser devices and engineering	Heriot-Watt University
Professor Brian Falzon	Bombardier	Advanced aerospace composites	Queen's University Belfast
Professor Chris Gerada	Cummins Generator Technologies	Electrical machine technology	University of Nottingham
Professor Alistair Gibb	ECI	Management of complex projects	Loughborough University
Professor Kenneth Grattan FEng	George Daniels Trust	Next generation optical and fibre-optic instrumentation	City University London
Professor Hugh Griffiths FEng	Thales UK	Intelligent radar systems	University College London
Professor Susan Grimes	SITA	Environmental waste management	Imperial College London
Professor Eileen Harkin-Jones	Bombardier	Composites engineering	University of Ulster
Professor Ian Hunter	Radio Design Limited	Microwave signal processing	University of Leeds
Professor Neil Hyatt	The Nuclear Decommissioning Authority	Nuclear waste management	University of Sheffield

Name	Co-sponsor	Subject	University
Professor Lorenzo Iannucci	Dstl	Multiscale composite armour design	Imperial College London
Professor Nikil Kapur	GSK	Pharmaceutical processing	University of Leeds
Professor Alan Kemp	Fraunhofer UK	Advanced laser engineering	University of Strathclyde
Professor Jianguo Lin	TATA Steel	Multidisciplinary studies of hot stamping	Imperial College London
Professor John Miles	Arup	Energy transitions	University of Cambridge
Professor James Moore	Bagrit Trust	Medical devices	Imperial College London
Professor Stephen Muggleton FREng	Syngenta	Applications of automated theory-formation using meta-interpretive machine learning	Imperial College London
Professor Andrew Neely	IBM/BAE Systems	Complex engineering systems	University of Cambridge
Professor Kamran Nikbin	EDF Energy	Structural integrity assessment	Imperial College London
Professor mc schraefel	Microsoft Research	Human computer interaction	University of Southampton
Professor Sven Schroeder	Infineum UK	Engineering applications of synchrotron science	University of Leeds
Professor Sridhar Seetharaman	TATA Steel	Low-carbon technologies	University of Warwick
Professor Spencer Sherwin	McLaren Racing	Transient flow simulation for advanced race and road cars	Imperial College London
Professor David Smith	Rolls-Royce/EDF Energy	Structural performance of energy systems	University of Bristol
Professor Iain Todd	GKN Aerospace	Additive manufacture and advanced structural metallics	University of Sheffield
Professor Zi-Qiang Zhu	Siemens Wind Energy	High efficiency and power density wind-power generator systems	University of Sheffield
Professor Andrew Davison	Dyson Technology Ltd	Ultra-efficient vision algorithms for resource-constrained robotics	Imperial College London
Professor Xiangqian (Jane) Jiang FREng	Renishaw	Precision metrology	University of Huddersfield
Professor Bruno Merk	National Nuclear Laboratory	Computational modelling for nuclear engineering	University of Liverpool
Professor Chris Pearce	EDF Energy	Computational mechanics for nuclear power engineering	University of Glasgow
Professor Mary Ryan FREng	Shell	Interfacial nanoscience for engineering systems	Imperial College London
Professor Jennifer Whyte	Laing O'Rourke	Systems integration	Imperial College London

## RESEARCH CHAIRS IN EMERGING TECHNOLOGIES

This programme allows recipients to develop an area of early-stage research into a new technology to the extent that it engages the wider research community and can subsequently be taken forward by industry.

Name	Subject	University
Professor Anne Neville FREng	Bio-inspiration for functional surface design	University of Leeds
Professor Jeremy O'Brien	Photonic quantum ICT	University of Bristol

## SENIOR RESEARCH FELLOWSHIPS

This scheme provides funding for senior lecturer/reader-level appointments. Fellowships are funded jointly with industry for a period of five years.

Name	Co-sponsor	Subject	University
Dr Matthew Hall	British Geological Survey	Rock-fluid interactions in carbon capture, storage and alternative hydrocarbons	University of Nottingham
Dr Stephen Neethling	Rio Tinto	Heap and <i>in-situ</i> leaching	Imperial College London
Dr Graham Spinardi	Ove Arup Foundation	Integrating technical and social aspects of fire safety engineering	University of Edinburgh
Dr Andrew Tyas	Dstl	Protection engineering against high explosive blast	University of Sheffield
Dr Thomas Scott	AWE	Performance and detection of actinide materials	University of Bristol

## RAENG/EPSRC RESEARCH FELLOWSHIPS

These Fellowships, which are funded jointly with the Engineering and Physical Science Research Council (EPSRC), are aimed at outstanding researchers from all branches of engineering who are about to finish their PhDs or have up to three years' postdoctoral experience.

Name	Subject	University
Dr Tore Butlin	Modelling the vibration of complex structures with localised nonlinearities	University of Cambridge
Dr Filippo Fazi	Electroacoustical inverse problems	University of Southampton
Dr Andrew Marshall	Exploiting emerging interface misfit epitaxy to engineer cheaper, higher performance photodiodes for imaging, communications and gas monitoring	Lancaster University
Dr Davide Mattia	Nanoparticle factory-on-a-chip	University of Bath
Dr Manlio Tassieri	Rheology at the microscale: new tools for bio-analysis	University of Glasgow



## LEVERHULME TRUST SENIOR RESEARCH FELLOWSHIPS

These Fellowships provide mid-career engineers working in UK academic institutions with the opportunity to focus on research activities for a period of up to 12 months while their academic and administrative responsibilities are taken over by an early-career academic.

Name	Subject	University
Dr Haofeng Chen	Modelling the fatigue and creep of metal matrix composite	University of Strathclyde
Dr Piotr Dudek	Analog computation with novel nanodevices for machine learning	University of Manchester
Dr Marianne Ellis	Scale-up of immune cell therapies for organ transplants	University of Bath
Dr Stephen Garrett	Understanding transition in boundary-layer flows over rotating geometries	University of Leicester
Dr Paola Lettieri	A life-cycle approach for nuclear waste management and plant decommissioning	University College London
Dr Chenfeng Li	Real-time computational methods for complex high-fidelity surgical simulation	Swansea University
Dr Cyril Lynsdale	Recycling of carbon dioxide in mortar and concrete	University of Sheffield
Dr Dmitry Nerukh	Personal supercomputer for modelling complete virus at all atom resolution	Aston University
Professor Thomas Nowotny	Enabling scientific computing with GPUs with domain specific languages and metacompilers	University of Sussex
Dr Rachel Oliver	Understanding and utilising nitride nanostructures	University of Cambridge
Dr Justin Philips	A non-invasive continuous monitor of intracranial pressure	City University London
Dr David Sanders	Improving mobility and quality of life for children with disabilities	University of Portsmouth
Dr Sebastian Savory	Realising the capacity in fibre-optic networks with uncertainty and nonlinearity	University College London
Dr Aleksandra Vuckovic	Home-based patient-managed neurorehabilitation following spinal cord injury	University of Glasgow

## DAPHNE JACKSON TRUST FELLOWSHIPS

These Fellowships enable engineers to return to work following a career break.

Name	Subject	University
Dr Margarita Fernandez-Chas	Effect of changes in the spatial properties of the myocardial tissue mechanics on the overall efficiency of the heart	Kings College London
Dr Suhaila Mattar	Embodied CO <sub>2</sub> of concrete: materials, structural and methodological factors	University of Leeds
Dr Divya Tiwari	LPG sensors for measuring carbon dioxide concentration at carbon capture and storage sites	Cranfield University
Dr Maria Ribera Vicent	Satellite FEM validation with advanced optimisation and virtual vibration testing	University of Surrey

## RAENG RESEARCH FELLOWSHIPS

These Fellowships are awarded to outstanding researchers from all branches of engineering who are about to finish their PhDs or have up to three years' postdoctoral experience.

Name	Subject	University
Dr Mark Ainslie	Engineering interactions of magnetic and superconducting materials for electrical applications	University of Cambridge
Dr David Armstrong	Micro-engineering advanced alloys for extreme nuclear power environment	University of Oxford
Dr Mahdi Azarpeyvand	Source and propagation modelling for wind turbine and turbomachinery noise	University of Bristol
Dr Emmanouil Benetos	Software inspired by the human ear/looking at the human ear to design novel listening software	Queen Mary, University of London
Dr Martynas Beresna	Ultrafast laser-induced nanostructuring: a pathway to advanced optical-fibre engineering	University of Southampton
Dr Ben Britton	Better understanding of materials to make safer reactors	Imperial College London
Dr Peter Carrington	High efficiency mid-infrared semiconductor materials and devices grown on silicon	Lancaster University
Dr Alasdair Clark	Plasmon enhanced pyroelectrodynamic nanoscale trapping and sensing	University of Glasgow
Dr David Clifton	Machine learning for the intelligent patient record	University of Oxford
Dr Simon Cotton	Next generation body-centric communications: a joint analytical-statistical approach to modelling quasi-cyclostationary anisotropic signal reception	Queen's University Belfast
Dr Alexander Dickinson	Developing the next generation of prosthetic limbs	University of Southampton
Dr Trung Duong	Meeting future wireless capacity via secure and energy-efficient small-cell networks	Queen's University Belfast
Dr Marco Endrizzi	Laboratory-based x-ray dark-field microscopy and microtomography	University College London
Dr Christian Fensch	Auto-tuned programming patterns and the programmability gap	Heriot-Watt University
Dr Amanda Joy Foust	Holographic light shaping for reverse engineering neural circuit learning	Imperial College London
Dr Peter Gammon	Novel interlayer cooling for harsh environment (NICHE) devices and circuitry	University of Warwick
Dr Deborah Gunning	Neural interfaces for studying cortical processes	University of Strathclyde
Dr Tawfique Hasan	Graphlex: fully flexible graphene-based transparent conductors	University of Cambridge
Dr Matthew Himsworth	Atom-chip integration for quantum-enabled devices	University of Southampton
Dr Edmund Kelleher	Next-generation short-pulse lasers for the visible and ultraviolet	Imperial College London
Dr Maiwenn Kersaudy-Kerhoas	Towards better pregnancy monitoring: miniaturised tools for non-invasive prenatal diagnosis in clinics and hospitals	Heriot-Watt University
Dr Edward Laird	Quantum computing devices based on carbon nanomaterials	University of Oxford

Name	Subject	University
Dr Martin Lavery	Increasing data transfer capacity using light's unusual properties	University of Glasgow
Dr Hugh Leather	Optimising the mobile net	University of Edinburgh
Dr Grigorios Loukides	Privacy protection in event-based data sharing and analysis	Cardiff University
Dr Fleur Loveridge	New thermal and geotechnical facility for ground heat exchangers	University of Southampton
Dr Mathieu Lucquiaud	Future-proofing fossil power stations with CO <sub>2</sub> capture	University of Edinburgh
Dr Luca Magri	Adjoint-based approaches in thermo-acoustics: understanding, modelling and controlling instabilities	University of Cambridge
Dr Christos Masouros	Interference as a source of green signal energy in wireless communications	University College London
Dr Matthias Mauch	Software systems for computer-aided music understanding	Queen Mary, University of London
Dr Ruth Misener	Towards rational chemotherapy strategies: a hybrid computational/experimental approach	Imperial College London
Dr Mehran Moazen	Predicting skull growth in craniosynostosis for improved surgical treatment	University College London
Dr Thomas Okell	Novel imaging techniques to visualise blood flow in the brain	University of Oxford
Dr Pola Goldberg Oppenheimer	Advanced micro-optofluidic portable sensing (AMPS) technology for timely point-of-care diagnostics	University of Birmingham
Dr Francesca Parmigiani	Optical processing of high-spectral efficiency phase-encoded signals for future generation optical networks	University of Southampton
Dr Oliver Payton	Mapping, measuring and manufacturing nanostructures via high-speed atomic force microscopy	University of Bristol
Dr Alberto Peruzzo	Quantum processors for quantum chemical engineering	University of Bristol
Dr David Phillips	Sensing and actuation of nanoscale mechanics in biological systems	University of Glasgow
Dr Soraia Pimenta	Exploiting novel carbon-fibre composites	Imperial College London
Dr Antoniu Pop	Developing a language for the computers of the future	University of Manchester
Dr Paul Shearing	Four-dimensional tomography of electrochemical devices	University College London
Dr Radu Sporea	Novel high performance transistors for use in large area electronics	University of Surrey
Dr Nikos Tzevelekos	Game semantics for program analysis	Queen Mary, University of London
Dr Freddie Withers	Light harvesting hybrid - graphene-based devices (GrapheX)	University of Manchester
Dr Amanda Wright	New horizons in adaptive optics for life science research: adaptive microscopy	University of Nottingham
Dr Weijia Yuan	Advancing renewable energy integration by innovative smes-battery storage systems	University of Bath

## RAENG/LLOYD'S REGISTER FOUNDATION RESEARCH FELLOWSHIP

This Fellowship is funded by the Lloyd's Register Foundation, and aimed at outstanding researchers from all branches of engineering who are about to finish their PhDs or have up to three years' postdoctoral experience.

Name	Subject	University
Dr Mark Batty	Holographic light shaping for reverse engineering neural circuit learning	University of Kent

## RAENG/MINISTRY OF DEFENCE RESEARCH FELLOWSHIP

This Fellowship offers an innovative engineer opportunities to work with research, development and modelling teams within the Defence Science and Technology Laboratory and some of the laboratory's industrial and academic partners.

Name	Subject	University
Dr Benjamin Russell	Energy mitigation and blast impact loading	University of Cambridge

## ENTERPRISE FELLOWSHIPS

Enterprise Fellowships provide funding and support to outstanding entrepreneurial engineering researchers, working at a UK university, to enable them to develop a spin-out business based on their technological idea.

Name	Project title	University
Dr Samuel Chapman	KENOTEQ: 'breathing' bricks that reduce waste in the construction sector	Heriot-Watt University
Dr Damien Coyle	NeuroCONCISE: 'movement-free' communication for the physically impaired	Ulster University
Dr Alexander Enoch	Robotical Ltd: programmable 3D-printed robot	University of Edinburgh
Dr Nicholas Everdell	Gowerlabs: real-time optical imaging of the human brain	University College London
Dr Yunjia Li	Synote: software to automate transcription	University of Southampton
Dr Andrew Marsden	Immaterial Labs: nano-materials for gas storage and separation	University of Cambridge
Dr Silo Meoto	AeroGraft: bone grafting in dentistry	University College London
Dr Oliver Stevens	On-the-spot cancer screening	University of Bristol

## BLAVATNIK FAMILY FOUNDATION ENTERPRISE FELLOWSHIP ALUMNI AWARDS

The Blavatnik Family Foundation Alumni Awards celebrate engineering innovation and promote role models for engineering entrepreneurship, by recognising the achievements of the most successful early-stage Hub members in turning innovative technologies into viable businesses. Awardees act as role models for future entrepreneurs.

Name	Project title	University
Dr Toby Basey-Fisher	Eva Diagnostics: blood measurements without the lab	Imperial College London
Dr Daniel Plant	Armourgel Ltd: SMART Clothing - falls and fracture prevention	Imperial College London
Dr Stephen Smith	Medical devices for routine monitoring of Parkinson's disease	University of York

## PATHWAYS TO GROWTH

The Pathways to Growth grants support capacity building within engineering and technology SMEs by providing up to £15,000 of funding towards training for their engineering staff. Leaders of high-performing awardee companies may also be invited to join the Academy's Enterprise Hub.

### Awardee companies

BBOXX	Keit	OC Robotics
BPE Design and Support	Kiln Flame Systems	Oil and Gas Measurement
Entropea	Lontra	Oxford Space Systems
Eta Projects	Magnomatics	Photocentric
Fianium	Mirico	React Engineering
Hyperdrive Innovation	Mo-Sys	YASA Motors

## LAUNCHPAD COMPETITION

The Launchpad Competition aims to find an exceptionally promising engineering entrepreneur or team of entrepreneurs, between the ages of 16 and 25, and enable them to start a business based on their engineering innovation and maximise the chances of its successful growth. The winner(s) of the competition receive the JC Gammon Award - a prize of £15,000 and membership of the Enterprise Hub. Other individuals or teams may be chosen as runners-up. The winner and finalists are invited to become Hub members.

### Winner

Name	Start-up company	Project title
James Roberts	MOM Incubators	Preventing premature baby deaths in the developing world

### Runners-up

Name	Start-up company	Project title
Amanda Campbell	Comp-A-Tent	Reducing festivals' environmental impact with biodegradable tents
George Edwards	Gas-Sense	Driving energy efficiency with wireless gas monitoring
Sorin Popa	Stent Tek	Improving outcomes for haemodialysis patients

## RAENG-ERA FOUNDATION ENTREPRENEURS AWARD

This award identifies, encourages and rewards entrepreneurial engineering researchers working in the field of electro-technology.

### Winner

Name	University	Project title
Dr Matthew Murray	University of Leeds	Alpin: advanced anti-counterfeiting with laser plasma implants

### Runners-up

Name	University	Project title
Dr George Frodsham	University College London	MediSieve: magnetic haemofiltration to treat malaria
Dr Peiman Hosseini	University of Oxford	Bodle Technologies: phase change materials for disruptive optoelectronics
Bethan Wolfenden and Philipp Boeing	University College London	Bento Lab: personal molecular biology laboratory to boost education and citizen science

## DISTINGUISHED VISITING FELLOWSHIPS

The Distinguished Visiting Fellowship scheme provides funding for an engineering department in a UK university to host a senior academic from an overseas academic centre of excellence for up to a month. The scheme promotes sharing of the latest developments and allows the participating organisations to discover common and complementary skills and initiatives that could lead to future collaborations.

Award holder	Distinguished Visitor	Area of collaboration
Dr Ankush Aggarwal, Swansea University	Professor Michael Sacks, University of Texas at Austin, USA	Stratification of patients at high risk of heart valve dysfunction using inverse model - strengthening the collaboration
Gordon Airey, University of Nottingham	Professor Jo Daniel, University of New Hampshire, USA	Impact of recycled materials and changing climate on the design, maintenance and performance of pavement systems
Dr Yun Bai, University College London	Professor Liaping Liu, Southeast University, China	Development of next generation superplasticiser for novel low-carbon concrete
Dr Christopher George Bryan, University of Exeter	Professor Sue Harrison, University of Cape Town, South Africa	A multidisciplinary approach to studying mineral-microbial interactions in low grade ore and waste rock dump bioleaching
Dr João Cabral, Imperial College London	Professor Jane Lipson, Dartmouth College, USA	Predictive engineering of polymer blends and composites with prescribed thermodynamics and transport properties
Dr Robert Cahill, Queen's University Belfast	Dr Mariano Barba Gea, Universidad Politecnica de Madrid, Spain	New design strategies for increasing the switching speed of microwave and mm antennas based on liquid crystals
Professor Jian Fei Chen, Queen's University Belfast	Professor Lawrence Bank, City College of New York, USA	Non-conventional, recyclable, construction materials for infrastructure renewal
Professor Zoran Cvetkovic, King's College, London	Professor Urbashi Mitra, University of Southern California, USA	Exploiting scarcity in future wireless networks

Award holder	Distinguished Visitor	Area of collaboration
Dr Andrea Da Ronch, University of Southampton	Professor Daniella Raveh, Technion-Israel Institute of Technology, Israel	Gust response analysis and buffet of elastic aircraft in transonic flows
Professor Julian Jones, Imperial College London	Professor Melissa Grunlan, Texas A&M University, USA	Shape memory polymer composites for bone tissue healing
Professor Richard Leach, University of Nottingham	Mr J.-Angelo Beraldin, National Research Council, Canada	Micro surface texture requirements for purpose-made physical standards in close range 3D imaging systems
Dr Haijiang Li, Cardiff University	Professor Mirosław Skibniewski, University of Maryland, USA	Enhancing the key understanding for future BIM (building information modelling) and its roadmap development
Dr Christos Masouros, University College London	Professor Constantinos Papadias, Athens Information Technology, Greece	Merging capabilities in analog-digital transmission of next generation wireless networks [MANGO]
Dr Alcaro Mata, Queen Mary, University of London	Professor Donald Inber, Harvard University, USA	'Organs-on-chips': micro-engineering tissues in the lab for biomedical research
Dr Nicole Metje, University of Birmingham	Professor Ian Moore, Queen's University, Canada	Buried infrastructure - how to design, assess and better utilise our hidden assets
Professor Muttukrishnan Rajarajan, City University London	Professor Shyam Shayamasundar, Indian Institute of Technology, Bombay, India	Information flow control for robust cloud computing with end-to-end security and privacy assurances
Sridhar Seetharaman, University of Warwick	Professor Zhand Lifeng, University of Science and Technology Beijing, China	A multiscale approach for fluid flow effect on microstructure and segregation
Ramanand Shenoi, University of Southampton	Professor Yonghwan Kim, Seoul National University, South Korea	Collaborative research and education in maritime engineering: UK - South Korea
Dr Junwang Tang, University College London	Professor Peidong Yang, University of California, USA	Water splitting for H <sub>2</sub> fuel synthesis by one dimensional photoelectrodes
Dr Shuncai Wang, University of Southampton	Professor Feng Zhou, Lanzhou Institute of Chemical Physics, China	Lubrication science learning from nature and beyond
Professor James Charles Woodcock, University of York	Professor Augusto Sampaio, Universidade Federal de Pernambuco, Brazil	Test-generation for mobile and autonomous robot controllers
Dr Haixue Yan, Queen Mary, University of London	Professor Chenglong Jia, Lanzhou University, China	Single-phase room temperature multiferroic materials for multistate spintronic devices
Professor Yonghao Zhang, University of Strathclyde	Professor Zhihui Li, China Aerodynamics Research and Development Center, China	Multiscale modelling of non-equilibrium gas flows

## NEWTON RESEARCH COLLABORATION PROGRAMME

The Newton Research Collaboration Programme is part of the UK Newton Fund, which aims to develop science and innovation partnerships to promote the economic development and social welfare of developing countries.

The main focus of the Newton Research Collaboration Programme is to support the aims of the Newton Fund by facilitating international exchanges lasting three months to a year between researchers in the UK and their counterparts in selected Newton Fund partner countries.

Partner country	UK researcher	Project title	Partner country researcher
Brazil	Dr Nathan Gomes, University of Kent	RFID moisture sensor network for landslide monitoring	Dr Luis Vieira Departamento, Acadêmico de Eletrônica
Brazil	Dr Stephen Leslie Smith, University of York	Security for all: using smart technologies to promote security for citizens	Dr Márjory Da Costa-Abreu, Federal University of Rio Grande do Norte
Brazil	Dr Mark Alan Baker, University of Surrey	Development and characterisation of novel Mg-substituted fluorapatite coatings on austenitic stainless steel for medical implant applications	Isolda Costa, Institute of Nuclear and Energy Research
Brazil	Dr Matteo Ceriotti, University of Glasgow	Optimisation of near Earth orbit transfers	Professor Maisa de Oliveira, Terra Instituto Tecnológico de Aeronáutica
Brazil	Dr Andrea da Ronch, University of Southampton	An outflow buffer zone based on the far-field self-similarity of high-Reynolds-number subsonic turbulent jet flows	Professor Carlos Moser, Pontifícia Universidade Católica do Rio Grande do Sul
Brazil	Professor Wuqiang Yang, University of Manchester	Water-cut measurement by a combination of electrical capacitance tomography and RF resonant cavity sensor	Professor Fernando Rangel de Sousa, Universidade Federal de Santa Catarina
Brazil	Dr Ying Weng, Bangor University	Large-scale active learning for visual retrieval	Dr Daniel Pedronette, University of Sao Paulo
Brazil	Dr Tannaz Pak, Teesside University	Pore-scale investigation of three-phase fluid transport in porous rocks - a time-resolved three-dimensional study using X-ray computed micro-tomography technique	Dr Lara Frangiotti Mantovani, Universidade Federal de Santa Catarina
Brazil	Dr Alistair Clark, University of the West of England	Robust optimisation models for humanitarian logistics in disaster relief	Dr Douglas José Alem, Universidade Federal de São Carlos
Brazil	Dr Sina Rezaei Gomari, Teesside University	Introducing a new technique using powder in quantifying wettability in challenging oil reservoirs	Professor Ronaldo Gonçalves dos Santos, Centro Universitario FEI
Brazil	Dr Christopher Bronn, York University of Glasgow	The flexible wing project: advanced tailoring strategies for laminated composite materials	Professor Sérgio Frascino Müller de Almeida, Instituto de Pesquisas Tecnológicas



Partner country	UK researcher	Project title	Partner country researcher
Brazil	Dr Kiran Kumar Ramesh, University of Glasgow	Development of a fast computational tool for highly flexible flight dynamics	Professor Flávio Silvestre, Instituto Tecnológico de Aeronáutica
Malaysia	Dr Alf Martinez-Felipe, University of Aberdeen	New candidates for targeted drug carriers based on palm oil-based glycosides and polymeric complexes. Towards tuneable natural-based controlled release systems.	Dr Nurul Fadhilah Binti Kamalul Aripin, University of Technology MARA
Malaysia	Dr Paul Grassia, University of Strathclyde	Exploiting microbiology and rheology to improve treatment of palm oil mill effluent	Dr Poh Phaik Eong, Monash University Malaysia
Malaysia	Dr Angela Doufexi, University of Bristol	5G architecture and technologies for a visualised smart city	Dr Nor Fadzilah Abdullah, Universiti Kebangsaan Malaysia
Malaysia	Dr Nicholas James Watson, University of Nottingham	Effect of spiral/tangential gas injection on mass transfer and hydrodynamics for bubbly flow reactors	Dr Sanaullah Khairuddin, University Malaysia Sarawak
Malaysia	Professor Siamak Noroozi, Bournemouth University	Design and development of HODS (human operating deflection shape) system for quantitative assessment of body joints	Dr Zhi Chao Ong, University of Malaya
Malaysia	Professor Dorothy Ndedi Monekoso, Leeds Beckett University	Intelligent system to support post-stroke rehabilitation	Dr Chee Seng Chan, University of Malaya
Malaysia	Dr Zhigang Ji, Liverpool John Moores University	Development of accurate circuit reliability simulator for Malaysia's electronics industry	Dr Norhayati Soin, University of Malaya
Mexico	Dr Jhuma Sadhukan, University of Surrey	Economic value generation and social welfare in Mexico by waste biorefining	Dr Amador Honorato Salazar Jose, INIFAP
Mexico	Dr Paolo Rapisarda, University of Southampton	Modelling and control of integrated renewable energy systems, with experimental validation	Dr Hebertt Sira-Ramirez, CINVESTAV-IPN
Mexico	Dr Flor Siperstein, University of Manchester	Biochar: research into the development of materials to mitigate greenhouse gas emissions (BRIDGE)	Dr Alejandro Gil-Villegas, Universidad de Guanajuato
Mexico	Dr Nour Ali, University of Brighton	An autonomic software architecture for knowledge management in medical diagnosis	Dr Angelina Espinoza, Universidad Autonoma Metropolitana
South Africa	Dr Charlotte Rebecca Ray, University of Nottingham	Energy, technology adoption and behaviour change	Dr Gisela Prasad, University of Cape Town
South Africa	Ashraf Osman, University of Durham	Predicting sinkhole collapse using an unsaturated soil mechanics framework	Professor Esve Jacobz, University of Pretoria
South Africa	Dr Barry Gordon Rawn, Brunel University	Non-active power compensators: implementations and implications	Professor Charles Trevor Gaunt, University of Cape Town
South Africa	Dr Jiangfeng Zhang, University of Strathclyde	Modelling and control for electric vehicle charging and battery swapping networks	Dr Henerica Tazvinga, Council for Scientific and Industrial Research South Africa
Turkey	Dr Trung Q Duong, Queen's University Belfast	A cross layer modelling and design for software defined 5G networks in smart cities	Dr Berk Canberk, Istanbul Technical University

Partner country	UK researcher	Project title	Partner country researcher
Turkey	Professor Khellil Sefiane, University of Edinburgh	Multiphase flows and heat transfer in microscale	Professor Ali Kosar, Sabanci University
Turkey	Dr Gyorgy Szekely, University of Manchester	Sustainable extraction of oleuropein antioxidant from olive leaves	Dr Rustem Kecili, Anadolu University
Turkey	Dr Aleksandra Drizo, Heriot-Watt University	Science and innovation partnership in water/energy/food nexus: assessment of novel technology for phosphorus removal, recycling and re-use from domestic wastewaters	Dr Kemal Gunes, TUBITAK Marmara Research Center
Turkey	Professor Nilanjan Chakraborty, Newcastle University	Enhanced heat transfer and mixing by mixed convection of yield stress fluids in cylindrical container with rotating end wall	Dr Osman Turan, Bilecik Şeyh Edebali University
Turkey	Professor Yong Wang, University of Manchester	Resilient and sustainable structural engineering risk assessment of tall residential buildings for structural fire safety	Dr Serdar Selamet, Bogazici University
Vietnam	Professor Martin Cryan University of Bristol	Nanoantennas for fluorescence biosensing applications	Minh Quang Ngo, Vietnam Academy of Science and Technology
Vietnam	Dr Hui Yu, University of Portsmouth	Multimodal data-based mental workload and stress assessment for assistive brain computer interface	Dr Nguyen Duc Thang, Vietnam National University
Vietnam	Dr Liyang Yue, Bangor University	3D printing of functional photonic and terahertz metamaterials	Dr Nguyen Thanh Tung, Vietnam Academy of Science and Technology
Vietnam	Dr Christos Tachtatzis, University of Strathclyde	Automatic rice seed inspection using hyperspectral imaging	Dr Hai Vu, Hanoi University of Science and Technology
Vietnam	Dr Ivana Kochar, University of Strathclyde	Efficient distributed optimisation methods for solving the dynamic optimal power flow problem	Dr Van-Hoan Pham, Can Tho University
Vietnam	Professor Duc Pham, University of Birmingham	UK-Vietnam collaboration in mechanical engineering and advanced materials science	Professor Duc Dinh Nguyen, Vietnam National University
Vietnam	Dr Chun Yang Yin Teesside University	Understanding adsorptive interactions in nanoporous carbons produced from agricultural by-products	Dr Nguyen Ngoc Ha, Hanoi National University of Education
Vietnam	Dr Trung Thanh Nguyen, Liverpool John Moores University	Operational research for green logistics in Vietnam - a UK-Vietnam research collaboration	Professor Lam Thu Bui, Le Quy Don Technical University
Vietnam	Dr Melissa Brazier-Hicks, Newcastle University	Utilising polyprotein technology to engineer yeast to produce high-value chemicals	Dr Nguyen Thi Hong Thuong, Vietnam National University

## LEADERS IN INNOVATION FELLOWSHIPS

The Leaders in Innovation Fellowship programme is aimed at researchers from an emerging country who have an innovation that helps address their country's development needs, and offers two weeks of entrepreneurship training and coaching to help them commercialise their innovation. This year, the Academy delivered training to 176 researchers from Brazil, Chile, China, Colombia, Egypt, India, Mexico, the Philippines, South Africa, Thailand, Turkey, and Vietnam.

## AFRICA PRIZE FOR ENGINEERING INNOVATION

The Africa Prize for Engineering Innovation aims to stimulate, celebrate and reward innovation and entrepreneurship in sub-Saharan Africa through six months of mentoring and training before a cash prize is awarded to the winner and runners-up.

### 2014/2015 winner

Dr Askwar Hilonga	Tanzania
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### 2014/2015 finalists

Samuel Njuguna Wangui	Kenya
Ernst Pretorius	South Africa
Musenga Silwawa	Zambia

### 2015/2016 shortlist

Edmand Aijuka	Uganda
Professor Emmanuel Bobobee	Ghana
Brian Bosire	Kenya
Kahituo Hien	Burkina Faso
Bukhary Kibonajoro	Tanzania
Dr Mercy Manyuchi	Zimbabwe
Felix Kimaru	Kenya
Taita Ngetich	Kenya
Olufemi Odeleye	Nigeria
Werner Swart	South Africa
Matt Wainwright	South Africa
Arthur Zang	Cameroon

## INDUSTRIAL SECONDMENTS SCHEME

This scheme facilitates knowledge transfer between universities and UK industry by providing engineering academic staff with exposure to industrial and commercial practice.

Name	University	Project title	Host
Dr Rafic Ajaj	University of Southampton	Loads alleviation for transport aircraft using folding wingtips	Airbus Operations Ltd
Dr Richard Bourne	University of Leeds	Self-optimising reactors for pharmaceutical process development	AstraZeneca
Dr Tao Chen	University of Surrey	In-silico modelling of transdermal permeation	Unilever UK
Dr Liana Mirela Cipcigan	Cardiff University	Future balancing services for high levels of embedded electricity generation	National Grid
Dr Andrea Da Ronch	University of Southampton	Industrial aircraft design	Airbus Operations Ltd
Dr Ibrahim Habli	University of York	Evidence-based assurance of health IT safety	Health & Social Care Information Centre
Dr James Robert Hopgood	University of Edinburgh	Novel signal processing algorithms for automated electrophoresis analysis	Agilent Technologies LDA UK Ltd
Dr Megan Jobson	University of Manchester	Operational optimisation of low-temperature separation processes	Process Integration Ltd
Dr Simon Justin Julier	University College London	Scalable and extensible tracking for virtual production	Mo-Sys Engineering Ltd
Dr Hamed Haddad Khodaparast	Swansea University	Efficient stochastic design of composite aircraft structures	Airbus Operations Ltd
Dr Dongfang Liang	University of Cambridge	Integrated dynamic modelling of surface and ground waters	Mott MacDonald Ltd
Dr Christopher Power	University of York	Methods for positive user experiences in big data analytics	International Business Machines Corporation
Dr Gillian Ragsdell	University of Loughborough	Engineering knowledge management: adding value to the energy sector	Energy Technologies Institute
Dr Karen Renaud	University of Glasgow	Engaging with Scotland's SMEs to improve their digital security	Scottish Business Resilience Centre
Dr Antoaneta Serguieva	University College London	Computational intelligence and knowledge engineering approaches to modelling systemic risk	Bank of England
Dr Siraj Ahmed Shaikh	Coventry University	Automotive cybersecurity	MIRA Ltd
Dr Rafael Mauricio Morales Viviescas	University of Leicester	Test of constrained multi-objective control for future helicopter rotor technologies	AgustaWestland

## ENGINEERING LEADERSHIP ADVANCED AWARDS

This award funds ambitious engineering undergraduates to undertake an accelerated personal development programme in order to move into a leadership position soon after graduation. The Academy currently funds 105 awardees.

Name	University	Subject
Imran Ahmed	University of Cambridge	General engineering
Ishan Alam	University of Bristol	Engineering design
George Anderson	University of Southampton	Mechanical engineering with aerospace
Christopher Bartolo	Queen's University Belfast	Mechanical engineering
Leigh Baxter	University of Strathclyde	Electrical and mechanical engineering
Serban Berariu	University of Southampton	Civil engineering
Thomas Bewley	University of Bristol	Engineering design
Ciprian Blujdea	University of Southampton	Mechanical engineering with management
Georgina Box	Durham University	General engineering
Jake Brown	University of Sheffield	Mechanical engineering
Francesca Capaldi	University of Strathclyde	Chemical engineering
Jessica Charter	Imperial College London	Civil and environmental engineering
Martina Cheadle	University of Cambridge	Engineering
Yun-Hang Cho	University of Sheffield	Mechanical engineering
Stephen Colbert	Queen's University Belfast	Aerospace engineering
Jennifer Coyle	University of Edinburgh	Chemical engineering
James Crothers	University of Southampton	Mechanical engineering
Michael Daley	University of Cambridge	Engineering
Arnaud Doko	University of Bath	Mechanical engineering
Rebecca Jane Ede	University of Sheffield	Mechanical engineering with French
Leah Edwards	Loughborough University	Mechanical engineering
Timothy Engstrom	Imperial College London	Mechanical engineering
Supun Fernando	University of Surrey	Aerospace engineering
Thomas Findlay	University of Edinburgh	Civil engineering
Bradley Fowler	University of Cambridge	Engineering
James Fraser	University of Bath	Mechanical engineering
Henri French	University of Bristol	Aerospace engineering
Luca Frondoni	Cardiff University	Mechanical engineering
Olga Fuhrmann	University of Edinburgh	Chemical engineering with management
Radovan Gallo	University of Southampton	Aeronautics and astronautics/spacecraft engineering
Ignacio Garcia Leon	University of Bristol	Engineering design
Cherie Gardiner	Queen's University Belfast	Mechanical engineering
Harry Garstka	University of Bristol	Engineering design, aerospace
Andrew Zi-Xiang Gng	Imperial College London	Civil engineering
Alexander Goff	Cardiff University	Mechanical engineering
Adam Gristock	University of Cambridge	Engineering

Name	University	Subject
Oliver Groling	Durham University	General engineering
Siddharth Gupta	University of Cambridge	Engineering
Conor Hamill	Queen's University Belfast	Mechanical engineering
Gideon Hammond	Loughborough University	Chemical engineering with management
Aurelia Hibbert	University of Cambridge	Engineering
Claire Hughes	Queen's University Belfast	Civil engineering
Samuel David Kelly	University of Bristol	Mechanical engineering
Dmitro Khroma	University of Bristol	Engineering design
Ailsa Kiely	University of Sheffield	Materials science and engineering with a modern language (Mandarin)
James Kinch	University of Leeds	Mechanical engineering
Rabia Lakhani	Imperial College London	Chemical engineering
Eric Shut Wai Leung	Imperial College London	Civil engineering
Sarah Linnell	University of Bath	Civil and architectural engineering
Susan Little	University of Strathclyde	Electrical and mechanical engineering
Archie Lodge	University of Cambridge	Engineering
Allan MacLeod	University of Aberdeen	Chemical engineering
Charlotte MacNair	University of Bristol	Engineering design
Dominic Maskell	University of Southampton	Electronic engineering
Javier Maurino-Alperovich	Imperial College London	Aeronautical engineering
John McBride	Queen's University Belfast	Mechanical engineering
Conor McGlacken	University of Bristol	Engineering design
Joel McGrath	Queen's University Belfast	Mechanical engineering
Peter McGrattan	Queen's University Belfast	Mechanical engineering
Kieran McHugh	University of York	Computer science
Connor McShane	Queen's University Belfast	Mechanical engineering
Alan Middup	University of Sheffield	Mechanical engineering
Erin Meredith	Loughborough University	Chemical engineering
Michel Mesquita	University of Surrey	Aerospace engineering
Vladislav Morgen	University of Strathclyde	Electrical and mechanical engineering
Rabbiya Naveed	University of Cambridge	Engineering
Charles Newton	Loughborough University	Mechanical engineering
Karolina-Verzhiniya Nikolova	University of Bath	Aerospace engineering
Ronan O'Connell	University of Glasgow	Biomedical engineering
Katherine Oxley	University of Sheffield	Chemical engineering
Philip George Parr	Queen's University Belfast	Aerospace engineering
Sarah Parsons	Loughborough University	Product design engineering
Shakti Patel	Loughborough University	Aeronautical engineering
Nicole Perrin	Loughborough University	Chemical engineering
Alice Purcell	Queen's University Belfast	Mechanical engineering

Name	University	Subject
Osian Rees	University of Bristol	Engineering design
Lewis Roberts-James	University of Bristol	Mechanical engineering
Edward James Rogers	Loughborough University	Mechanical engineering
Mark Runciman	University of Strathclyde	Electrical and mechanical engineering
Max Schinke	University of Cambridge	Engineering
Cui Seow	University of Bristol	Mechanical engineering
Holly Smith	University of Bristol	Civil engineering
Aaron Smyth	Queen's University Belfast	Mechanical and manufacturing engineering
Laura Steedman	Robert Gordon University	Mechanical engineering
Gareth Stephenson	Queen's University Belfast	Product design engineering
Hugo Stock	Imperial College London	Mechanical engineering
Alexa Strobel	University of Cambridge	Chemical engineering
Monika Szczyrba	University of Sheffield	Civil engineering with a modern language
Kathryn Taheny	University of Edinburgh	Electronics and electrical engineering
Conor Taylor	Queen's University Belfast	Aerospace engineering
Katherine Theobald	University of Southampton	Civil engineering
Angie Theresia	University of Manchester	Mechanical engineering
Aleksi Tukiainen	University of Cambridge	Engineering
Rebecca Vaslet	University of Strathclyde	Electrical and mechanical engineering
Julian Vercruysse	University of Edinburgh	Structural engineering with architecture
Fiona Walport	Imperial College London	Civil engineering
Neale Watson	Queen's University Belfast	Aerospace engineering
Jack Wilkinson	Imperial College London	Civil and environmental engineering
Lucinda Wilkinson	Imperial College London	Civil and environmental engineering
Robert Winn	University of Southampton	Ship science
Cuebong Wong	University of Strathclyde	Electrical and mechanical engineering
Rebecca Wray	Queen's University Belfast	Product design engineering
Jerome Wynne	University of Bristol	Engineering design
Thomas Yard	Imperial College London	Mechanical engineering
Wai-Ming Yap	Imperial College London	Chemical engineering
Mareks Zevalds	University of Bristol	Engineering design

## INGENIOUS PUBLIC ENGAGEMENT AWARDS ROUND 10 AWARDS

*Ingenious* provides funding for projects that enable engineers to enhance their public engagement skills, and raise awareness of the diversity, nature and impact of engineering.

Awardee	Organisation	Project title
Sujatha Nirmali Arambepola	Structurally Found	Structurally Found
Kate Bellingham	Kate Bellingham Ltd	School Gate SET: Primary school parents supporting STEM
Rebecca Cottrell	Tallyn Holdings Limited & Narrow Gauge Railway Museum	Learning from the Past, Engineering the Future
Susan Brumpton	The Making Place	Making Place Engineering Kits
Jon Chouler	University of Bath	Buskineers: Bath engineers perform their research on the street
Steve Cross	Steve Cross	Engineering Showoff: Chaotic cabaret about making the world
Kevin Curran	Ulster University	Securing Tomorrow's World: Best practice in staying secure online
Ravinder Dahiya	University of Glasgow	Electronic Touch
Adrian Harwood	University of Manchester	Knead for Speed: Aero Challenge
Lindsay Keith	Refinery Productions Ltd	Survival Village @ SMASHFestUK: A festival bringing engineering to new audiences
Ramine Tinati	University of Southampton	The Macroscope: A lens for the World Wide Web
David McGoran	Rusty Squid	Heart in your Hands
Shane McCracken	Gallomanor Communications	I'm an Engineer: Online STEM engagement for schools
Andrea Meyrick	Techniquet, Cardiff	Qualified for Life: Focus on Engineering
Larissa Paver	Telegraph Museum, Porthcurno	Hard Wired World: Fibre-Optic Communication and You
Dawn Pavey	Techniquet, Glyndwr	Let's go on an Engineering Adventure in North Wales
Felicity Paynter	Science Museum	Robots Pop-Up Workspace
Laura Rolinson	Arcola Energy	Wales & Humberside Schools Hydrogen Challenge
Siraj Sabihuddin	University of Edinburgh	eTunes: Building your own electro-acoustic guitar workshop series
Cathy Sturrock	Science Oxford	Student Engineering Ambassador Programme
Jake Tompkins	Modus	Foundation for Jobs
Ricardo Torres	University of Liverpool	Particle accelerator engineering workshops for schools
Jess Wade	Imperial College London	Stemettes Hackathon



## VISITING PROFESSORS

The Visiting Professor programme places practising engineers into UK universities to enhance the teaching and learning, as well as employability and skills, of undergraduate engineering students. The programme currently supports nearly 80 Visiting Professors at more than 40 universities.

Name	University
Ivor Annetts	University of Leicester
Nicholas Anott	University of Surrey
Dr David Arnold FEng	London South Bank University
Professor Malcolm Bailey	University of Surrey
Richard Baker	University of Leeds
Neil Barron	Royal College of Art
Ron Bell	Liverpool John Moores University
Massimo Bombino	Middlesex University
Dr Rick Bradford	University of Bristol
Dr Andrew Bradley FEng	Loughborough University
Keith Clarke CBE HonFEng	Aston University
Andy Clough	University of Warwick
David Daniels CBE	University of Manchester
Dr Ashish Darbari	University of Southampton
David Drew	University of Nottingham
Professor Colin Eddie FEng	University of Warwick
Penny Endersby	University of Southampton
Dr Shaun Fitzgerald FEng	University of Cambridge
Professor Malcolm Fox	University of Bradford
Pierre French	University of Huddersfield
Stefan Gabriel	University of Huddersfield
Dr David Goddard	University of Manchester
Steve Graham	University of Liverpool
Dr Isobel Hadley	University of Bristol
Dr John Haine	University of Bristol
Dr Erol Hepsaydir	University of Kent
Dr Walter Holweger	University of Southampton
Dr Robin Irons	University of Nottingham
Christina Jackson	University of Birmingham
Paul Jennings	University College London
Chris Lawrence	University of Nottingham
Dr Darren Lee	Lancaster University
Stephen Legg	University of Surrey
Professor Scott Lockyer	Loughborough University
Dr Ivan Lucic	City University London
John Mackey	University of Surrey
Professor Norman MacLeod	University of Leeds
David Maroney	Queen's University Belfast
Brian McFarland	Queen's University Belfast
Dennis McKeag	University of Derby
Chris Newbold	University of Surrey
John Nolan	University of Birmingham
Crispin Oakman	University of Nottingham

Name	University
Dr Scott Owens	Imperial College London
Paul Rawlinson	University of Manchester
Dr Michael Raxworthy	University of Leeds
Dr Mei Juan Ren	University of Manchester
Franck Robert	Coventry University
Ian Robertson	University of Warwick
Professor Peter Robery FEng	University of Birmingham
Philip Sams	Northumbria University
Jonathan Sands OBE	University of Huddersfield
Martin Simpson	University of Salford
Aaron Smith	University of Edinburgh
Keith Towell	University of Southampton
Simon Vaitkevicius	Bournemouth University
Dr Dick Whittington FEng	University of York
Dr Paul Withey	University of Birmingham
Mike Wood	University of Sheffield

## SAINSBURY MANAGEMENT FELLOWSHIPS

This scheme aims to enhance the capability of the UK engineering industry by providing grants to young engineers with leadership qualities so that they can undertake an MBA course at a leading international business school. Last year, 20 Fellowships were awarded.

Name	Business school
Nicholas Allen	International Institute for Management Development, Switzerland
Olubusola Yejide Banjo	INSEAD
Andrew Buckley	London Business School
Jorgina Busquets	London Business School
John Collins	INSEAD
Evridiki Giamouzi	London Business School
Christopher Hughes	INSEAD
William Jones	INSEAD
Eirini Koukaki	London Business School
Christopher Mannion	Massachusetts Institute of Technology

Name	Business school
Kwok-Gam Ng	London Business School
Sinead O'Sullivan	Harvard Business School
Philip Price	London Business School
Pierre-Nicolas Queyroux	INSEAD
Nikhil Sachdeva	Harvard Business School
Mohammad Saquib	London Business School
Hersh Shah	International Institute for Management Development, Switzerland
Farid Singh	INSEAD
Charles Sudborough	London Business School
Mengyi Wu	INSEAD

## AEROSPACE MSC BURSARY SCHEME

The Royal Academy of Engineering, the Royal Aeronautical Society, the government and leading companies in the aerospace sector have developed an initiative to boost the supply of aeronautical engineering skills to the UK economy.

The main purpose of the scheme is to bring new talent, knowledge and skills into the UK aerospace sector. It is designed for people who would not otherwise be able to finance their MSc studies. It also provides MSc funding to upskill employees already working in the UK aerospace sector.

**Last year, the third and final year of the scheme, 210 students were supported in their studies at the following universities:**

University of Birmingham, Brunel University London, City University London, Coventry University, Cranfield University, De Montford University, University of Exeter, University of Glasgow, Glyndwr University, University of Hertfordshire, Imperial College London, Kingston University, University of Leeds, University of Leicester, University of Liverpool, Loughborough University, University of Manchester, University of Nottingham, Queen's University Belfast, Queen Mary, University of London, Robert Gordon University, University of Aberdeen, University of Salford, University of Sheffield, Sheffield Hallam University, University of Southampton, Staffordshire University, University of Strathclyde, University of Surrey, Swansea University, University College London, Ulster University, University of South Wales, University of West England, University of Westminster, University of Wolverhampton, University of York.

## PETROFAC FELLOWSHIPS

Petrofac Fellowships develop graduate engineers through a combination of an appropriate full-time postgraduate master's level degree, coupled with additional learning and development opportunities provided by Petrofac.

Name	University
Imwenoghomwen Enabulele	University of Aberdeen
Abdi Ismael Mahamed	Cranfield University

Name	University
Mose Makombe	Cranfield University
Irene Rios	University of Aberdeen

## PANASONIC TRUST FELLOWSHIPS

The Panasonic Trust supports graduate engineers to acquire skills in environmental technology by supporting full-time study of appropriate master's courses.

Name	University
Jacob Boast	Royal College of Art
Matthew Colson	Imperial College London
Kyle Gray	University of Cambridge

Name	University
Thomas Knight	University of Nottingham
Aimen Sattar	University of Cambridge
Philip Wiltshire	Heriot-Watt University

## HERTHA MARKS AYRTON FELLOWSHIP

This award was established by the Panasonic Trust to support members of underrepresented groups to study a full-time master's course in a new technology subject.

Name	University
Danielle Beever	Durham University

## SIR ANGUS PATON BURSARY

The Panasonic Trust continued to award the Sir Angus Paton Bursary on behalf of the Academy. Enabled by an endowment in 1986 from Sir Angus Paton CMG FREng FRS, this annual bursary recognises excellence and seeks to inspire a suitably qualified engineer to study a full-time master's course related to water engineering.

Name	University
Rachel Chester	Loughborough University

# Queen Elizabeth Prize for Engineering

The Queen Elizabeth Prize for Engineering is a global award that celebrates outstanding innovations in engineering that have created significant benefit to humanity. The £1 million prize is awarded to an individual or team of people, of any nationality, directly responsible for a groundbreaking advance in engineering.

## QUEEN ELIZABETH PRIZE FOR ENGINEERING PANEL OF JUDGES

Name	Job title	
Professor Sir Christopher Snowden FREng FRS	Chair of Judges Vice-Chancellor, University of Southampton	UK
Professor Frances Arnold	Professor of Chemical Engineering, Bioengineering and Biochemistry, Caltech	USA
Professor Brian Cox OBE	Royal Society Research Fellow, University of Manchester	UK
Dr Jean-Lou Chameau	President, King Abdullah University of Science and Technology	Saudi Arabia
Professor Lynn Gladden CBE FREng FRS	Pro Vice Chancellor for Research, Shell Professor of Chemical Engineering, University of Cambridge	UK
Professor John Hennessy	President, Stanford University	USA
Professor Carlos Henrique de Brito Cruz	Science Director, Saõ Paulo Research Foundation	Brazil
Professor Dr hc Reinhard Huettl	President, German National Academy of Science and Engineering	Germany
Professor Calestous Juma HonFREng FRS	Professor of the practice of international development, Director of the Science, Technology and Globalisation Project, Harvard University	Global
Professor Hiroshi Komiyama	President, Engineering Academy Japan	Japan
Dr Dan Mote Jr	President, U.S. National Academy of Engineering; Regents Professor, University of Maryland	USA
Narayana Murthy CBE	Founder, Infosys	India
Professor Choon Fong Shih	Professor, National University of Singapore	Singapore
Professor Dr Dr hc Viola Vogel	Head of Laboratory of Applied Mechanobiology, ETH Zurich	Switzerland
Paul Westbury FREng	Group Technical Director, Laing O'Rourke	UK

## QUEEN ELIZABETH PRIZE FOR ENGINEERING FOUNDATION TRUSTEES

The Queen Elizabeth Prize for Engineering is run by a charitable company limited by guarantee and called The Queen Elizabeth Prize Foundation, which manages the prize and its funding.

Chairman

**Lord Browne of Madingley FREng FRS**

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**Sir John Beddington CMG HonFREng**

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**Sir Mark Walport, Chief Scientific Adviser to UK government**, is adviser to the board.

**Professor Dame Ann Dowling OM DBE FREng FRS**

**Sir Paul Nurse HonFREng FRS**

## QEPRIZE DONORS

The Queen Elizabeth Prize for Engineering Foundation extends its gratitude to the corporate donors whose generosity has funded an endowment to enable the continuing development of the QEPrize. Support has been received from the following:

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National Grid plc	Toshiba
Nissan Motor Company Ltd	

## QEPRIZE SEARCH GROUP

The role of the Search Group is: profile raising; engaging the global professional engineering community in making nominations for the prize; acting as global ambassadors for the prize; promoting awareness throughout networks; participating in events; discovering emerging areas of accomplishment and innovation; and assisting in the search for nominations.

Name	Job title	
Professor Stephen Williamson FREng	Chair of Search Group Emeritus Professor, University of Surrey	UK
Professor Jan Cilliers FREng	Head of Department and Chair in Mineral Processing, Imperial College London; Director, Rio Tinto Centre for Advance Mineral Recovery	UK
Professor John Clarkson FREng	Professor of Engineering Design, University of Cambridge	UK
Naomi Climer FREng	President, Institution of Engineering and Technology	UK
David Eyton FREng	Head of Technology, BP	UK
Professor Roger Falconer FREng	Professor of Water Management, Cardiff University	UK
Dr Martin Grant FREng	Chief Executive Officer - Energy, WS Atkins	UK
Dame Judith Hackitt DBE FREng	Chair, EEF; Former Chair Health and Safety Executive (until March 2016)	UK
Professor Joe McGeehan CBE FREng	Emeritus Professor of Communications Engineering, University of Bristol	UK
Professor Philip Nelson FREng	Chief Executive, Engineering and Physical Sciences Research Council; Professor of Acoustics, University of Southampton	UK
Professor Alison Noble OBE FREng	Technikos Professor of Biomedical Engineering and Director of Institute of Biomedical Engineering, University of Oxford	UK
Professor Ric Parker CBE FREng	Former Director of Research and Technology, Rolls-Royce (until April 2016)	UK
Professor Richard Pentty FREng	Professor of Photonics, University of Cambridge; Master, Sidney Sussex College	UK
Dr Scott Steedman CBE FREng	Director of Standards, BSI; Board Member, Port of London Authority	UK
David Thomlinson FREng	Former Senior Managing Director – Geographic Strategy and Operations, Accenture	UK
Dr Jean Venables CBE FREng	Chair, Crane Environmental; Chair, Nuclear Liabilities Fund	UK

# Development and fundraising

## DEVELOPMENT ADVISORY BOARD

The role of the Development Advisory Board is to support the realisation of the Academy's goals and in particular its fundraising efforts.

Chair

**Ian Barlow**

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**Ayman Asfari FREng**

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**Iain Conn FREng**

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**Steve Holliday FREng**

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**Dr Mike Lynch OBE DL FREng FRS**

**David Thomlinson FREng**

## CONTRIBUTORS TO ACADEMY PROGRAMMES

The Academy extends its gratitude to the Fellows, companies and charitable trusts whose generosity has enabled the continuing growth and development of its programmes and activities in the UK, and its engineering capacity-building work in sub-Saharan Africa. In the financial year, support was received from the following:

Airbus Group	FCO Africa Prosperity Fund	National Grid plc
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Babcock International plc	GE UK & Ireland	Petrofac Ltd
BAE Systems plc	GKN plc	QinetiQ plc
Stephen Bechtel FREng	The Helsington Foundation	RealVNC Limited
BG Group plc	IBM UK Ltd	Rolls-Royce plc
The Blavatnik Family Foundation	Jaguar Land Rover Limited	Royal Commission for the Exhibition of 1851
BP plc	Johnson Matthey plc	Sir Robin Saxby FREng FRS
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The Commercial Education Trust	Lloyd's Register Foundation	Shell Centenary Scholarship Fund
The Comino Foundation	Sir Robert Malpas CBE FREng	Shell International Ltd
ConocoPhillips Nigeria	Lockheed Martin UK Limited	Urenco Limited
Consolidated Contractors Company	Mathys and Squire LLP	Weir Group plc
The Drayson Foundation	Mayneord Phillips Trust	The Wellcome Trust
The Entrepreneurs Fund	The Motorola Solutions Foundation	Welsh National Research Network
The ERA Foundation	Mott MacDonald Group Ltd	The Worshipful Company of Engineers

## ROYAL ACADEMY OF ENGINEERING 2015 ANNUAL FUND

In November 2015, the Academy launched its fourth Annual Fund appeal to its Fellowship. The Academy would like to thank the following\* and also those Fellows who have made regular gifts for some years:

William Baker FREng	Dr John Lazar FREng	Dr Robert Sansom FREng
David Ball FREng	Professor Robert Mair CBE FREng FRS	Professor Sarah Springman CBE FREng
Peter Carr FREng	Trevor Massey OBE FREng	Professor Roger Wootton FREng
John Evans OBE JP FREng	William McAlonan FREng	Faith Wainwright MBE FREng
Dr Cecil French FREng	Professor John McWhirter FREng FRS	Dr Christoph Wiesner FREng

\*a further four Fellows wished their gifts to remain anonymous.

The Academy also wishes to acknowledge a legacy from the late Jeffrey Turnbull CBE FREng.







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