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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.

Recognising excellence and inspiring the next generation

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.

Leading debate

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.



The Royal Academy
of Engineering

Engineering Research Forum 2010

the meeting of Academy-funded research

Wednesday 15 September 2010

Chairman
Professor Brian Cantor FREng
Vice-President, The Royal Academy of Engineering

The Royal College of Physicians
11 St Andrews Place, Regent's Park, London NW1

10.00am until 3.30pm
Registration from 9.30am



The Royal Academy of Engineering promotes excellence in the science, art and practice of engineering.

Registered charity number 293074

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Engineering Research Forum 2010

15 September 2010

The Royal Academy of Engineering, in promoting excellence in engineering, has sponsored leading edge engineering research in UK universities since 1986. At present we are funding 35 Research Chairs and Senior Research Fellows. These are co-sponsored by industry for a period of five years, over the course of which post-holders are expected to develop and lead a prestigious research group and gain international standing.

Our Research Fellowship Scheme, jointly run with EPSRC, currently funds 57 Fellowships, each for five years. The Fellowships aim to retain the best young engineers in UK research, and provide a stepping stone to a successful research career in academia or industry.

The Academy also runs a scheme funded by The Leverhulme Trust which provides funding for seven Senior Research Fellows every year. Fellows are relieved from their administrative and teaching duties for up to one year, allowing them to concentrate on full-time research.

We continue to support UK-based engineers engaged in research to travel to centres of excellence overseas for up to a year under our Global Research Awards scheme, so aiding the development of international research networks and encouraging the uptake of globally competitive technology in the UK.

Global research collaborations are also initiated through the Newton Fellowships Scheme which provides post-doctoral researchers from overseas with a two year Fellowship at a UK university. Upon completion, and returning to their home country, they receive a travel fund for 10 years which enables return visits to the UK to maintain and enhance the links established.

Professor Adrian Smith FRS, Director General, Science and Research at the Department for Business, Innovation and Skills (BIS), will speak on the strengths of the UK research base and the challenges it faces in the efficient and effective use of public funding.

This meeting will be a superb opportunity for individuals undertaking leading edge engineering research, their industry sponsors, as well as a host of interested parties to meet and hear about the wide range of work that is currently under way. Researchers will be exhibiting their work and the speakers shown are representative of our various research schemes.

If you wish to find out more about the Academy's research schemes, please contact the Research Programmes team, Email: research@raeng.org.uk Telephone: 020 7766 0600 www.raeng.org.uk

There will be no charge for attendance.

Programme

- 9.30am **Registration**
- 10.00am **Chairman's Introduction**
Professor Brian Cantor FEng
Vice-President, The Royal Academy of Engineering
Chairman, The Academy's Research and Secondments Committee
- 10.10am **The Role of Engineering in Services**
Professor Duncan McFarlane
University of Cambridge
BAE Systems/Royal Academy of Engineering Research Chair
- 10.30am **Nano & Beyond - How Small Can We Go?**
Dr Valeria Nicolosi
University of Oxford
RAEng/EPSCRC Research Fellow
- 11.00am **Tea/coffee**
- 11.30am **Can Robots Build Aeroplanes?**
Professor Philip Webb
Cranfield University
Airbus/Royal Academy of Engineering Research Chair
- 11.50am **Trapped Rainbow: Stopping Light in Metamaterials**
Dr Kosmas Tsakmakidis
University of Surrey
RAEng/EPSCRC Research Fellow
- 12.10pm **Innovating a Low Carbon Future**
Professor Stefaan Simons
University College London
Global Research Award to Australia
- 12.40pm **Philip Leverhulme Prizes for Engineering**
Presented by Sir Richard Brook OBE FEng
Director, The Leverhulme Trust
- 1.00pm **Lunch**
- 2.15pm **Excellence With Impact: The Future of The UK Research Base**
Professor Adrian Smith FRS
Director General, Science and Research, Department for Business, Innovation and Skills
- 2.35pm **Terahertz Plasmonics: When Tera Meets Nano**
Dr Oleksiy Sydoruk
Imperial College London
Newton Fellow
- 2.55pm **Direct Noise Computations For a Quieter Future**
Dr Richard Sandberg
University of Southampton
RAEng/EPSCRC Research Fellow

Engineering Research Forum 2010

15 September 2010

I wish to reserve place(s) for the Engineering Research Forum 2010

Title: _____

Full Name: _____

Honours (OBE etc): _____

Job Title: _____

Organisation: _____

Email: _____

Guest

Title: _____

Full Name: _____

Honours (OBE etc): _____

Job Title: _____

Organisation: _____

Email: _____

The meeting will run from 10.00am to 3.30pm with coffee and registration from 9.30am. Lunch will be provided and the facilities will be open until 5.00pm should delegates wish to stay on to chat. We are limited to 140 places which will be allocated on a first come first reserved basis.

Please return this form by 20 August 2010 or send the above information to janet.weekes@raeng.org.uk

Please detach and return booking form only