

## Westminster Higher Education Forum Keynote Seminar

### Addressing the STEM skills gap - progression to university, employer engagement and postgraduate training

Timing: Morning, Wednesday, 25<sup>th</sup> February 2015

Venue: Sixty One Whitehall, London SW1A 2ET



WESTMINSTER  
HIGHER EDUCATION  
FORUM

Agenda subject to change

- 8.30 - 9.00 Registration and coffee
- 9.00 - 9.05 **Chair's opening remarks**  
**Sir Peter Luff MP**, former Chair, House of Commons Business, Innovation and Skills Select Committee
- 9.05 - 9.35 **Following the Perkins' Review of Engineering Skills: progress and policy priorities**  
**Professor John Perkins**, former Chief Scientific Adviser, Department for Business, Innovation and Skills  
Questions and comments from the floor
- 9.35 - 9.50 **Making STEM subjects enjoyable for all - thinking outside the box**  
**Shahneila Saeed**, Programme Director, Digital Schoolhouse and Board Member, Computing At School  
Questions and comments from the floor
- 9.50 - 10.05 **Challenges for schools and colleges**  
**Professor Sa'ad Medhat**, Chief Executive Officer, NEF: The Innovation Institute
- 10.05 - 10.55 **Improving STEM in schools and further education**  
*What are the early signs of how the introduction of new National Curriculum Programmes of Study for Maths, Science and other STEM-related subjects is affecting the number of students progressing to study these subjects at GCSE, A-level and beyond? Has the introduction of schemes such as Researchers in Schools helped to encourage more skilled STEM graduates to enter into teaching careers; how can Government, universities and the STEM community build upon programmes such as this to ensure the quality of teaching in schools remains high? What more can be done to raise the aspirations of young people to pursue STEM careers, particularly girls, beyond school visits and work experience opportunities - what other innovative approaches could be tried? Have arrangements whereby universities advise on A-level content led to qualifications that better prepare students for university? What more can STEM-intensive businesses do to support or design A-level and FE curriculums? Are Apprenticeships and vocational courses the most effective way to address the skills shortage; what can be done to encourage more businesses to offer Apprenticeships in STEM subjects? What challenges do schools and colleges face in making better use of developing technologies, both in practical lessons and as a teaching method to make STEM subjects more engaging?*  
**Dr Tom Wilks**, Midlands Regional Director, The Brilliant Club  
**Jo Cox**, Head of Science and Senior Leader, STEM, Redmoor Academy, Leicestershire  
**David Porter**, Young Scientist Centre Manager, Royal Institution  
Questions and comments from the floor with **Professor Sa'ad Medhat**, Chief Executive Officer, NEF: The Innovation Institute
- 10.55 - 11.00 **Chair's closing remarks**  
**Sir Peter Luff MP**, former Chair, House of Commons Business, Innovation and Skills Select Committee
- 11.00 - 11.30 Coffee
- 11.30 - 11.35 **Chair's opening remarks**  
**Professor John Perkins**, former Chief Scientific Adviser, Department for Business, Innovation and Skills
- 11.35 - 12.30 **Increasing STEM applicants to university and meeting the needs of employers**  
*What is the likely long-term effect of the removal of student number controls, from September 2015, on STEM admissions; what are the indications so far? How might the benefits of STEM-related careers, including often higher-than-average salaries, be used to encourage students to take up these courses? How successful have the Science Industry Partnership (SIP) pilot training programmes been so far in addressing the STEM skills shortage? What lessons can be learnt from the SIP in creating a joined-up approach to STEM teaching? How can STEM curriculums be developed to ensure students develop the necessary transferable skills and experience required by employers? What further steps do universities and learned societies need to take to encourage more businesses to get involved in the funding, design and teaching of university STEM courses; in what courses would the opportunity of work experience, internships or a 'year in industry' be most beneficial? Are the Centres for Doctoral Training (CDTs) meeting the expectations of students and businesses? What more can be done to fund postgraduate STEM students?*  
**Professor Colin Please**, Professor of Applied Mathematics and Co-Director of the EPSRC CDT in Industrially Focused Mathematical Modelling, University of Oxford  
**Gemma Garrett**, Higher Education Manager, Royal Society of Chemistry  
**Professor Simon Hodgson**, President, Engineering Professors' Council and Dean, School of Science and Engineering, Teesside University  
**Patrick Kniveton**, Visiting Professor, University of Derby; Immediate Past President, IMechE and Head of Engineering Skills & Knowledge Management, Rolls-Royce Submarines  
Questions and comments from the floor
- 12.30 - 12.55 **Increasing the number of women in Science Technology Engineering and Maths (STEM)**  
**Roma Agrawal**, Structural Engineer and Ambassador, Your Life Campaign  
Questions and comments from the floor
- 12.55 - 13.00 **Chair's and Westminster Higher Education Forum closing remarks**  
**Professor John Perkins**, former Chief Scientific Adviser, Department for Business, Innovation and Skills  
**Alex Kenney**, Senior Researcher, Westminster Higher Education Forum