

LEADING THE WAY: DIVERSITY AT THE ROYAL SOCIETY



Professor Dame Julia Higgins
DBE FRS FREng
Professor of Polymer Science at
Imperial College London and chair
of the steering group for the Royal
Society's diversity project 'Leading
the way: increasing diversity in the
scientific workforce'.

As Chair of the Royal Society's diversity programme steering group I was delighted to be invited to sit on the panel for Parliamentary Links Day. Parliamentary Links Day is organised by the Society of Biology on behalf of the whole science and engineering community and is supported by a wide range of scientific societies and organisations including the Royal Society. The day was a huge success and brought together policy makers, MPs, ministers and representatives from the STEM community for talks and discussions about diversity in science. Topics covered included the 'leaky pipeline' through academia, social mobility, integrating the sciences in schools, work experience and parental leave.

With the number of women holding professorships in science, technology, engineering, maths and medicine (STEMM) subjects at 15.6% (ECU, 2012), and this pattern mirrored in industry, it is clear that women's recruitment, progression and retention is a major issue in STEMM academia. Andrew Miller, Chair of the Science and Technology Select Committee, announced that an inquiry would be launched to look at women in STEM careers. The committee put out a call for evidence to which the Royal Society responded, using information

Lack of diversity across the scientific community represents a large loss of potential talent. Restricted opportunity and diversity limits not only UK competitiveness and prosperity, but also vitality in the wider scientific workforce and creativity in society. The Royal Society is tackling these issues on two fronts, internally through the Society's Equality and Diversity Advisory Network and externally through its diversity programme.

The Royal Society's four-year programme, funded by the Department for Business, Innovation and Skills,

The Royal Society's diversity programme *Leading the way; increasing diversity in the scientific workforce* is investigating ways to remove barriers to entry, retention and progression within the scientific

... women's
recruitment,
progression and
retention ...

workforce. It focuses on gender, ethnicity, disability and socio-economic status in the first instance and aims to cultivate leadership in the scientific community. We are focused on individuals making career transitions. For the purposes of the project, the 'scientific workforce' is taken to comprise all those for whom their scientific knowledge, training, and skills are necessary for the work that they do.

The programme covers both academia and industry. The

... the 'leaky pipeline' ...

and data from our diversity programme. We are currently awaiting the outcome.

Diversity in science is wider than just gender. Individuals from lower socio-economic backgrounds, certain ethnic minorities and disabled people are all under-represented in education, training and employment related to STEMM.

complements a programme by the Royal Academy of Engineering. While the two programmes are separate, there are areas of overlap including comprehensive data gathering, pilot activities, and showcasing role models.

... a large loss of potential talent ...

majority of those in the scientific workforce work in industry particularly in small and medium-sized enterprises (SMEs) (61.8% of scientific workforce work in SMEs). Academia therefore represents only a small fraction of the

academia, and where they go. We will combine this into a single report to answer questions about what the scientific workforce looks like. This will be published towards the end of this year.

... individuals making career transitions ...

workforce. However there are many successful schemes and initiatives including the Athena SWAN Charter, which focuses on women in science, which promote good practice in science. We must learn from these to increase diversity in the wider scientific workforce. A recent report from the Women's Business Council made two recommendations that are key to our wider diversity definition: to broaden young people's aspirations and job choices before the start of their working lives by increasing partnership involving schools, business and

We have commissioned research on establishing the business case for diversity in the scientific workforce. This will consist of a literature review and key interviews looking at the economic case for diversity. It will establish the difference diversity makes to science, looking at optimum group size and diversity in relation to a range of productivity measures.

Another activity under the programme is a collaboration between the Royal Society and 'An Oral History of British Science' led by National Life Stories at the British Library.

... promote good practice in science ...

parents; and for businesses to embrace flexible working and to support working parents.

The programme has several different projects including a data gathering exercise to improve our understanding of the scientific workforce, and to identify where gaps exist. This includes investigating socio-economic status within the scientific workforce, and research into social mobility in the scientific workforce using 1970 British Cohort Study. An analysis of HESA data on staff and students will identify at what point people leave

We are working with National Life Stories on an oral history project focusing in the first instance on scientists from different ethnic groups. The project uses an interview, and will chart the life stories of 10 individuals active in UK science, focusing on the interplay of issues such as universities, learned societies, and ethnic diversity. We will expand this methodology to include gender and disability.

... developing a good practice guide ...

... 'An Oral History of British Science' ...

A pilot project has been established with Equality Challenge Unit and the Athena SWAN Charter to look at the compatibility of the current Athena SWAN framework with the structures and working practices of research institutes, with a view to extending the Charter. This pilot involves BBSRC, MRC, NERC, EPSRC and independent research institutes. It aims to explore research institute management structures, career pathways, and policies and procedures, identifying where the current Athena SWAN framework may need to be adapted.

The Royal Society provides the secretariat for the STEM Disability Committee (STEM-DC). STEM-DC is a group of professional bodies which

We held a very successful Wikipedia 'edit-a-thon' last October focusing on improving the online records of women in science using the Royal Society archives and library followed by a panel session led by Professor Uta Frith FRS on this topic. The Royal Society received a 'Wikimedia UK' award – Educational Institution of the Year – for the 'edit-a-thon' and there have been calls to hold more such events. As part of their Centenary celebrations, the Medical Research Council, in conjunction with the Royal Society, is planning a series of Wikipedia Women in Science "Edit-a-thon" events throughout 2013 that will highlight the wealth of outstanding female scientists over the last century. As well as the edit-a-thon, each

... career pathways, and policies ...

considers ways to improve policies, practices and provision for disabled people in STEM, including those aspiring to a STEM career as well as those already employed in a STEM role. Projects have included: developing a good practice guide for academic staff on supporting STEM students with dyslexia; the creation of over 100 new physics and engineering British Sign Language (BSL) signs and commissioning a further 200 signs; a project to support assessors who conduct Disabled Students Allowance (DSA) Needs Assessments for STEM students.

event will include a discussion led by leading female academics on the challenges faced by women in science and how we can address gender under-representation. An event was held at the Royal Society on 11 October 2013 in celebration of Ada Lovelace day.

We are building up a body of good practice case studies on issues within recruitment and retention in industrial employment, as well as undertaking research into the different routes available into the life sciences.

I hope that you will all take the opportunity to engage with the programme and ensure its success in increasing the diversity of the scientific workforce.

