

Diversity in Engineering

Update May 2015

Welcome to the seventh update from the Diversity in Engineering programme.

These updates are produced twice a year to keep all stakeholders and interested parties up to date with activities and progress. To find out more, email diversity@raeng.org.uk or telephone Bola Fatimilehin or Jenny Young on 020 7766 0600.

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Engineering Diversity Concordat

Support for the Engineering Diversity Concordat continues to grow. Since our October update, The Welding Institute has signed up to the Engineering Diversity Concordat. This brings the total number of signatories to 32. We would like to welcome them on board and look forward to working with them to increase diversity and inclusion across engineering.

Further information and support documentation on the concordat can be found at http://www.raeng.org.uk/about/diversity/resources/eng_div_concordat.htm

At the Concordat meeting on 13 May, chaired by Professor Dame Wendy Hall FEng, our focus was on the ways in which Professional Engineering Institutions (PEIs) provide support to their female members in membership, registration and governance. This encompasses support for those on career breaks and links closely with Project RETURN,

a Women's Engineering Society project that we are funding during 2015/16 – see later in the newsletter for more details.

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PEI Diversity Pilot Projects

Three Academy-funded PEI projects have been funded over the last year:

1. Chartered Institution of Highways and Transportation – Routes to Diversity P project

The objectives of the project are to:

- establish the workforce profile of our Corporate Partners
- identify good practice that encourages and supports a diverse workforce
- provide a good practice tool kit for employers, and
- share findings across the sector.

CIHT has conducted a diversity survey across 25 of their corporate partners. The key themes identified from the survey have been explored through the next stage of the project, including interviews with corporate partners and the development of a toolkit to support culture change and increase diversity and inclusion. CIHT are finalising the toolkit and will also shortly publish a collection of good practice case studies that complement their project findings.

2. BCS – The Chartered Institute for IT – Unconscious Bias Training for Volunteers

This project has developed unconscious bias material specific to the professional body context. Thirty-two regional BCS ambassadors have been trained in delivery of materials and sessions have been rolled-out to members and volunteers of the BCS. A dissemination event for this project was held on 13 May, to representatives from PEIs and also from professional bodies that are members of the Science Council.

3. Chartered Institute of Building Services Engineers (CIBSE)

This project is focused on embedding equality, diversity and inclusion in CIBSE Governance, membership and knowledge portal in order to promote behaviour change that will have a positive impact on climate change. An initial review of governance documents has taken place and unconscious bias training has been delivered. Further action is due to be taken over the coming months including a cultural evaluation and training of corporate facilities management teams. The project is now expected to conclude in the first 3 months of 2016.

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Diversity Leadership Group (DLG)

The DLG is an employer-focused group, chaired by Allan Cook CBE FREng, to co-ordinate action in stimulating demand for, and retention of, a diverse talent base. The DLG comprises senior leaders from around 40 engineering employers and employer-led organisations. Its focus is on practical collective action to establish and encourage greater inclusion in the engineering workforce, reflected through recruitment and retention.

Since the last update, the group has held 2 meetings, including 1 extended meeting to which subgroups, stakeholders and 10 steps signatories were invited. An updated terms of reference and action plan for 2015/16 has been agreed. The subgroups continue to progress actions and publications are expected over the next 2 months in the following areas:

- Delivery of a DLG diversity and inclusion survey to assess current activity across members organisations and provide a baseline against which to measure progress

- Good practice case studies for wide dissemination to encourage more good practice
- Guidance on delivering engineering work experience to a diverse student groups
- Publication of common career perception evaluation that aligns with other large scale attitude surveys
- Development of a shared philosophy/code of conduct for suppliers based on current good practice

If you are an employer interested in working with us in these aims, please get in touch at diversity@raeng.org.uk.

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National Women in Engineering Day (NWED)

The Academy is very pleased to be supporting the Women's Engineering Society in staging the second NWED which takes place on 23 June 2015. We are providing support to the resource packs and WES organisation of NWED. We will also be presenting Project RETURN, a WES project that we are funding, at the conference '*Engineering Women: Are they returning to work?*' on 23 June at the Institution of Mechanical Engineers. For more details on the event, please see <http://www.wes.org.uk/returning> and for information on NWED please see <http://www.nwed.org.uk/>

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Project RETURN

Over 2015/16 we are funding the Women's Engineering Society to deliver Project RETURN, a project that looks at support for those on career breaks given by PEIs. Delivered in four phases, the project objectives are:

- Investigate the current support offerings for those on career breaks across multiple PEIs
- Propose best practice approaches and support mechanisms for providing career break support in a PEI environment
- Pilot new/wider approaches and support mechanisms within PEIs
- Report and disseminate findings

The project builds on the survey, [Women in STEM: Are you IN or OUT?](#), conducted by WES and several other organisations in 2014. This explored barriers perceived by those who wished to return to engineering and other STEM roles after a career break. The survey found that almost half of those who were on a career break were not members of a professional institution. Project RETURN builds on the idea that PEIs are potentially well-placed to provide ongoing professional connection and support to those on career breaks, especially during longer breaks where links with a previous employer are not maintained.

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Higher Education – pilot project to widen engagement of employers

The Academy has just initiated a significant pilot project that will run during 2015/16. The aim of the project is to widen the participation of engineering employers with higher education institutions as part of their standard graduate recruitment activities. We have commissioned SEO London to lead the project delivery, working with 11 engineering employers that are engaged with the project and form its steering group. The project will engage and support a substantial and diverse cohort of engineering undergraduate students from a range of universities, with particular focus on post-1992 universities. The cohort composition will have higher percentages of students than companies typically attract from BME, female and socially-disadvantaged backgrounds.

The two key project elements will be:

- a residential summer school in July 2015 for 50 students that will be split between the Academy and several employer sites
- a support programme for up to 200 students during the 2015/16 academic year that is designed to equip them to succeed in employer recruitment processes

There is still the opportunity for new employers to engage with this exciting pilot project. If you are interested please contact bola.fatimilehin@raeng.org.uk

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Diversity in Science and Engineering Governance

The Academy is hosting a pilot event on 8 June, in conjunction with The Royal Society and the Engineering and Physical Sciences Research Council. This initiative will bring together a small group of individuals from a range of academic and industrial backgrounds and provide them with information about the governance processes and landscape within science and engineering, particularly with regard to public governance bodies.

The aim of the programme is to increase the diversity of the pool of candidates available for leadership roles in Science and Engineering governance over the next ten plus years. It explicitly seeks to secure participation from potential candidates from diverse backgrounds principally, but not exclusively, women and those from black and minority ethnic backgrounds.

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10 Steps for retaining Women in STEM

As part of its work with the Diversity Leadership Group (DLG), the Academy joined forces with WISE in the development of a 10 point plan of actions to sustain the pipeline of women in the STEM sector. The plan is targeted at encouraging more Chairs and CEOs of organisations in STEM sector organisations to take consolidated action to retain more women in STEM and includes the following 10 Steps:

1. Understand the starting point and put plans in place to improve performance and monitor progress
2. Educate leaders and give them responsibility for change
3. Change mind-sets by challenging bias and sexism whenever and wherever it occurs
4. Be creative in job design
5. Make flexible working a reality for all employees
6. increase transparency of opportunities for progression
7. sponsor talented women, giving the same exposure as men and support to develop their career
8. demonstrate to women we want to retain them through career breaks and beyond
9. treat this as we would any other issue affecting our core business
10. share learning and good practice with our industry partners

The 10 Steps plan was launched on 29 September with an initial 20 signatories, with a further 9 signatories joining to date. Our ambition is for many more companies to adopt the 10 Steps. Please contact diversity@raeng.org.uk to get involved.

The Academy presented a joint seminar with Akins about the 10 Steps development as part of the daytime programme for the WISE Awards on November 13

<http://www.wisecampaign.org.uk/about-us/wise-awards/2014-wise-awards/daytime-programme>.

For more on the 10 Steps visit <http://www.wisecampaign.org.uk/business/ten-steps>.

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Academy at the WISE Awards

The Academy supported the WISE Awards in 2014 by sponsoring the WISE Advisor Award. The award recognised an individual who had increased the number of girls or women who pursue further study or work in STEM and supported them to achieve their potential. The award was won by Tony Thompson of Incommunities Group Ltd, who provided advice and support to female apprentices in construction, delivering significant take-up over a sustained period.

The Academy also joined forces with Atkins to deliver a session describing the development and application of the 10 steps industry-led plan for retaining women as part of the daytime seminar programme leading up to the Awards ceremony.

For 2015 we are very pleased to support the awards programme again, this time sponsoring the Influence Award that will recognise an organisation or individual who has influenced their organisation or sector to take action improving the participation of women in STEM. Nominations for the 12 award categories are open until 17 August at <https://www.wisecampaign.org.uk/wise-awards/wise-awards-2015/nominations>

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LGBT in Engineering

We initiated activity on sexual orientation in engineering as part of our programme with the Data Driven Diversity event that we staged in May 2014, in conjunction with BP and Stonewall. Since then we have been supporting activities that have emerged from that event.

InterEngineering – A cross-disciplinary and pan-institute group for lesbian, gay, bisexual and transgender engineers was set up in Oct 2014 to “Communicate. Inform. Empower”. This group is supported by the Academy, although we are not involved directly in its running.

In the period to May 2015 the group has held a number of networking and social events for LGBT engineers and allies, including one on March that focused on setting up Business Resource Groups. The group has a growing website at <http://www.interengineeringlgbt.com/> and is building a collection of positive role model profiles as part of the online material. They can also be followed on Twitter @LGBTEngineers.

Representatives for the InterEngineering committee are sought from across all PEI's. If you are interested and/or would like to represent your institution, please contact mark.mcbridewright@gmail.com.

LGBT Employer Round Table – On 11 May 2015 the Academy convened a round table meeting with 10 engineering employers, in conjunction with InterEngineering and Stonewall. The purpose of the event was to bring together a small group of employers, at differing stages of maturity in their LGBT inclusion work, to explore potential areas for sharing and collaboration. The session also aimed to stimulate increased focus on LGBT inclusion within the engineering sector and to provide connection between strategic-level action within employers and the grass-roots action amongst employees that InterEngineering represents. The wide-

ranging session identified a number of potential threads for future collaboration, including potential for combining network groups across organisations in geographic areas.

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STEMM Disability Advisory Committee

The STEM Disability Committee, a cross-STEM collaborative group hosted by the Royal Society, has been re-launched as the STEMM Disability Advisory Committee. The committee now incorporates representation from the medical science community as well as representatives from science and engineering professional bodies. It will concentrate its effort on contributing to, and influencing, policy development affecting STEMM disability issues. The group will also seek to use its collective voice to influence government and other leading decision makers. The STEMM DAC is currently seeking a chair to support this new focus. For more information please contact diversity@royalsociety.org

The group website is currently undergoing redevelopment <http://www.stemdisability.org.uk/>.

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Everywoman Academy – advancing women in engineering

On 12 November 2014 we hosted the second Everywoman Leadership Academy of Engineering and Advanced Manufacturing. The event was well attended, with over 80 delegates from 32 different organisations hearing from a selection of speakers and trainers on the theme of 'taking control of your career'.

We are very pleased to be partnering with Everywoman again to deliver this year's development academy for women on 11 November 2015. With a broader scope than the first two years, the event will help women across engineering and construction to focus on their own development for a day. The event will feature inspirational speakers and personal development masterclasses, centred on the theme of resilience. Full event details will be available at <https://www.everywoman.com/event/2015-everywoman-academy-advancing-women-engineering>

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University Technical Colleges - workshops

In November, WISE completed delivery of a series of four regional workshops to UTC leadership teams. These were held in Greenwich, Reading, Sheffield and Manchester. We commissioned these workshops to disseminate our March 2014 booklet <https://www.wisecampaign.org.uk/resources/2014/03/university-technical-colleges-opening-up-new-opportunities-for-girls> , providing advice and guidance on encouraging female students to apply to UTCs.

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Social Mobility Foundation (SMF) – Engineering Futures

On 7 April 2015, the Academy hosted its third Engineering Futures day in partnership with the SMF. The SMF is a charity which aims to make a practical improvement in social mobility for young people from low-income backgrounds. It works with young people to support them to make informed choices by giving them greater insight into their options.

At the Engineering Futures Day, students heard from a panel of engineers who spoke about their career journeys and motivations. They then had an overview of engineering

mindset, based on the Academy's 'Thinking like an Engineer' report, and were introduced to the value that PEI involvement could give them as students. The day rounded off with an introduction to aerodynamics given by Dr Geoff Parks, which led to a practical and competitive activity in which students built their own gliders.

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Working with refugees

The Academy works on several initiatives to ensure that people from under-represented and disadvantaged backgrounds have access to opportunities within the engineering profession. As part of this effort, the Academy supports Transitions, a social enterprise Community Interest Company with a mission to facilitate a more diverse and equitable skilled jobs market in London and nationally. Transitions's activities are focused on accessing highly skilled professionals who have refugee status in the UK and connecting them with employers. Refugees are permitted to work in the UK in any profession and at any skill level but yet the unemployment rate of refugees is extremely high – at around 70% - almost 6 times higher than the UK national average. Few employers monitor refugee applications or are aware that refugees have the right to work in the UK which is a great loss to the engineering skills pipeline. However, over the years Transitions has collaborated with engineering organisations such as Arup, Crossrail, National Grid, Network Rail and EDF to actively tackle barriers to refugee recruitment.

More information on Transitions's work and services can be found at <http://transitions-london.co.uk/index.php>

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Academy Visiting Professors scheme seeking female applicants

The Academy provides grant funding to support the appointment of senior industrial engineers as Visiting Professors at UK universities. This industry-into-academia initiative aims to utilise the experience of the Visiting Professors to enhance undergraduate and/or postgraduate learning as well as the employability and skills of UK engineering graduates. As part of the wider focus within the Academy to ensure diverse applicant profiles across all its programmes, applications for this scheme are particularly being encouraged from female candidates. The current application round closes at **4pm on Tuesday 16 June 2015**. For enquiries please see <http://www.raeng.org.uk/grants-and-prizes/schemes-for-people-in-industry/visiting-professors-in-innovation> or contact jacqueline.clay@raeng.org.uk

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Diversity Programme evaluation

As our programme has now entered its final year of current funding, we have recently commissioned EY to undertake an in-depth evaluation of the activities we have undertaken over the last 4 years. EY administer the National Equality Standard and will be using their consequent expertise in evaluating diversity activities to provide analytical feedback on all our work. We are excited to be working with EY in conducting this evaluation and see it as an opportunity to receive independent feedback on which of our activities have had the most impact and added the most value. EY will be engaging with a cross-section of our stakeholder community in the course of their review.

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Academy Diversity team

We are delighted that our team has now increased in size with the addition of our new Project Officer, Elena Fatasi. Elena joins us from Finmeccanica and will help to strengthen and reinvigorate our communications output as well as supporting the programme delivery. We hope many of you will meet her at forthcoming events and meetings.

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Academy Diversity Events Calendar

Diversity in Science and Engineering Governance

Monday June 8 9am-6pm and dinner (invitation only)
Joint event with Royal Society and EPSRC

Engineering Uncovered Summer School

Starts **Monday 20 July** at the Royal Academy of Engineering
First part of the HE Widening Engagement pilot project

Everywoman Leadership Academy in Advanced Manufacturing and Engineering

Wednesday 11 November 9.30am-5.00pm, at the Royal Academy of Engineering.
Registration is open now at www.everywoman.com/engineeringacademy.

WISE Awards and Daytime Seminar Programme

Thursday 12 November

A daytime programme will be delivered at the newly refurbished IET building at Savoy Place <https://www.wisecampaign.org.uk/wise-awards/wise-awards-2015/wise-conference-2015>
The awards dinner and ceremony will take place at the Grange Hotel St Paul's, London <https://www.wisecampaign.org.uk/wise-awards/wise-awards-2015> .

Diversity Leadership Group Meetings

Full meetings of the DLG will take place as follows at the Royal Academy of Engineering
Wednesday June 24 1.30-3.30pm (hosted by EEF)

Wednesday Sept 9 1.30-3.30pm

Wednesday Dec 2 1.30-3.30pm

If your company is interested in joining our DLG work, please contact diversity@raeng.org.uk.

STEMM Disability Advisory Committee Meetings

TBC

Engineering Diversity Concordat Group Meetings

Meetings will take place as follows at the Royal Academy of Engineering

Wednesday 4 Nov 2-4pm

RAEng Diversity Committee Meeting (internal)

TBC at the Royal Academy of Engineering

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Academy internal activity

The Academy is nearing completion of implementation for an online system capable of tracking individuals through key processes. When the monitoring goes live, all visitors to Academy activities will be invited to input diversity data, although there will be a 'prefer not to say' option against all characteristics. The online system will provide the opportunity for the Academy to track applicants through processes such as those concerned with the distribution of grants and awards in order to identify trends and any

inherent bias. The online system which reflects Concordat monitoring categories will be piloted in December and go live in 2015.

In addition to a focus on diversity monitoring, the Academy is reviewing diversity training and development options with a view to delivering training that reflects its diversity strategy. The aims of the training and/or development will be to achieve a position where all staff understands how their role can support the Academy in becoming more inclusive.

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Academy Diversity resources

The Academy Diversity webpages host a number of resources to inform the understanding of diversity in engineering. We will be updating all our webpages over the next few months. The resource information is organised into separate strands to make it easier to navigate www.raeng.org.uk/about/diversity/resources/default.htm

If you have any reports or case studies you would like to share, please send them to diversity@raeng.org.uk

If you would like to follow up on any aspect of our diversity work, please do not hesitate to contact either Bola Fatimilehin (0207 766 0656) or Jenny Young (0207 766 0621) or email us at diversity@raeng.org.uk

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Background to the Academy Diversity in Engineering Programme (DiEP)

The Royal Academy of Engineering and the Royal Society are funded by the Department for Business, Innovation and Skills (BIS) to run a programme of work aimed at addressing the issue of diversity in the STEM workforce. The programme, originally funded for 4 years from 2011, is made up of two strands one run by the Royal Society and the other by the Royal Academy of Engineering (the Academy). Since our last update, we are pleased to report that our funding has been extended for an additional year - until the end of March 2016. Our diversity brief BIS challenges the Academy to lead the 'mainstreaming' of diversity in all its aspects across the engineering profession.

The Academy works with the Royal Society across a number of areas of overlap including data gathering, pilot activities, showcasing role models, and more recently, in running a joint Wikipedia edit-a-thon to raise the profile of prominent women in STEM. Both organisations work together on events when launching research findings and programme activities.

The programme has established productive links with key stakeholders, particularly professional engineering institutions (PEIs) and engineering employers. The other focus of the programme continues to be proactively collaborating with partner organisations and to deliver activities and research that supplement the existing literature and evidence available surrounding diversity.

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**Diversity Team
May 2015**