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<th>Grant Ref/ Contact/ Institution</th>
<th>IM Project</th>
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<th>Project Partners</th>
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| EP/S012001/1/ Belinda Colston/ University of Lincoln | Advanced Strategic Platform for Inclusive Research Environments | Programme Director Professor Belinda J Colston: “The research sector has been striving for fully inclusive environments in science- and engineering-related disciplines for over 30 years. Despite substantial investment, however, broad under-representation and inequalities are still widespread. Reasons for this are complex and often system-wide, but ultimately reflect deep-rooted cultures and attitudes in the workplace. To build a more inclusive research environment, we need a step-change in our approach to equality, diversity and inclusion (ED&I). Our focus needs to shift towards long-term behavioural and culture change, and away from blunt staff statistics (eg numbers of female professors) and performance metrics.

*ASPIRE offers an innovative, evidence-based approach to deepen our efforts in improving ED&I. It will provide a web-based toolkit to harness best practice across the sector, enable measurement and monitoring of the implementation of inclusion initiatives across institutions, link implementation with markers of culture change and provide recommendations for scaling across the sector. It will develop a new and more comprehensive impact framework to extend simple metrics-based evaluation and measure genuine and meaningful changes in ED&I attitude and behaviour. Through extensive partnership, working and drawing on experiences across both the research and non-research communities, ASPIRE will accelerate sector-wide implementation of effective ED&I practice.*” | Aston University, Coventry University, Emerald Publishing Ltd, Oxford Brookes University, The Lisbon Council, Towards Vision, University of Sheffield, University of Kent, University of Tren to, Vitae | http://eleanorglanvillecentre.lincoln.ac.uk/research/inclusive-environments/aspire/ |
| EP/S011927/1/ Jon Rowe/ University of Birmingham | Challenging different forms of bias in EPS Research | Programme Director Professor Jon Rowe: “The University of Birmingham is committed to increasing our representation of academics from ethnic minority backgrounds and female academics.

"It is not yet fully understood why academics from these groups struggle to progress in their careers. We are delighted to participate in this important collaboration and investigate the underlying causes.

"We are mindful that previous attempts at addressing such imbalances have not been successful, so we are investigating new ways of understanding how to support progression of our female and ethnic minority colleagues.

"Activities will include looking at how the quality and value of academics’ work is assessed in promotion processes and in the Research Excellence Framework (REF), to understand where the sources of bias arise.

"Questions such as ‘Is there a bias when the gender of the academic is known?’; ‘Is it the result of the group dynamic of a panel of assessors?’; and ‘Are women encouraged to work in particular research areas, perhaps those outside of STEM subjects?’ will also be addressed.

"At the University of Birmingham, we will trial some innovative interventions such as ‘reverse mentoring’, where a junior BAME woman coaches a senior male, white professor, and empowering academics to challenge senior-level decisions, with appropriate backing and support.

"We will share best practice between our partner organisations, and particularly look forward to working with the NHS trust, which has faced similar challenges with career progression.

"We will roll out the lessons learned via our national networks; develop training programmes; and feed into the equality and diversity agenda for the upcoming REF.” | Aberystwyth University, University Hospitals Birmingham, Vitae |
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<th>EP/S012117/1</th>
<th>Programme Director Professor Kate Sang: “Disabled researchers are leaving scientific careers due to social and physical barriers. Disabled employees face a range of obstacles when in employment including inaccessible laboratories, social barriers and a lack of managerial understanding of disability inclusion. Disability Inclusive Science Careers (DISC) focuses on early career entry to the science sector. The aim of DISC is to improve the recruitment, retention and progression of postdoctoral disabled scientists through an online training portal designed to support employers with disability inclusion. Disabled researchers, managers and employers are co-designing the DISC web tools alongside a Heriot-Watt led research team. Training includes immersive virtual reality games for line managers and research leaders, giving an insight into the lived experiences of disabled researchers. In addition, DISC will provide training for disabled researchers to support their career development. The training will be rolled out across participating organisations. DISC is rooted in the social model of disability, which focuses on making employment more accessible to disabled researchers. At the end of the two-year project, DISC will be freely available for any science research employer to tailor to their own organisational needs.”</th>
<th>University of Edinburgh, University and Colleges Union Scotland, National Association of Disabled Staff</th>
<th>@DisabilityIncl1 - <a href="https://twitter.com/DisabilityIncl1">https://twitter.com/DisabilityIncl1</a></th>
<th><a href="http://disc.hw.ac.uk/">http://disc.hw.ac.uk/</a></th>
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<td>EP/S012087/1</td>
<td>Co-Programme Director Dr Sara Shinton: “We’re all familiar with the various reports describing the glacial progress towards equality in science and engineering. For many years, various initiatives and approaches have tried to address the imbalance, but no substantial progress has been made. Before more resources and effort are poured in, eBase will conduct cutting-edge, empirical research to unpick the complexity which undermines equality and expose the key constraints that restrict progress. We are starting with Big Grant leadership for two reasons - the particularly poor diversity in leadership and the strategic importance of these opportunities for the UK economy. “The project is a partnership between science and social science. We will execute an ethnographic study to understand the culture that supports the current ‘exclusive’ Big Grant Club and from this develop a more intuitive ‘system level’ understanding of our institutional culture and practices in order to bring about more effective change. With our new culture map in place, we will trial interventions to tackle the ‘pinch-points’ which contribute to poor diversity. These will be implemented locally and then more broadly through partnerships with learned societies and key networks, covering the academic and industrial sectors. The University of Edinburgh has extended our project by a full year to focus on embedding change more widely.”</td>
<td>University of Nottingham, Royal Society of Chemistry Publishing, Institute of Physics, SRP in Engineering, Knowledge Transfer Network Ltd</td>
<td>@evidenceBase_I M - <a href="https://twitter.com/evidenceBaseI">https://twitter.com/evidenceBaseI</a> M</td>
<td><a href="https://evidencebase.org.uk/meet-the-team/">https://evidencebase.org.uk/meet-the-team/</a></td>
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<td>EP/S011919/1</td>
<td>Programme Director Dr Ioana Latu: “Although gender equality initiatives (GEIs) exist in EPS Schools across the UK, progress is painfully slow. Our vision is that in order to change EPS diversity and inclusion culture sustainably and rapidly, we need to understand academics’ potentially negative or indifferent attitudes towards GEIs. “To address this challenge, we will first conduct research to understand how attitudes towards GEIs can be improved. In a second phase, based on this evidence-based knowledge, we will build and test training tools aimed at improving the reception of GEIs. These tools will be designed both for the general EPS academic population (Virtual Reality toolkits, multimedia tools, apps) and for Athena SWAN committees. We will ensure broad impact by sharing our empirical findings and trainings tools nationally, across EPS departments, and internationally with the scientific community.</td>
<td>University of Glasgow, University of Warwick</td>
<td>@QUBIncMatters - <a href="https://twitter.com/QUBIncMatters">https://twitter.com/QUBIncMatters</a></td>
<td><a href="https://www.qub.ac.uk/sites/InclusionReallyDoesMatter/ProjectOverview/">https://www.qub.ac.uk/sites/InclusionReallyDoesMatter/ProjectOverview/</a></td>
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### Northern Power – Making Engineering and Physical Sciences Research a Domain for All in the North of England

**Programme Director Professor Emma Flynn:** “Engineering and physical sciences contribute hundreds of billions of pounds to the UK economy each year. Yet, women, disabled people, LGBT+, and people from Black and Minority Ethnic backgrounds are poorly represented across the sector. Research reveals that women engineers and physical scientists are underrepresented in all grades, but especially in senior academic posts. Unequal opportunities, paucity of role models from under-represented groups, and a lack of understanding among senior leaders as to the barriers these groups face are among a number of factors that cause, compound, and sustain this problem. With the generous support of the Engineering and Physical Sciences Research Council, Durham University, along with eight other Universities and six industrial organisations, are embarking on a new and exciting research project to tackle this issue in the North of England.

“The two year project includes six activities – undertaken across the 15 organisations – that are designed to help address the problem of entrenched under-representation. These include Shared Characteristic Mentoring: matching junior staff members from under-represented backgrounds with more senior colleagues who share characteristics, identities, and experiences; Reverse Mentoring, in which staff from under-represented groups in engineering and physical sciences mentor senior staff about the challenges they face and, in return, are coached on their career development; and collaborating with industry, including conducting research workshops and outreach activities.

“The motivation behind the project – part of a bigger, £5.5 million national initiative – is to create a more inclusive culture in the sector, which will lead to a more diverse talent pool and, ultimately, better science and engineering to address complex and pressing global challenges.”

### Promoting EDI in University Spinout Companies

**Programme Director Professor Simonetta Manfredi:** “Too few women researchers are leading spinout companies. There has not been enough attention focused on the progression of women researchers at all career stages on the entrepreneurial pathway from research to spinout leadership. Whilst challenges relating to women's research career progression are well understood, the STEM community and the Higher Education (HE) sector as a whole are not as well informed about women entrepreneurial career progression pathways to spinout. Research shows that founders and co-founders of university spinout companies are predominantly men. Encouraging and understanding women’s engagement in spinout companies is of strategic importance to the UK’s new Industrial Strategy which aims to increase investment in science, research and innovation and to support new businesses and growth. Oxford Brookes University in collaboration with the University of Oxford have been funded by EPSRC under its Inclusion Matter call to undertake a project to identify barriers as well as enabling factors that exist for women scientists, engineers and mathematicians in key stages of the spinout process and entrepreneurial activities to commercialise research and innovation. This project vision is to achieve a step change in institutional capabilities to increase the participation of women researchers in STEM.
| EP/S012168/1 | Reimagining Recruitment | **Programme Director Dr Tim Rogers**: “Ask a typical eight-year-old to describe a scientist and they will likely repeat the stereotype of the lone genius: a middle-aged white man in a lab coat. We now know that in fact, the best research is produced by collaborative teams of diverse membership who each contribute different skills and perspectives. Nonetheless, the stereotypes remembered from childhood are sadly persistent and research shows they can negatively influence the recruitment process.

“The vision of our proposal is to begin a process of culture change, by giving scientists the opportunity to undo damaging stereotypes and learn the benefits of working as part of a more diverse team. To achieve this, we will run a programme of innovative ‘incubator’ events - academic research workshops in which senior academics work alongside early-career scientists, in an accessible and inclusive environment to tackle cutting-edge research problems. At the same time, we will conduct an interlinked programme of psychology research into the experiences of early-career researchers in STEM subjects and the efficacy of alternative recruitment strategies in academia. This will enable the development and communication of evidence based policy to drive cultural change in science and technology higher education and more widely.” |

**Will be set up shortly** | [https://www.bath.ac.uk/projects/reimagining-recruitment/](https://www.bath.ac.uk/projects/reimagining-recruitment/) |

| EP/S012133/1 | STEM Equals | **Programme Director Professor Rebecca J Lunn**: “There is a growing body of evidence demonstrating that women are discriminated against in Universities, and that the problem is particularly persistent across engineering and the sciences. For example, in 2012, a study (www.pnas.org/content/109/41/16474) was published where applications that had been randomly assigned a male or female name were rated for a Physics Laboratory Manager position. Recruitment panels rated the male applicant as significantly more competent and hireable than the (identical) female applicant. The experiences of LGBT staff in science and engineering are less well-studied, but it is widely recognised that the numbers of ‘out’ senior academic staff are vanishingly small. Of the very few studies conducted most are on students, one UK study ([https://www.researchgate.net/publication/241710032_Navigating_the_heteronormativity_of_engineering_The_experiences_of_lesbian_gay_and_bisexual_students](https://www.researchgate.net/publication/241710032_Navigating_the_heteronormativity_of_engineering_The_experiences_of_lesbian_gay_and_bisexual_students)) found that LGB Engineering students viewed engineering departments as hostile and that most students coped by ‘passing’ as heterosexual.”

“The STEM Equals project at the University of Strathclyde aims to develop initiatives that will improve equality and diversity for female and Lesbian, Gay, Bisexual and Transgender (LGBT) staff across science and engineering. Project activities include the introduction of free flexible créche facilities for staff to attend key research meetings whilst on-leave, the delivery of workshops with key industry partners to disseminate successful activities and share best practise, and the setting up of public and private social media platforms for women and for LGBT staff within the University.

“The STEM Equals project also aims to deliver a fresh approach to University management, decades-old practice within UK Universities has led to a severe lack of senior women. Current promotion criteria are modelled on full-time male academics, that have taken no periods of carer or family leave. This lack of senior diversity is not in the UK’s best interest; Universities should be promoting the top strategic thinkers and the most talented/innovative researchers, regardless of their career path.” |

**BAM Nuttall Ltd, Scottish Research Partnership in Engineering** |

[@STEMEquals](https://twitter.com/STEMEquals) | [https://www.stemequals.ac.uk/](https://www.stemequals.ac.uk/) |
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<th>EP/S011897/1</th>
<th>Sam Kingman/University of Nottingham</th>
<th>&quot;Research on the STEM Equals Project will 'peel-back' over time the CVs of volunteer senior female academics from across the UK, to define excellence at each stage in their career, and hence to develop alternative promotion criteria, more appropriate to academics that have had periods of leave or part-time working.&quot;</th>
<th>University of Bradford, University of Kent, University of Liverpool, Newcastle University, Nottingham Trent University, University of Warwick, The Science Council, Virginia Polytechnic Institute and State University, Royal Academy of Engineering, Royal Society of Chemistry Publishing, Kohler Mira Ltd, Institute of Physics, Diversity by Design</th>
<th>@STEMM_Change</th>
<th><a href="https://www.stem-change.co.uk/">https://www.stem-change.co.uk/</a></th>
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<td>EP/S012079/1</td>
<td>Caroline Gauchotte-Lindsay, Helen Mulvana/University of Glasgow</td>
<td>&quot;VisNET (virtual in situ networking), led by the University of Glasgow, aims to understand and fundamentally transform the mechanisms of networking and collaboration in academia. Focusing on the dominant leak in the academic pipeline, the post-doctoral researcher to lecturer transition, we seek to remove the disadvantage women experience in building their international reputation, an important measure of academic esteem. Ultimately, our outcomes will help to redress the under-representation of women in STEM academia by establishing equality of opportunity when competing for research funding and academic promotion. &quot;Barriers for women to participate equally in the international scientific conversation are multi-fold. Among these, gender bias means that women are less likely to be invited to speak at conferences or take part in opinion panels - both critical networking opportunities. They are also more likely to have primary caring responsibilities, restricting their freedom to travel. &quot;The growth in technologies enabling remote working offers us an exciting opportunity to redefine networking practices by making them less reliant on frequent travel. Working with the Universities of Edinburgh and Strathclyde and multinational companies including Microsoft, Nokia and Thales, we will develop, integrate and advocate for new strategies that remove gender bias and allow women to influence the new 'rules', thus challenging the persistence of 'male networks'.&quot;</td>
<td>University of Edinburgh, University of Strathclyde, NXP Semiconductors Ltd, Nokia UK Ltd, CGI IT UK Ltd, Atkins Ltd, Scottish Research Partnership in Engineering, Thales UK Ltd.</td>
<td>@visNET_</td>
<td><a href="https://www.gla.ac.uk/colleges/scienceengineering/research/visnet/">https://www.gla.ac.uk/colleges/scienceengineering/research/visnet/</a></td>
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