

The Department of Chemistry presents

PATHWAYS TO EQUITY IN RESEARCH

Symposium Programme



23 September 2022
National STEM Learning Centre
University of York





Symposium Schedule

11:00 - 11:10 **Welcome Remarks**

Prof. Kiran Trehan

Introduction to Morning Session

Prof. Caroline Dessent

11:10 - 11:55 **Equity & Research Culture**

Prof. Dame Ottoline Leyser

Dr Daniel Smith

11:55 - 12:25 **Gender and Racial Inequalities in Publishing**

Lauren Crawford

12:25 - 13:00 **Panel Discussion: Research funding & Publishing**

Chair: Dr Pooja Goddard

Panellists: Lauren Crawford

Dr Daniel Smith

Prof. Anna Vignoles

13:00 - 14:00 **Lunch**

13:40 - 13:45 **Introduction to Afternoon Session**

Prof. Deborah Smith

13:45 - 14:05 **Ableism in Academic Research**

Dr Jennifer Leigh

14:05 - 14:25 **Research Performance Metrics**

Prof. James Wilsdon

14:25 - 14:45 **Equity & Diversity Across the Talent Pipeline**

Prof. Anna Vignoles

14:45 - 15:20 **Panel Discussion: Working Environment & Career Progression**

Chair: Prof. Sarah Thompson

Panellists: Dr Rehana Sidat

Sarah Bakewell

Dr Jennifer Leigh

Prof. Kevin Cowtan

15:20 - 15:30 **Closing Remarks**

Prof. Andy Dougill

15:30 - 16:30 **Optional Networking Session**

Wine, soft drinks and nibbles available in the atrium



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Welcome Remarks Prof. Caroline Dessent

Head of Department of Chemistry



I'm writing to warmly welcome you to the University of York and to our Pathways to Equity in Research Symposium. This symposium was conceived as part of our action plan for our last Athena SWAN gold award submission, which was developed back in 2018. It has therefore been some time in the planning. This "action" arose

out of concerns that came to light when we reviewed patterns of research funding for members of our Department. Although York Chemistry is (rightly!) proud of its track record of nurturing the careers of female Chemists, statistics from our review of our research grant funding showed that female staff members applied for fewer and smaller research grants than male members of staff.

This pattern for York Chemistry reflects known national trends around research grant application and success rates by gender. Gender issues around gaining research funding are amplified in other areas of research success, particularly in the context of being published in the highest impact journals. All of these problematic trends that are evident in relation to gender are now



well recognised to extend to individuals in other marginalised groups, including those from minoritised ethnic groups and with disabilities.

Inequalities in access to research success (grants, prizes, journal articles) all contribute to sub-optimal experiences for certain members of our research communities. This can lead to individuals deciding to give up STEM careers, and hence to a significant loss of talent. This is a critical problem if society is to address its most challenging scientific goals, whether in curing terminal diseases or solving the energy crisis. Our goal today is to challenge current practice, and think about how we can achieve the most inclusive, supportive and meritocratic research environment possible.

I hope you have a wonderful day, and are able to help us develop the best possible strategies for making research funding and success equitable for the future.

Organisers

Organising Committee

Dr Cate Anstöter
 Dr Sari Budisulistiorini
 Dr Will Drysdale
 Dr John Halfacre
 Dr Katherine Manfred
 Megan McLoughlin
 Dr Beth Nelson
 Dr Connor Prior
 Dr Mia Shandell
 Dr Luke Wilkinson

Steering Group

Prof. Caroline Dessent
 Prof. Mat Evans
 Prof. Kevin Cowtan
 Dr Alison Parkin
 Dr John Slattery
 Dr Leonie Jones

Focus Group Facilitators

Dr Taryn Bell
 Dr Naomi Elstone
 Ranbir Jabanda



Speaker Bios

Sarah Bakewell

Institute of Physics

Sarah joined the IOP in February 2021 to provide leadership and expertise to the EDI strands woven within the Unlocking the Future Strategy.

In her role as Head of Equality, Diversity, and Inclusion (EDI) at IOP, she is currently leading on the creation of a new Inclusion Model for physics to replace Project Juno, the IOP's gender equality award and supporting governance activity to include IOP members in delivery of the strategic goals.

Sarah leads a team of four and between them they cover all aspects of EDI including policy, working with IOP members and staff education and engagement. Sarah previously worked at AWE plc as the Diversity and Inclusion Manager where she established the EDI activity including working with the Executive to design the governance and reporting, creating five employee resource groups, delivering EDI training and activities across the organisation and attaining a Silver Award in external EDI benchmarking from enei (the Employers Network for Equality and Inclusion) for the progress made.



Professor Kevin Cowtan

University of York

Kevin has spent most of their career developing software and methods for improving electron density maps and fitting atomic models into maps. They also apply the same skills to the analysis of historical climate data. Kevin is currently exploring methods for teaching computer programming which break down traditional patterns of exclusion,

in particular with respect to gender.

Kevin is autistic and genderqueer. Their autism gives them an incomprehension of people and social interactions which they have turned into an intellectual curiosity into the unwritten rules and social structures we live in, particularly around gender. Kevin now applies this curiosity to trying to uncover hidden structural biases in the social structures of academia.





Lauren Crawford

Royal Society of Chemistry

Lauren has recently joined the Royal Society of Chemistry Inclusion and Diversity team as Senior Programme Manager, Inclusion and Diversity.

Lauren has overall responsibility for the Inclusion and Diversity strategy and its implementation across all areas of the Royal Society of Chemistry.

Lauren has dedicated her career to ensuring equitable access to STEM, working across organisations such as the Wellcome Trust and BBC Children in Need, most recently in her previous role as Head of Equality, Diversity and Inclusion at EngineeringUK. Lauren currently studies physics part-time at the Open University.



Professor Caroline Dessent

University of York

Caroline Dessent is Head of Department and a Professor of Physical and Analytical Chemistry in the Department of Chemistry at York (@ChemistryatYork). Her research group (@DessentLab) works on photoactive molecules and ensembles, with applications in biological systems and human health.

She was previously the Chair of the Equality and Diversity Group in Chemistry (2017-2021), where she led the equality, diversity and inclusion work conducted by the department. She led the Chemistry Department's successful 2019 Gold Athena Swan award. Caroline has been a keen advocate of supporting the careers of women in science for many years, and has also been the Chair of the Science Faculty's Athena Swan Working Group, and a member of the University's Athena SWAN steering group. Caroline is leading a number of projects to support the career development of Black and Minority Ethnic students and staff in Chemistry, and has established a project to Decolonize and Diversify the Curriculum in Chemistry.





Professor Andy Dougill

University of York

Andy is the Dean of the Faculty of Sciences at the University of York. He has recently joined York from the University of Leeds where he held posts as Dean for Global Development, Dean of Faculty of Environment and Head of School of Earth and Environment.



He is an applied environmental change researcher whose work integrates a range of disciplines including soil science, ecology, climate services and environmental social sciences. He has led trans-disciplinary research projects on environmental sustainability and climate change adaptation in African food systems. He has successfully built long-lasting partnerships across a range of African Universities and partner organisations through a strong commitment to impact, capacity building and research training.

Dr Pooja Goddard

Loughborough University

Pooja is a Kenyan-born "modern nomad". Her academic career started with an MChem degree from Coventry University, which included an industrial placement at GSK.



Her PhD project at the University of Warwick under the late Prof. Mark Rodger involved Computational and

Experimental Studies of Formate Brines used in oil drilling applications.

In 2005, Pooja moved to the Dept. of Physics and Materials Science at Uppsala University, Sweden, on a FP7 project looking at diagnosing malaria using a non-invasive magneto-optical technique. After 3.5 years she joined the University of Bath as an EPSRC Research Officer working on Energy Materials such as Fuel Cells, Lithium Ion Battery materials and Thin Film PV materials. She was Senior Research Fellow at the University of Huddersfield (2012-2015), before joining Loughborough as a Lecturer in 2015. She is now a Senior Lecturer and Director of EDI (School of Science) and sits on several UKRI Strategic Advisory Teams as well as the RSC I&D committee.



Dr Jennifer Leigh

University of Kent

Jennifer Leigh (@DrSchniff) initially trained as a chemist and somatic movement therapist before completing her doctorate in education at the University of Birmingham. She has recently edited or authored five books, including *Ableism in Academia: Theorising disabilities and chronic illnesses in higher education* (UCL Press, 2020) and *Women in Supramolecular Chemistry: Collectively crafting our work and lives in STEM* (Policy Press, 2022). As a Reader at the University of Kent, she co-chairs the Visual and Sensory Research Cluster, co-chairs the Staff Disability Network, and developed and leads the Summer Vacation Research Competition.



She also leads research for WISC (Women in Supramolecular Chemistry), co-leads the National Association for Disabled Staff Networks' STEM Action Group, and is part of the #WIASN (Women in Academia Support Network) research working group. Her research incorporates embodiment, phenomenological and creative research, marginalised identities, ableism, and bringing embodied research approaches (and glitter) into the worlds of science and public engagement.

Professor Dame Ottoline Leyser

UKRI



Professor Dame Ottoline Leyser is the Chief Executive of UK Research and Innovation (UKRI) and Regius Professor of Botany at the University of Cambridge. Prior to this Ottoline Leyser was Director of the Sainsbury Laboratory, an interdisciplinary institute which combines computational modelling with molecular genetics and cell

biology in the control of plant growth and development.

Ottoline has interests in research culture and chaired the Nuffield Council on Bioethics project. She has actively engaged in work generating a more inclusive, creative and connected culture. She has worked extensively in science policy, as Chair of the Royal Society's Science Policy Expert Advisory Committee, Chair of the Management Committee of the University of Cambridge Centre for Science and Policy, and as a member of the Prime Minister's Council for Science and Technology. She is a Fellow of the Royal Society, a Member of the Leopoldina and EMBO, and an International Member of the US National Academy of Sciences. In 2017 she was appointed DBE for services to plant science, science in society and equality and diversity in science.



Dr Rehana Sidat

GSK

Rehana Sidat is a fellow of the RSC with over 24 years of senior leadership experience in the Pharma industry, spanning across commercial supply and various groups in R&D. As a focused, assertive, empathetic leader who holds high standards, she has proven experience of transforming team performance across diverse disciplines within and outside of her immediate domain.



Known for her authenticity, delivery and for building transparent, trusting partnerships, Rehana is a Senior Leader who leverages delivery through a mindset where return on investment and value add is established on the outset; examples of application include technical & non-technical applications, direct & matrix environments, risk compliance, and management. Her experience exemplifies diverse leadership experience and ability to deliver complex global change projects. Rehana is an incredibly passionate advocate, ally, sponsor, coach and mentor of DEI, both within and outside of GSK, and sits on the RSC I&D Committee, RSC Nominations Committee, and GSK R&D Diversity, Equity & Inclusion Council.

Dr Daniel Smith

EPSRC

Danny is the Head of Physical Sciences for EPSRC-UKRI and is a chemist by training. After joining EPSRC in 2013, he has undertaken a range of different roles, including a policy secondment to BEIS and time in NERC as the interim Head of Partnerships.



Prior to joining the physical sciences team however, he was the Head of Business Engagement, and with the team, developed EPSRC's Prosperity Partnerships into the successful £250m+ jointly funded academic-industry programme that it is today. He then joined the Physical Sciences team in 2021 to develop new opportunities in partnership with the fundamental science community.

Danny has a strong focus on ensuring that we support a diversity of ideas, people and activities. This acts as a guiding principle for the physical science team, both through how we work as a team, and how we support and work with the community.



Professor Deborah Smith

University of York

Professor Smith trained as a biochemist at the University of Southampton. She held positions with the Medical Research Council (MRC) at Mill Hill in London, the US National Institutes of Health in Bethesda, and Imperial College London before moving to York in 2005 to establish the Centre for Immunology and Infection and further her research into neglected tropical diseases, particularly the leishmaniases, global parasitic diseases that are endemic in parts of the tropics and subtropics including southern Europe.



Professor Smith was head of the Department of Biology at York for three years before becoming Pro-Vice-Chancellor for Research in 2014, a position held until her retirement in 2020. She has also played a leading role in championing Equality Diversity and Inclusion issues at York through her work with Athena Swan. In addition to her work at York, Professor Smith was a member of the MRC Strategy Board and co-chaired the Science Funding Panel of the Wellcome Trust from 2011 to 2014. Professor Smith was awarded an OBE for Services to Biomedical Sciences in 2010.

Professor Sarah Thompson

University of York

Sarah is the Associate Pro-Vice Chancellor for Research and Associate Dean (Research) for the Faculty of Sciences, responsible for strategic research decisions within the faculty, providing leadership and oversight for University level committees, and leads on university wide initiatives such as industrial engagement.



A former Head of the Department of Physics, she is a member of the Condensed Matter Physics Group and her main research interests lie in magnetic thin films and multilayers and nanoscale thermal transport. She served as Vice President of the Institute of Physics (Science and Innovation) from 2015-2019.



Professor Kiran Trehan

University of York

Kiran is Pro-Vice-Chancellor for Partnerships and Engagement and Director of the Centre for Women's Enterprise, Leadership, Economy & Diversity. She is a key contributor to debates on leadership, enterprise development and diversity in small firms and business. She has published extensively, and her work has been supported by grants from a range of research funding bodies; including the ESRC and AHRC, government departments, regional and local agencies, and the private sector.



She has an international reputation in a senior research, impact capacity, embedding the complementary concerns of practitioners, policy-makers and academics by converting academic insights into effective action, policy initiatives and sustainable impact. In 2019, she was elected President of the ISBE, the leading national body for SME research and policy learning. She was a lead commissioner on the West Midlands Leadership Commission, and the report on the new research and policy agenda on leadership diversity was commended by then PM Theresa May and featured in the Times Higher.

Professor Anna Vignoles

Leverhulme Trust

Anna Vignoles is Director of the Leverhulme Trust: one of the largest research funders in the UK. An education economist and previously a Professor at the University of Cambridge.



Her research focuses on the relationship between educational achievement, inequalities and social mobility and the role played by skills in the economy.

She has advised numerous government departments, including the Department for Education, of Business, Innovation and Skills, and HM Treasury. She has been a Trustee of the Nuffield Foundation and Member of Council of the Economic and Social Research Council. She was elected to the British Academy in 2017.



Professor James Wilsdon

University of Sheffield

James Wilsdon is Digital Science Professor of Research Policy at the University of Sheffield and founding Director of the Research on Research Institute (RoRI), which launched in 2019 with a mission to accelerate transformational and translational research on research systems, cultures and decision-making. RoRI's consortium includes 18 research funders from 14 countries, who between them invest over US\$ 23bn each year in research and innovation.



Over his career, in addition to academic posts at the universities of Sheffield, Sussex and Lancaster, James has worked in think tanks, NGOs and as director of science policy for the Royal Society. He has pioneered concepts such as upstream public engagement, science diplomacy and responsible metrics; and has co-founded or led initiatives including the International Network for Government Science Advice (INGSA); People & Planet; the Campaign for Social Science; and the UK Forum for Responsible Research Metrics.

Main Co-Sponsor Royal Society of Chemistry

Dr Ale Palermo - Head of Global Inclusion



We are grateful for the invitation to join you all in this important event. We share the ambition that "Chemistry should be for everyone", though the sad truth is that, today, chemistry does not welcome everyone.

As you would expect from a scientific organisation, we know this through in-depth research, building on data, which confirms the lived experience we hear from members of the chemistry community: that the issues of bias and discrimination are real, current, and harmful; that these biases are baked into the systems and institutions that chemistry is built on; and that countless talented people are driven out from chemistry – or are never able to join us at all.

Given the overwhelming evidence of discrimination and exclusion, we have embarked on a fundamental shift in how we approach everything we do. Just as inequality sadly permeates all of science, our belief in equality will permeate every project, event, process, policy and message. Chemistry will benefit, society will benefit – and it is the right thing to do. Chemistry does not welcome everyone – but it should, and it will.



Platinum Sponsor

GSK

We're working hard to become a more inclusive company in the way we do business, both through our clinical trials and the external companies we choose to work with. Internally, we want GSK to be a workplace where everyone can feel a sense of belonging and thrive.



We've made good progress – delivering new inclusion training on an annual basis including how to recognise and take action on discriminatory behaviours, launching a development programme for ethnically diverse employees, and reviewing our recruitment and selection processes.

We recruit and develop outstanding people- people who believe in our purpose, live our culture and want to help us achieve our ambition. We expect managers to motivate, focus, develop and care for their teams, and we recognise, celebrate and reward success.

Above all, we create a place where people can grow, be their best, be safe, and feel welcome, valued and included.

National STEM Learning Centre

About STEM Learning



At STEM Learning, our commitment to STEM education is part of everything we do. Whether that's delivering teacher CPD (continuing professional development) in STEM subjects, bringing STEM role models into schools as part of the STEM Ambassador Programme or providing bespoke, long-term support for

groups of schools in collaboration with companies through our ENTHUSE Partnerships, our aim is always the same – to provide a world-leading STEM education for all young people across the UK.

Access to the NSLC is via first floor reception, and you will be directed to the ground floor atrium for signing in. Please help yourselves to refreshments and view exhibition and Focus Group posters before the start of the symposium. All speakers and panel sessions will be held in Lecture Theatre 1. Lunch will be held in the atrium. Additionally, Seminar Room 1 on the first floor is available for participants who would like a quiet space during breaks.



Notes

