

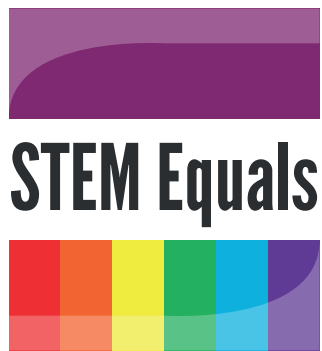


STEM Equals



2021 Report

2019-2021 : TWO YEARS BY THE NUMBERS



STEM Equals is a four-year research and impact project focused on creating more inclusive STEM communities for women and LGBT+ people in both academia and in industry. The project is funded by EPSRC with matched funding from the University of Strathclyde. The project industry partner is BAM Nuttall.

60K FUNDING CALLS AWARDED

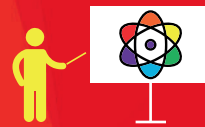
to support 11 projects led by women, diverse teams, and pump-prime larger bids within EPSRC 's remit.

120+ LAUNCHED STRATHPRIDE

the LGBTQI+ Staff & PGR Student Network at the University of Strathclyde. The Network formally launched on 21 October 2020 and over 120 members have joined so far!

We have done:

25 TALKS AND PRESENTATIONS



Including: Vitae 2019; STEM Village Symposium 2020; Advance HE EDI Conference 2021; and more.

90+ NETWORKING MEETINGS & EVENTS

27 OUTREACH EVENTS

We have organised:

11 EVENTS (incl. 1 conference) (feat. 58 speakers)

8 WORKSHOPS

33K ATTRACTED EXTRA FUNDS

for outreach activities, to promote innovation, and to establish global partnerships.

5 POLICY IMPACT & PUBLICATIONS

including: APPG: Equity in the STEM Workforce Inquiry; The STEM Equals Project: First Year Report; Teaching Case Study; Internal Policy documents; and more.

THANK YOU TO ALL WHO SUPPORTED US!



We have conducted focus groups and interviews with:

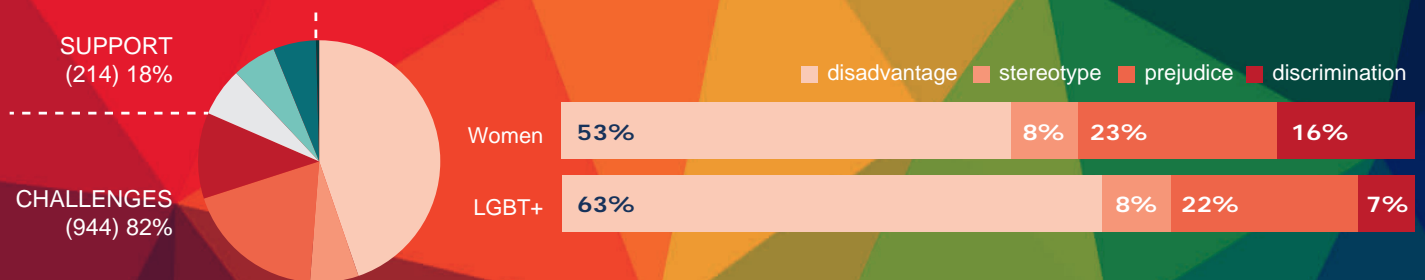
82 PARTICIPANTS
 (including 38 staff members and 44 PhD students)

46 HOURS and
370_K WORDS



Findings highlight that:

The experience of Women and LGBT+ academic staff and PhD students in STEM is characterised by challenges and inequities rather than support from colleagues and the institution. In particular, data reveals that discriminatory practices against protected characteristics are neither the only nor the most prevalent form of inequity. Rather, they are one of the many facets of a working culture in which structural disadvantages, stereotypes, and prejudices are reproduced and able to thrive.



We developed: the Slippery Slope to Discrimination and the Path to Inclusion

To understand and visualize the multifaceted nature of inequity in STEM, and the work that needs to be done to realise inclusion.





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Inclusion Matters!

STEM Equals: Creating more inclusive STEM communities

WOMEN IN STEM



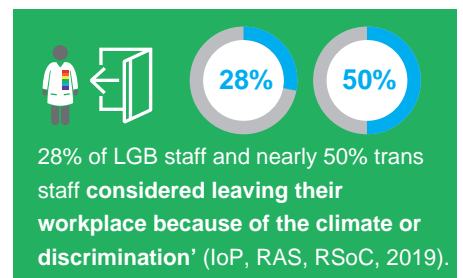
Women engineers receive fewer citations (Murphy, 2017)



LGBT+ IN STEM



Discrimination, exclusion and a concerning lack of initiatives.



Male applicants are rated as more competent (Moss-Racusin et al., 2012).



EPSRC grants awarded gone to projects led by men (Weale and Barr, 2018).

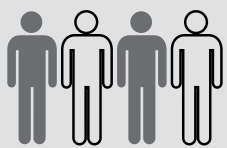
LGBT faculty, staff, and students are more likely to have negative perceptions of their campus climate, and are more likely to consider leaving their institution (Rankin et al., 2010).

LGBT students in STEM are less likely to persist (Hughes, 2018).

'the lived experiences of students reveal **stereotypes, biases, chilly campus cultures, unsteady identities, and a wavering sense of belonging** that are still barriers for successful degree completion and career entry' (Blackburn, 2017, p. 250).

Staff 'working in STEM fields with better representation of women reported a higher degree of [LGBTQA] openness' and 'those who reported a higher degree of openness in the workplace were more likely to describe their workplace as safe and welcoming' (Yoder and Mattheis, 2015, p. 21).

UNDERSTANDING DIVERSE NEEDS



HETERONORMATIVE HEGEMONY

Discrimination
Insecurity
Isolation
Anxiety



CELEBRATING INTERSECTIONALITY

Inclusion
Belonging
Community
Wellbeing

PROMOTE INSTITUTIONAL CHANGE



Introduction

One of only eleven EPSRC funded projects under the Inclusion Matters initiative, STEM Equals is a four-year research and impact project focused on creating more inclusive STEM communities for women and LGBT+ people in both academia and in industry.

Through an intersectional lens, the project is: working to examine working cultures within higher education and industry; undertaking research to understand specific challenges and develop new initiatives; developing joint equality learning experiences with key industry-university research partners; and reaching out to other University and strategic industry partners to share best practices.

The project is funded by EPSRC with matched funding from the University of Strathclyde. The project industry partner is BAM Nuttall.

STEM Equals' objectives include:

Identify: Specific challenges/issues women and LGBT staff and PhD students in STEM face; Best practices around fair/equitable hiring/promotion processes in STEM; Best practices around support for and inclusion of women and LGBT staff and PhD students in STEM; Best practices around fair/equitable working policies and practices that impact women and LGBT staff and PhD students in STEM.

Inform improvements to: Hiring and promotion policies and processes; Policies and practices that impact working cultures/STEM communities; Working policies and practices that impact women and LGBT staff and PhD students in STEM.

Evidence policies, practices, and initiatives that enable: More inclusive working cultures/STEM communities to build better belonging for women and LGBT staff and PhD students; Increasing numbers of women PIs on submitted research grants; Retention of women and LGBT talent in STEM; Support for diversity in STEM.

About this Report

We have produced this report to highlight just some of the milestones we have met in 2021 through STEM Equals. We have chosen to put a spotlight on our research, initiatives - in particular the See Yourself in STEM project and the Roadblocks on the Path to Innovation seminar series - events, and knowledge exchange activities.

The coronavirus pandemic has changed the way we work. Since mid-March 2020, the STEM Equals team started working remotely while adapting to this difficult time. To comply with the government guidelines and with everybody's safety in mind, we responded to the crisis by redesigning or postponing events we had planned for 2020 and 2021. While this required extra effort and disrupted the delivery of several initiatives, it also prompted the STEM Equals team to creatively find new ways to stay relevant, advocate for equality and inclusion, and deliver the expected outcomes from the project.

As we start to seeing evidence of impact from our research and initiatives, both at the University of Strathclyde and in the higher education sector, we are continuing to adapt to the changing times and we are looking forward to the year ahead.

Research with Impact

Over the course of the last year, the STEM Equals research team focused on analysing data from the project's first phase of data collection. While we are working on a number of academic publications, findings were used to prepare reports and presentations that could maximise the impact of our research on practice in the sector.

Improving the Experience of Women and LGBT+ People at Strathclyde and in the Sector

Between November 2019 and March 2020, the STEM Equals team conducted interviews and focus groups with 82 participants who are women and/or LGBT+ academic staff or PhD students in STEM at the University of Strathclyde. Through an intersectional lens, data were analysed to: examine working cultures, policies, and practices; understand specific challenges to equity, diversity, and inclusion; develop new and innovative initiatives to remove barriers to inclusion both at the University and in the sector.

Results from this study led to **six recommendations on changing University policy and practice** that have been accepted in principle and are now being shared with other Universities in Scotland.

APPG Call on Diversity in STEM

The STEM Equals team responded to the call for evidence under the '[Equity in the STEM workforce](#)' inquiry promoted by the All-Parliamentary Working Group on Diversity and Inclusion in STEM. The inquiry started in November 2020 and aimed to outline and better understand inequities faced by underrepresented and marginalised individuals in the UK STEM workforce.

Results from STEM Equals were included in the '[Inquiry into Equity in the STEM Workforce](#)' **Final Report**, and the evidence we submitted is available to download together with the contributions of over 85 organisations and individuals who responded to the call.

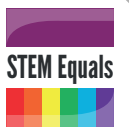
Dissemination

Over the last year, we have delivered several invited talks and conference presentation to share findings from the project both in the UK and internationally. Highlights include:

- Gagnon, J., & Reggiani, M. (2020, November). *Creating Paths to Inclusion in STEM: Initial Findings from STEM Equals*. Pop-Up Inclusion Matters, University of Edinburgh, UK.
- Gagnon, J., & Reggiani, M. (2021, March). *STEM Equals: Creating more inclusive STEM communities*. Advance HE EDI Conference, Edinburgh, UK.
- Gagnon, J., & Reggiani, M. (2021, July). *The Smoke and Mirrors of performative diversity: Institutional reputation, individual burden, & distraction from*

Women and LGBT+ people in STEM: Evidence from STEM Equals

Internal Report



accountability. 2021 Gender, Work and Organization Virtual Conference, University of Kent, UK.

- Gagnon, J., & Reggiani, M. (2021, July). *STEM Equals: Creating more inclusive STEM communities*. Network Gender & STEM 2020 Conference, Sydney, Australia.
- Gagnon, J., & Reggiani, M. (2021, August). *Working towards an inclusive future for STEM professions: Systemic challenges and anti-change agents, findings from the STEM Equals project*. European Sociological Organisation Conference 2021, Barcelona, Spain.



Engineering and
Physical Sciences
Research Council



Jessica Gagnon (she/her)



Izzy Jayasinghe (she/her)



Avery Cunningham (he/hi...)



Clau Nader



Tanmoy Laskar



Katie Nicoll Baines (she/he...)



Marco Reggiani (he/him)

zoom

Initiatives

In addition to research, the STEM Equals project continued to deliver initiatives to remove barriers to inclusion and promote the creation of more inclusive STEM communities.

StrathPride: Strathclyde LGBTQI+ Staff & PGR Network

In alignment with the University of Strathclyde's commitment to equality, diversity and inclusion, the STEM Equals team worked with the Equality & Diversity team to facilitate the creation of [StrathPride, the University's first LGBTQI+ staff and PGR network](#). The network provides an opportunity to build a more diverse and inclusive university community, and enhance support for and visibility of LGBTQI+ people at Strathclyde.

Over 120 Strathclyde staff and PGR students who are LGBTQI+ and our allies have joined StrathPride since it formally launched on 21 October 2020. Members are from across the university: of our current members, 22% are from central Professional and Student Services/IT/Library/Student Union; 20% are from the Faculty of Engineering; 28% are from the Faculty of Humanities and Social Sciences; 15% are from the Faculty of Science; 15% are from the Strathclyde Business School.

STEM Equals Funding Call

After awarding £50,000 to [10 project led by women at Strathclyde and within the remit of EPSRC's research areas](#), the STEM Equals team organised a workshop in April 2021 to monitor progress and impact of the funded projects. On the day, we provided networking

opportunities to attendees and featured a talk from Dr Alison Robinson & Louise R Virdee (RKES, University of Strathclyde) to offer guidance and discussion on turning pump priming projects into a larger bid for EPSRC funding or into a Fellowship.

Attendees were also invited to complete a brief questionnaire so that we could collect data to evaluate the success of this funding scheme. We aim to use the data gathered to **build a case for continuation of similar internal pump-priming funding schemes, both within the University of Strathclyde and at other institutions.**

Reciprocal Mentoring

In October 2021, we launched the STEM Equals Reciprocal Mentoring Programme to **increase awareness of the challenges of building an academic career for those who are from one or more groups underrepresented amongst university leaders and senior staff in UK higher education**, including women, LGBT+ people, BAME (Black, Asian, and minority ethnic) people, and people with disabilities. The programme is delivered with the support of Dr Kay Guccione, and we are currently recruiting mentors and mentees to kickstart the programme in 2022.

LGBTQI+ Awareness Training

We are currently working with the Equality & Diversity team to facilitate a LGBTQI+ Awareness Training for senior leaders at the university. We aim to pilot this training in 2022 and we will collaborate with the Equality Network to facilitate and organise training sessions.



SEE YOURSELF IN STEM



ATIMATI EHINOMEN

University of Strathclyde Electronic and Electrical Engineering

My interest in STEM started at a very young age. My quest to learn how everything around me worked and the desire to showcase my understanding to others kept me keenly interested in science. I find solace in all the women before me (in and out of STEM) who have believed that it's possible to follow and achieve their dreams.

Atimati Ehinomen is a PhD student in the Department of Electronic and Electrical Engineering at the University of Strathclyde.



SEE YOURSELF IN STEM



ALEX BLANCHARD

University of Strathclyde Physics

The books I read while growing up made me want to stick with STEM and allowed me to excel as I already knew partially what was going on from the reading I had done. I also had great teachers though, who were very supportive for me when it came to choosing subjects.

Alex Blanchard is a PhD student in the Department of Physics at the University of Strathclyde.



SEE YOURSELF IN STEM



CHELBI HILLAN

University of Strathclyde Pharmacy and Biomedical Sciences

We should also celebrate the diversity of our community. It is important to have positive role models to inspire a career in STEM and it is vital we have representatives of all communities so that people considering a career in STEM can see themselves as a future leader.

Chelbi Hillan is a Master student at the Strathclyde Institute of Pharmacy and Biomedical Sciences.

Researcher Role Models

We recruited 18 Glasgow-based STEM Researcher Role Models to participate as volunteers in the See Yourself in STEM project (see page 13). The role models included academic staff, postdoctoral researchers, PhD students, and undergraduates from a wide range of STEM subjects.

The researchers included many from groups that are underrepresented and marginalised in STEM such as women, LGBTQ+, or Black, Asian, and other minority ethnic people. This was an intentional choice in order to challenge stereotypes about people working in STEM.



SEE YOURSELF IN STEM



CALLUM WILSON

University of Strathclyde Mechanical & Aerospace Engineering

When I was younger, I really enjoyed taking things apart which got me interested in how things worked. If you are interested in STEM, go for it! A career in STEM is not without challenges, but that is part of why it is so fulfilling. Stay curious and do not be afraid to ask lots of questions.

Callum Wilson is a PhD student in the Department of Mechanical and Aerospace Engineering at the University of Strathclyde.



SEE YOURSELF IN STEM



JINGLANG FENG

University of Strathclyde Mechanical & Aerospace Engineering

STEM subjects cover many broad fields where you can really develop your passions into your career if you are interested. I have read books about outstanding scientists and engineers in different fields, and I have always been in study or working environments where people are passionate about STEM, which has inspired me a lot.

Jinglang Feng is a Chancellor's Fellow and Lecturer in the Department of Mechanical and Aerospace Engineering at the University of Strathclyde.



SEE YOURSELF IN STEM



EYA NWANNEKA

University of Strathclyde Computer and Information Sciences

I believe diversity is critical to excellence especially in STEM where teamwork is encouraged. Diversity leads to better problem-solving, expands the talent pool and is important for long-term economic growth. An inclusive STEM community should have all hands-on deck irrespective of their different identities and backgrounds.

Eya Nwanneka is a PhD student in the Department of Computer and Information Sciences at the University of Strathclyde.

SEE YOURSELF IN STEM



Citizen Science

Inclusion

Curiosity

Diversity

Climate Change



See Yourself in STEM

STEM Equals was awarded funding by the Scottish Library and Information Council (SLiC) as a partner with Glasgow Life/ Glasgow Libraries for a project titled See Yourself in STEM. The purpose of the project was to enable students, particularly those from groups underrepresented in STEM, to engage with science and technology around climate change through research and hands-on science activities to inspire them to consider a STEM career path.

We recruited [18 Glasgow-based STEM Researcher Role Models](#) to participate as volunteers in the See Yourself in STEM project. The role models included academic staff, postdoctoral researchers, PhD students, and undergraduates from a wide range of STEM subjects. **The researchers included many from groups that are underrepresented and marginalised in STEM such as women, LGBTQ+, or black, asian, and other minority ethnic people. This was an intentional choice in order to challenge stereotypes about people working in STEM.**

Six groups of pupils from three Glasgow Secondary Schools, Smithycroft Secondary, All Saints Secondary, and Shawlands Academy, participated in the project. The groups included two groups of 20 S1 pupils (Smithycroft and Shawlands) and four groups of 20 S2 pupils (All Saints), so their ages will range from 11-14. During the four sessions organised with each group, researchers were joined by school librarians and school STEM leader. In addition, authors of books related to climate change and sustainability were invited by school librarians to talk about their work.

Together with Glasgow Life/Glasgow Libraries coordinators, Dr Claire Quigley and Ian Lebeter, the STEM Equals team researched resources and organised activities to support Researcher Role Models in delivering four sessions with school pupils. These included: (1) Introduction and Overview; (2) Citizen Scientists and Climate Science; (3) Experiments - the Researcher Role models demonstrate; (4) Experiments - The pupils demonstrate. Additionally, the pupils completed a "draw a scientist" activity during the first and fourth sessions. Developed by the STEM Equals team for Curiosity Live in 2019, during this activity pupils were encouraged to get creative by drawing and naming a scientist, opening up conversations about who can be a scientist and what scientists do.

Feedback from researcher role models, school librarians, and pupils was encouraging and mostly positive. **For example, one of the researcher role models reported: "I was doing my final outreach session today for [See Yourself in STEM]. When the pupils started their experiments, their teacher told me that before starting a pupil asked if I was coming again, she said when she confirmed the pupil started clapping from excitement".**

A video highlighting the aim of the project and some of the activities carried on by Researcher Role Models with the pupils is available online at the following [link](#).

If you would like to know more about the See Yourself in STEM project, or replicate it in your school, get in touch!

Events

LGBT+ in HE: Building Networks, Making Change

To mark the launch of StrathPride, Strathclyde LGBTQI+ Staff and PGR Students Network, we organised an event discussing networks and how we can create more inclusive research communities in which people feel like they can bring their whole selves to their work. Speakers included:

- **Dr Izzy Jayasinghe**, UKRI Future Leader Fellow, School of Biomedical Sciences, University of Sheffield
- **Dr Katie Nicoll Baines**, School of Chemistry, co-chair, Staff Pride Network, University of Edinburgh
- **Dr Matson Lawrence**, Access, Equality and Inclusion, University of Strathclyde
- **Dr Marco Reggiani**, Civil and Environmental Engineering Department, University of Strathclyde
- **Professor Yvette Taylor**, School of Education, University of Strathclyde
- **Jack Hao Yang**, Physics Department, University of Strathclyde

LGBT STEM Day 2020: Celebrating LGBT+ Researchers Fighting Climate Change

To celebrate international LGBT+ STEM Day the STEM Equals team hosted an event focused on the contributions LGBT+ STEM researchers make in addressing climate change challenges. The speakers included:

- **Dr Rachael Treharne**, Postdoc Researcher, Woodwell Climate Research Center
- **Dan Hdidouan**, PhD Researcher, Imperial College London

- **Dr Agustí Egea Alvarez**, Chancellor's fellow and Lecturer, University of Strathclyde.

International Women's Day 2021: Celebrating Women Researchers Focused on Sustainable Development

In honour of International Women's Day 2021 the STEM Equals team hosted an event focused on the contributions of women researchers make in addressing sustainable development. The speakers included:

- **Dr Tracy Morse**, Senior Lecturer in environmental health and Head of University of Strathclyde's Centre for Sustainable Development
- **Dr Tosin Somorin**, Chancellor's fellow and Lecturer, University of Strathclyde
- **Ms Jenala Chipungu**, Senior Social Behavioural Research Fellow, Centre for Infectious Disease Research in Zambia

LGBTQ+ STEMinar 2022

Together with the STEM Village, STEM Equals was awarded the bid to host the [LGBTQ+ STEMinar 2022](#). The event is believed to be the longest running and the biggest conference in world dedicated specifically to showcasing the achievements of LGBTQ+ people in STEM. On the 14 January, we featured two keynote speakers and 20 speakers from a variety of disciplines, identities, and backgrounds. Over 460 people registered to attend the LGBTQ+ STEMinar 2022 from around the world, and the event was made possible through the generous contributions of our sponsors.

Page 15,16,17: Example flyer and programme from some of our featured events.

**LGBTSTEM DAY
18 NOVEMBER 2020**



**CELEBRATING
LGBT+ RESEARCHERS
FIGHTING
CLIMATE CHANGE**

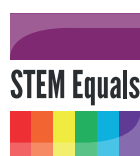


3PM-5PM (GMT)

FREE ONLINE EVENT, REGISTRATION REQUIRED

LGBTQ+ STEMinar 2022

14 January 2022



Our Sponsors

The LGBTQ+ STEMinar 2022 is made possible through the generous support of our sponsors:

IOP Institute of Physics



CANCER
RESEARCH
UK

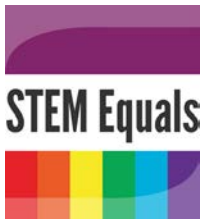
BEATSON
INSTITUTE



ROYAL SOCIETY
OF CHEMISTRY



University
of Glasgow | Institute of
Cancer Sciences



The
LINNEAN
SOCIETY
of London



South East Physics Network



Institute of
mathematics
& its applications



LONDON
MATHEMATICAL
SOCIETY
EST. 1865



I.M3
Institute of Materials,
Minerals & Mining

Roadblocks on the Path to Innovation Series

The UK Government Research and Development Roadmap was published in 2020, setting out the UK's vision for science, research and innovation. Improving the culture of research, addressing equity issues, and attracting, training, and retaining diverse people are key to this strategy.

In collaboration with Dr Katie Nicoll Baines (Project Manager for Evidence Based, University of Edinburgh), we have designed the series as dialogues between experts to address the roadblocks on the published Roadmap. **If institutions want diverse researchers to create world leading research and tackle global challenges, those institutions must first be able to answer the six questions tackled in these sessions.**

These thought-provoking conversations across fields were chaired by early career researchers to facilitate discussion and provide research-informed recommended actions for institutions to create more inclusive research communities and enable world leading research and innovation.

The series featured 6 seminars held via Zoom in October and November 2021:

- **Am I valued here?**
- **Am I seen here?**
- **Am I safe here?**
- **Am I represented here?**
- **Am I welcome here?**
- **Am I going to thrive here?**

Featured speakers included:

- **Khadija Mohammed**, Senior Lecturer, University of the West of Scotland
- **Hilary Noone**, Research & Innovation Culture Lead, UKRI
- **Prof Tessa Parkes**, University of Stirling
- **Dr Lilian Hunt**, Equality, Diversity and Inclusion in Science and Health Lead, Wellcome Trust
- **Hazel Booth**, PhD researcher, University of Stirling
- **Maya Carlyle**, National Physical Laboratory (NPL)
- **Dr Yuwei Xu**, Assistant Professor, University of Nottingham
- **Dr Melanie McCarry**, Lecturer, University of Strathclyde
- **Dr Erin Shannon**, Research Associate, University of York
- **Prof Vanita Sundaram**, University of York
- **Jarita Holbrook**, Ass Prof University of the Western Cape & Marie Sklodowska-Curie Fellow, University of Edinburgh
- **Shomari Lewis-Wilson**, Senior Manager, Research Culture & Communities, Wellcome Trust
- **Dr Jost Migenda**, Research Associate, King's College London
- **Olugbenga [Abraham] Babajide**, PhD researcher, Heriot-Watt University
- **Dr Nicole Brown**, Lecturer, UCL
- **Dr Jane Essex**, Senior Lecturer, University of Strathclyde
- **Dr Anna Bull**, Founder, 1752 Group, Lecturer, University of York
- **Dr Addy Adelaine**, Cofounder & CEO, Ladders4Action

Roadblocks on the path to innovation: Creating inclusive research communities



Programme:

1. **Am I valued here?** (Wednesday 6th October 3:30pm)

Metrics of success are often promoted as a way of objectively measuring the value of research outputs and are important factors in who we employ and promote. This session will examine the nature of these metrics and challenge what is meant by success and excellence in academia.

Panellists: Khadija Mohammed, Hilary Noone, Prof Tessa Parkes, Dr Lilian Hunt.

2. **Am I seen here?** (Wednesday 13th October 3pm)

Visibility, or lack thereof, come with significant implications for researchers from underrepresented and marginalised identities. In this session we will discuss benefits, downfalls, and ambiguities of visibility with a focus on intersectionality and privilege.

Panellists: Hazel Booth, Maya Carlyle, Dr Yuwei Xu

3. **Am I safe here?** (Wednesday 20th October 3pm)

Bullying, harassment, and gender based violence must be eradicated from our universities and organisations. How can we demand that our institutions take accountability for ensuring that our places of work, study, and research are safe so that we may innovate without fear of abuse?

Panellists: Dr Melanie McCarry, Dr Erin Shannon, Prof Vanita Sundaram

4. **Am I represented here?** (Wednesday 27th October 3pm)

You cannot be what you cannot see...or hear. Representation matters and it isn't simply about visibility. How can we move beyond tokenism towards meaningful, substantive representation?

Panellists: Jarita Holbrook, Shomari Lewis-Wilson, Dr Jost Migenda

5. **Am I welcome here?** (Thursday 4th November 1pm)

Accessibility is much more than compliance to requirements. What do accessibility and inclusivity for all look like? This session will explore the notion of accessibility as key to more equitable and innovative research practice.

Panellists: Olugbenga [Abraham] Babajide, Dr Nicole Brown, Dr Jane Essex, Emrys Travis

6. **Am I going to thrive here?** (Wednesday 10th November 2pm)

One measure of inclusion is how our institutions handle complaints. Our universities and organisations must be responsible for ensuring that policies, procedures, and practices enable researchers to thrive. Who thrives more in our current research cultures - the abusers or those they abuse?

Panellists: Dr Anna Bull, Dr Addy Adelaine

Organised by:

Dr Jessica Gagnon (she/her), Research Fellow, STEM Equals, University of Strathclyde

Dr Katie Nicoll Baines (she/her), Project Manager for Evidence Base, University of Edinburgh

Dr Marco Reggiani (he/him), Research Associate, STEM Equals, University of Strathclyde

Knowledge Exchange

During the last year, the STEM Equals team was involved in a variety of knowledge exchange initiatives, both at the University of Strathclyde and in collaboration with other higher education institutions in the UK.

Pronouns Matter

In 2019, the STEM Equals team designed and facilitated at the Glasgow Science Centre the Pronouns Matter workshop to explore the relationship between identity and pronouns use and discuss the importance of gender-inclusive language to create more welcoming work environments. We run the workshop again in 2021 for the Pure and Applied Chemistry at the University of Strathclyde to support colleagues in creating more inclusive research environments.

Thriving Together

In September 2021, the STEM Equals team was invited to design and facilitate the Thriving Together workshop by Prosper – a project looking at postdocs' career development led by the University of Liverpool, in partnership with the University of Manchester and Lancaster University, and funded by the Research England RED fund. The workshop examined the benefits and challenges of engaging in the work necessary to create fully embedded inclusive policies and practices and, together with participants, we explored strategies for improving policies and practices to create more inclusive research communities.

We are currently working to run again the workshop with other partners in the sector, including the University of Sheffield and Manchester Metropolitan University.

A Case for Inclusion as Essential for Innovation

In January 2021, we were invited to create a teaching case study for the new Responsible Research and Innovation short course at the University of Strathclyde.

In the case study we discuss inclusion as essential for innovation, illustrate some consequences of non-inclusive design, and present findings and initiatives from STEM Equals. Additionally, we prompt students to complete an EIA (Equality Impact Assessment) to reflect on how to embed inclusion in the research practice.

The teaching case study can be accessed online at the following [link](#).



Conclusions

This report provides an insight into the research and the activities undertaken during 2021 by the STEM Equals project. While examining the experience of women and LGBT+ individuals in STEM through an intersectional lens, we collected evidence that adds to the understanding of the challenges, hostile working culture, bias, and systemic inequalities faced by underrepresented groups in STEM disciplines. At the same time, we continued to deliver evidenced-based initiatives to remove barriers to inclusion and engage with the community to widen access to STEM.

Adapting to the Pandemic and making change

The coronavirus pandemic has changed the way we work. Adapting to this difficult time required extra effort and disrupted the delivery of several initiatives. However, the STEM Equals team was able to achieve some of the key outcomes from the project. These include completing the analysis of data from our first phase of data collection, launching StrathPride (the Strathclyde LGBTQI+ Staff and PGR Students Network), and keep planning events and initiatives to highlight the contribution and improve the experiences of women and LGBT+ people in STEM.

During 2021, we put particular emphasis on using our findings to promote evidence-based change. For this reason, we engaged with institutional leaders, sector-wide partners, and national experts and policymakers. Results from this study led to recommendations on changing Strathclyde policy and practice that are now being shared with other Universities in Scotland. Findings from STEM Equals were included

in the 'Inquiry into Equity in the STEM Workforce' Final Report promoted by the All-Parliamentary Working Group on Diversity and Inclusion in STEM (see page 8).

Planning for the year ahead

Despite uncertainties and the challenges posed by the continuing pandemic, we have exciting plans for 2022. They include:

- A wide survey with staff and PhD students at Strathclyde to investigate working culture along with EDI issues emerging from phase one of the study.
- The LGBTQ+ STEMinar 2022, the longest running conference in world dedicated to showcasing the achievements of LGBTQ+ people in STEM (see page 14)
- Piloting a reciprocal mentoring scheme for senior management and leaders at Strathclyde to increase awareness around diversity, inclusion, and systemic challenges faced by underrepresented groups. (see page 10)
- Piloting a LGBTQI+ awareness training at for senior leaders at the University of Strathclyde (see page 10)
- Work to develop existing partnerships and establish new connections both within the UK and internationally.

By undertaking research and implementing these interventions, we will continue to support marginalised and underrepresented communities at Strathclyde, increase awareness around equality and diversity in academia, and contribute to building more inclusive STEM communities.

Meet the Team



Professor Becky Lunn, MBE, (she/her) is a Royal Academy of Engineering Research Chair and Head of the Centre for Ground Engineering and Energy Geosciences in the Department of Civil & Environmental Engineering at the University of Strathclyde. She is currently a member of EPSRC's Science Advisory Team for Engineering and has led more than £6M of research projects. In 2011, she was awarded the Geological Society's Aberconway Medal. Becky has a significant track record of supporting women in engineering and, in 2015, the Saltire Society named her one-of-ten 'Outstanding Women of Scotland'.



Dr Jessica Gagnon (she/her) is an educational sociologist focused on inequalities. She has worked in universities in the US and UK for 20 years. Dr Gagnon completed her PhD in Education and her MSc in Social Research Methods at the University of Sussex. She completed her MA in Higher Education at Santa Clara University. She completed her BA at Framingham State University. Dr Gagnon was a first-generation student from an American working-class, single mother family.



Dr Marco Reggiani (he/him) has been researching urban development, places, and mobilities—especially in the context of Japan—as well as inequities, diversity, and inclusion, in higher education and industry, particularly in STEM subjects. In addition to his research, he has taught and tutored at the postgraduate level and he is the award-winning author of '*Giappomania*', an illustrated book about Japanese culture and lifestyle available in five languages.

Advisory Board

Professor Scott MacGregor (he/him) is Vice-Principal of the University of Strathclyde (UoS) and chairs the Staff and Equality & Diversity Strategy Committees.

Annie McLaughlin (she/her) is responsible for the development and implementation of the University's Equality and Diversity strategy, priorities and plans, including the delivery of its Equality Outcomes.

Professor Susan Pyne (she/her) is Professor of Molecular Signalling, Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS).

Dr Joanna Renshaw (she/her) is a Senior Lecturer in Environmental Radiochemistry and Geomicrobiology, in the department of Civil and Environmental Engineering, UoS.

Professor Ian Rivers (he/him) is Executive Dean of the Faculty of Humanities and Social Sciences and Associate Principal at the University of Strathclyde.

Professor Zoe Shipton (she/her) is Professor of Geological Engineering in the department of Civil and Environmental Engineering and works on geological controls on fluid flow and quantifying geological uncertainty.

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The STEM Equals Project: 2021 Report

This report has been written by
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