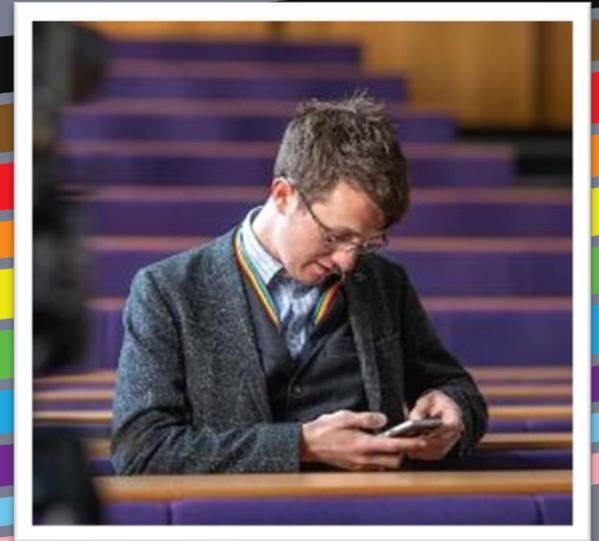
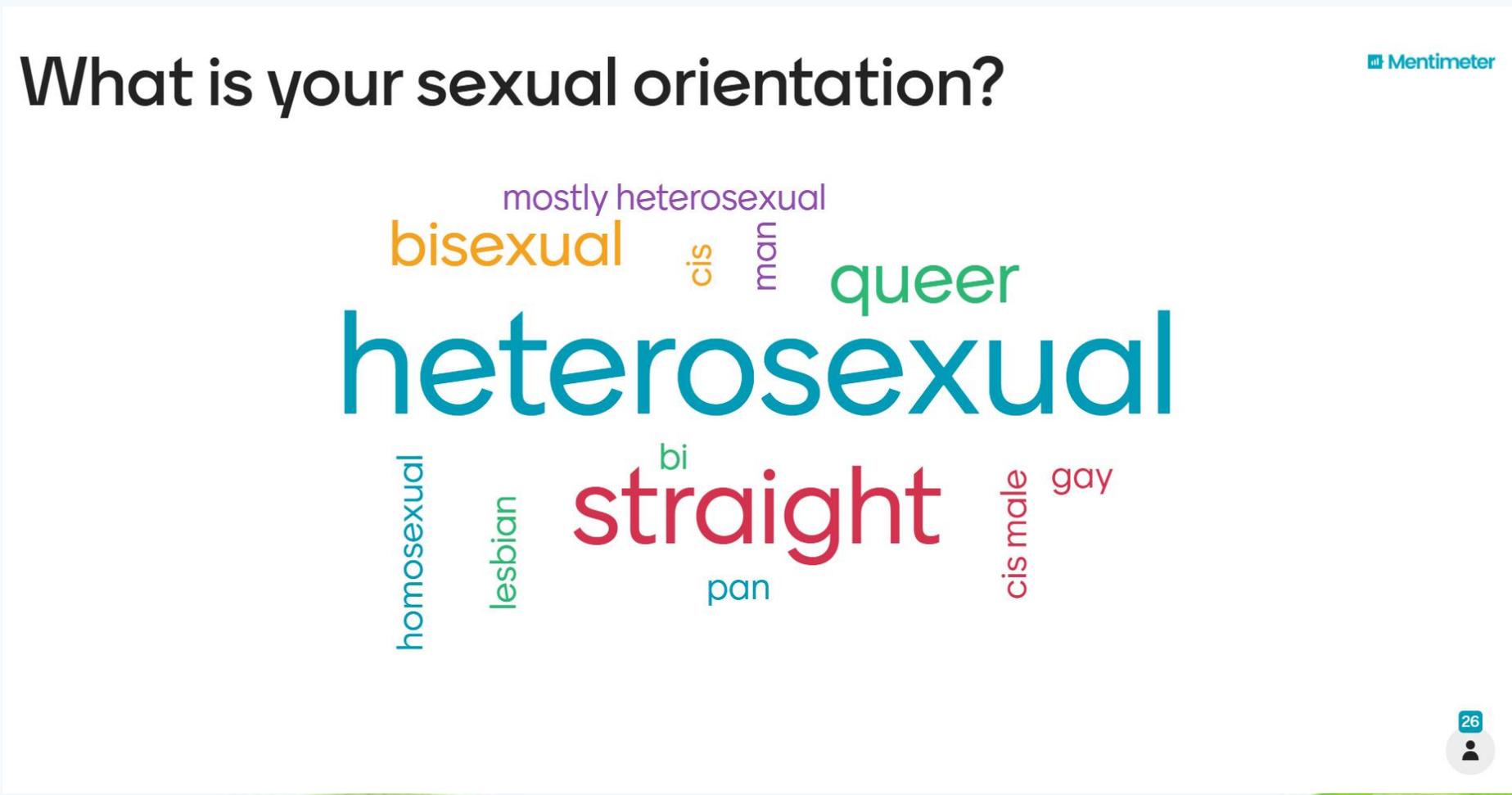


# Pride, power & privilege: *creating space for 2SLGBTQ+ in STEM*



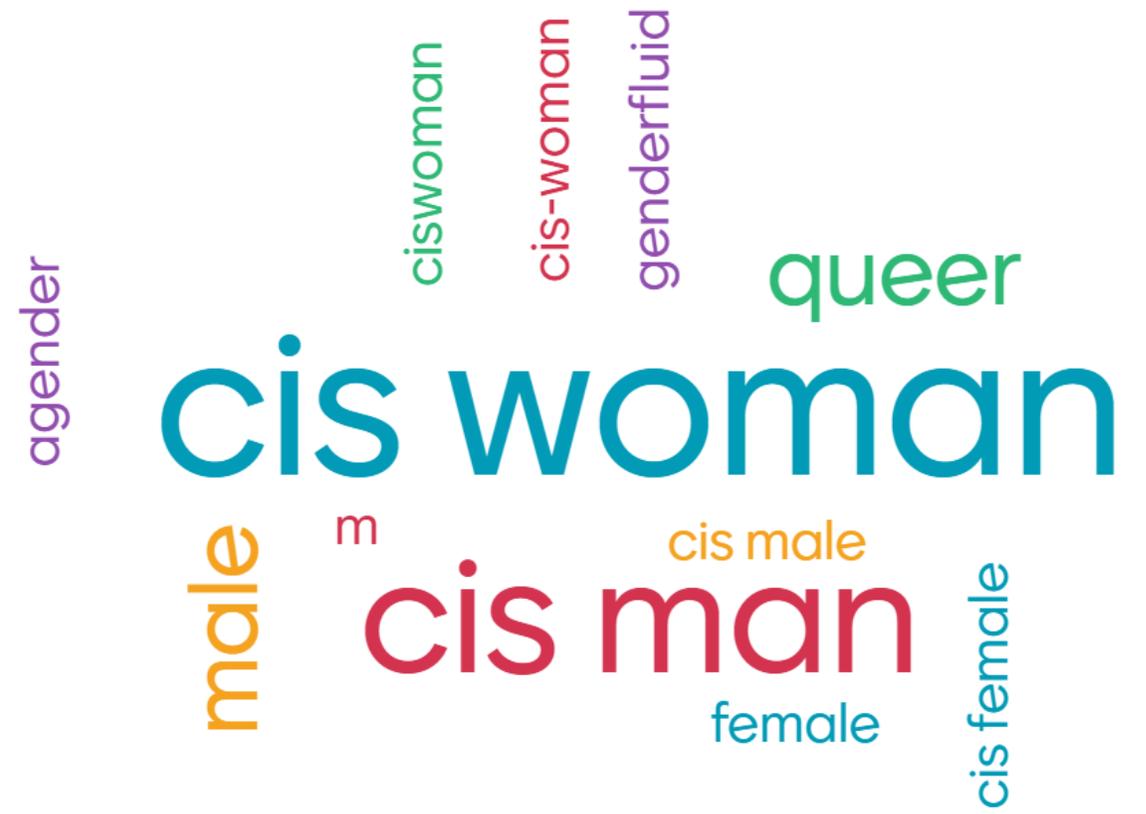
Dr Ben Britton (He/him), CEng, CSci, FIMMM  
🏳️‍🌈 t: @bmatb, e: ben.britton@ubc.ca

# Menti survey results

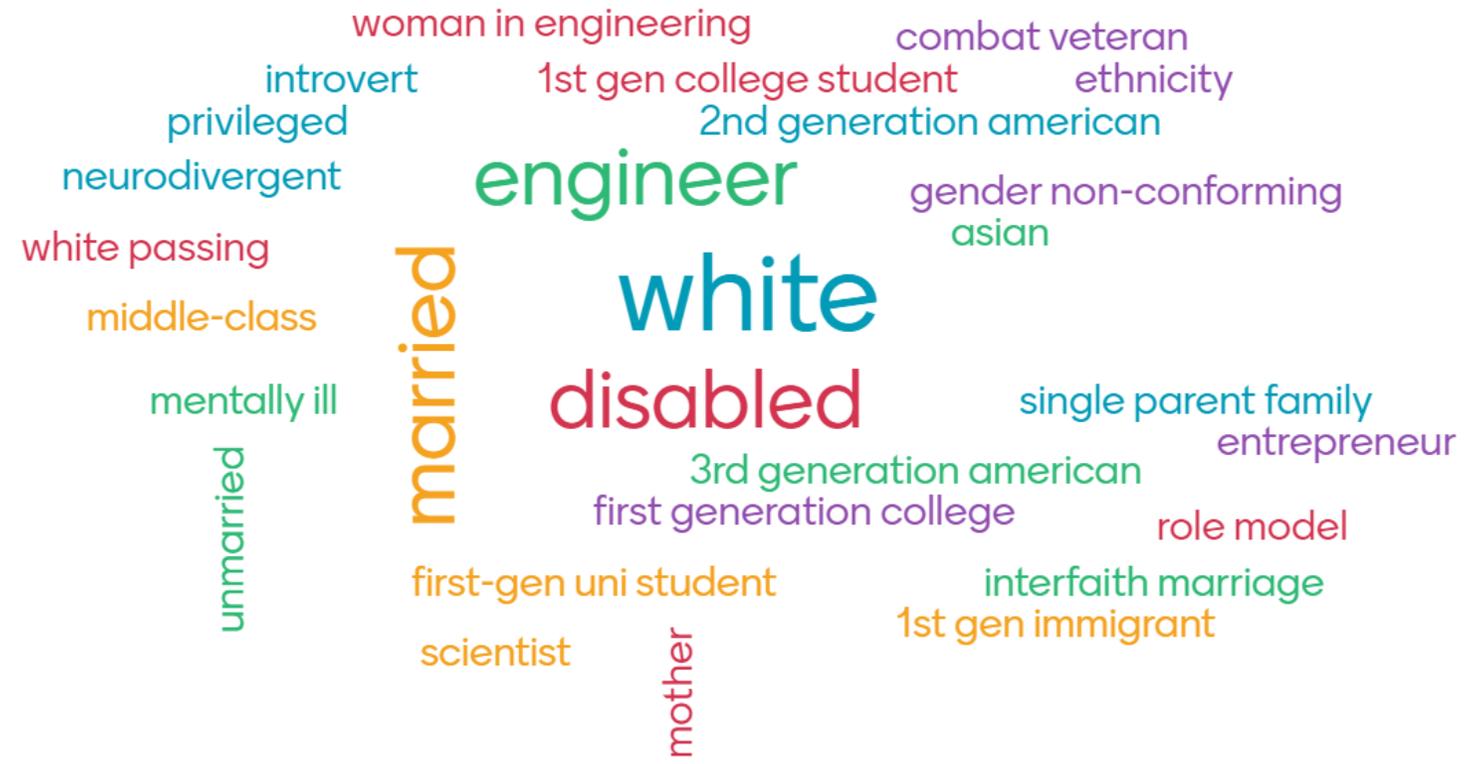


26

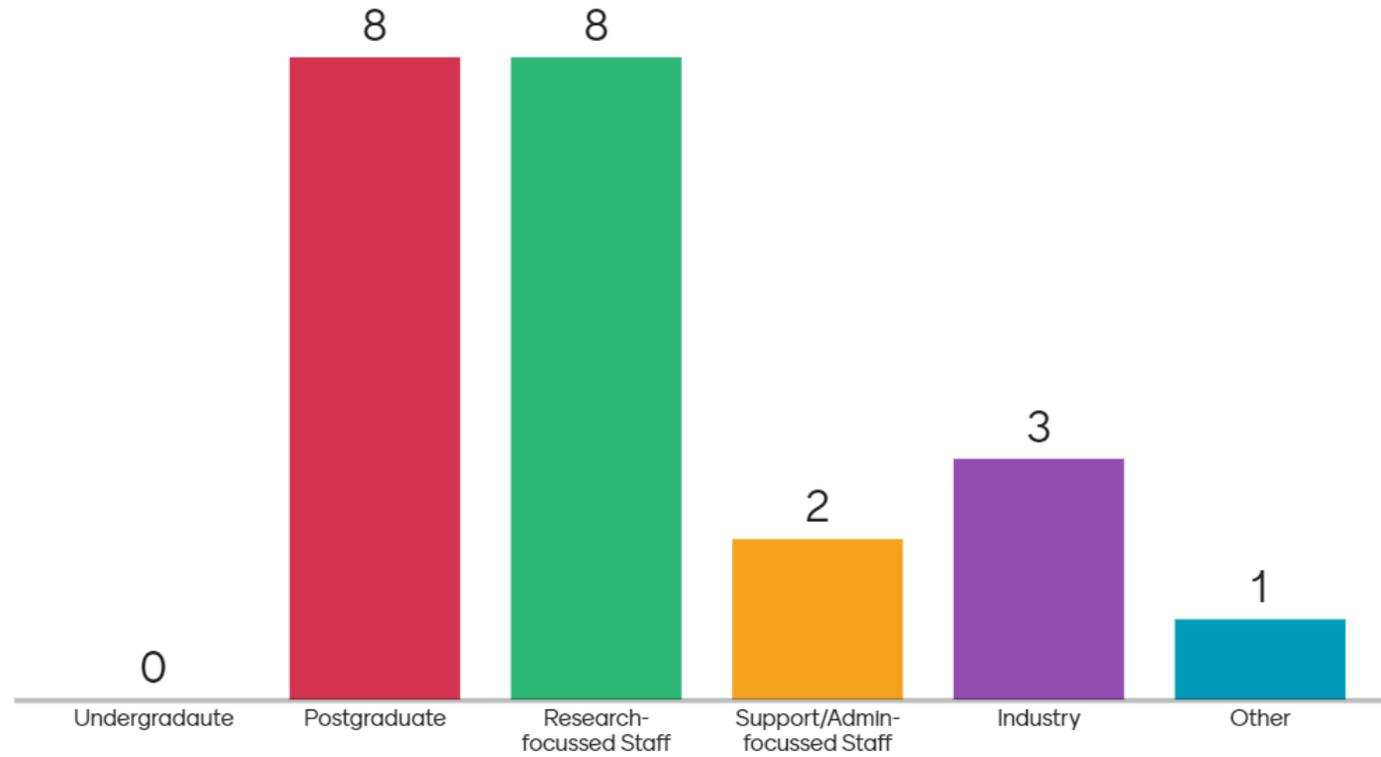
# Gender Identity



# Wider personal identity



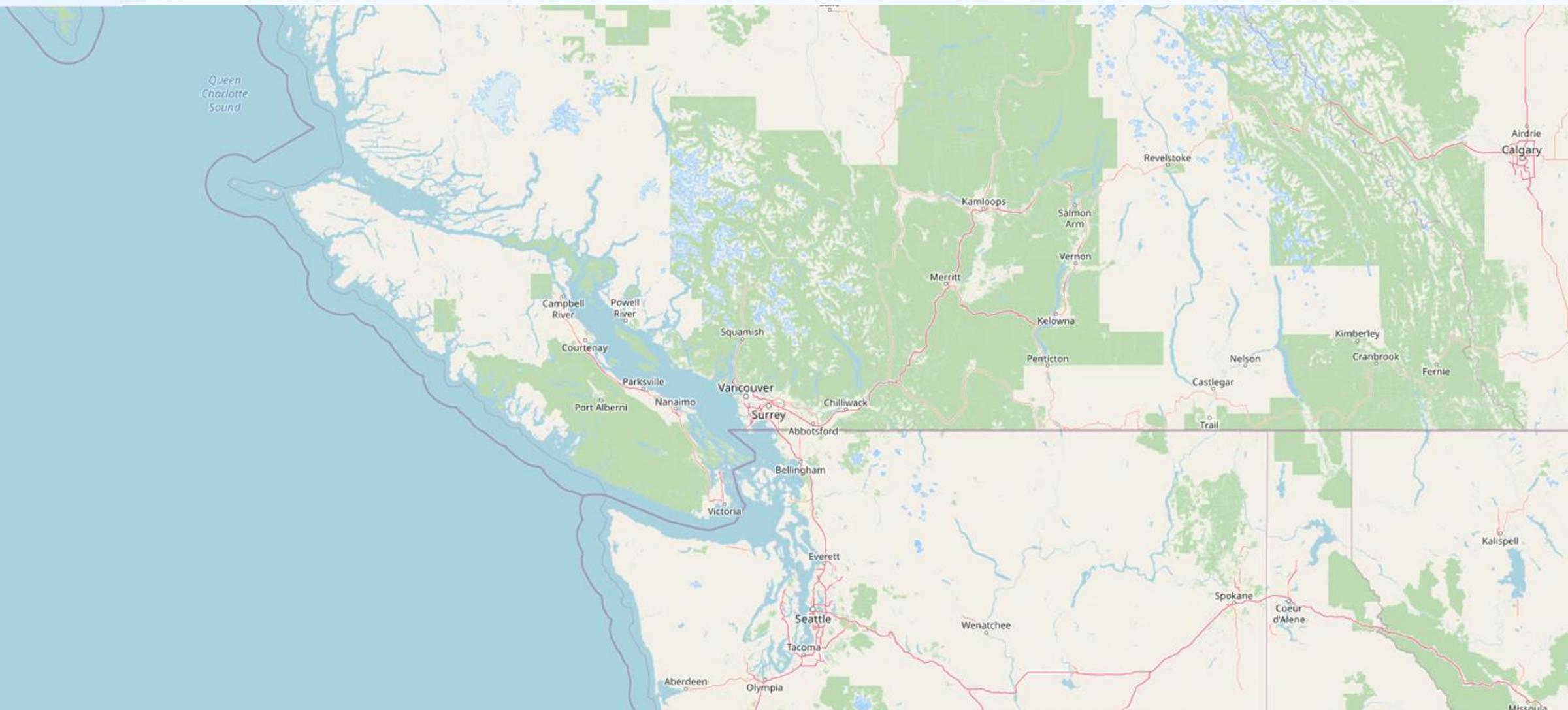
# What career stage are you at?



- *As a recent settler, I take a moment to recognise the land on which I talk, and how this influences our discussions*
- *I share from the Musqueam, Squamish and Tseleil-Waututh territories – and in this story, we can recognise that this is both unceded Coast Salish Territory and the city of Vancouver.*

<https://indigenous.ubc.ca/indigenous-engagement/musqueam-and-ubc/>

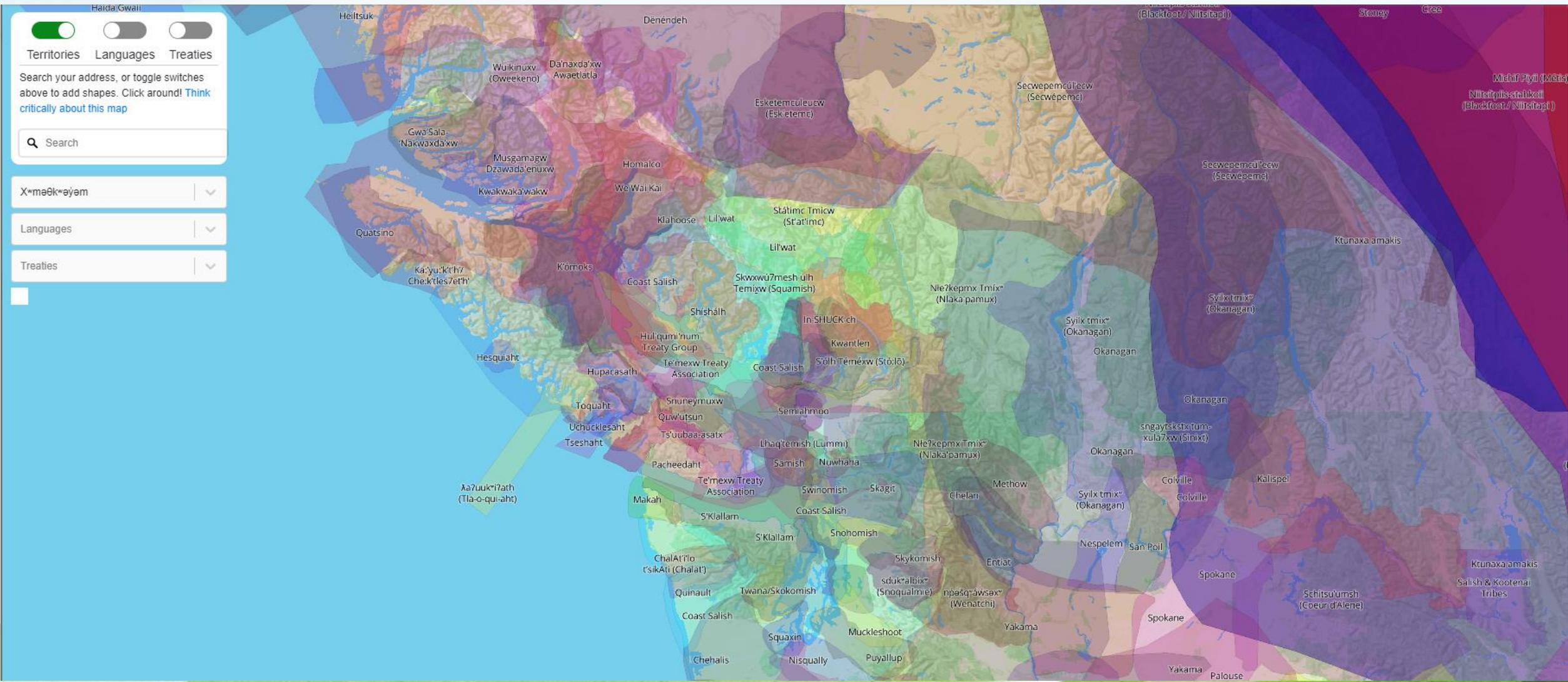
# *A sense of place...*



# A sense of place...



# A sense of place...



# A sense of place & the feeling of inclusion

- Our own lived experiences are important, and so are the histories of power and privilege, especially as we consider 2SLGBTQIA+ struggles to gain recognition, dignity, & equity
- These build upon the histories of our cultures, and how the Colonial-settler western-Europeans created, and sustained, so much damage across our societies

# The letters - 2SLGBTQIA+

2s = Two-spirit – a (relatively) modern term to link together first nations ideas that overlap with the LGBT+ (important re: indigeneity)

L = Lesbian

I = Intersex

G = Gay

A = Asexual

B = Bisexual

P = Pansexual

T = trans,  
(as different to cis)

NB = Non-binary (enby)

Q = queer

GNC = Gender nonconforming

Genderfluid, gender queer ...

M./F.A.A.B = Male/female assigned at birth

+ = more, considering the overlap of gender identity and sexual orientation

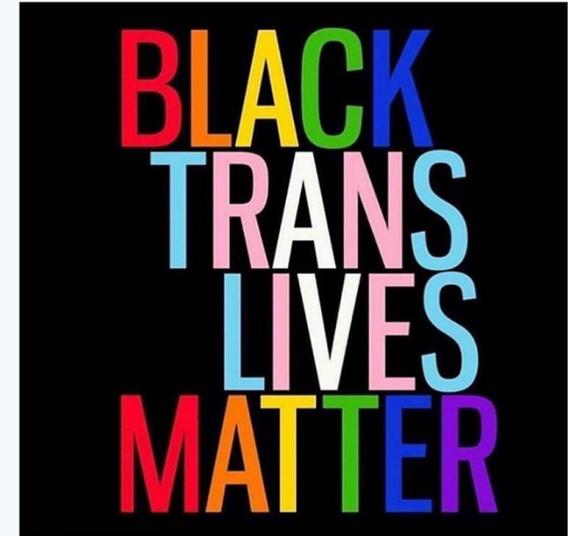
For those familiar to the SOGI (sexual orientation/gender identity) space, these letters can be familiar, but individual people will have ideas each word...

... based upon their lived experience

for allies, these letters can be intimidating (but please do learn about them!)

# Context: Stonewall Riots

- LGBT (Lesbian, Gay, Bisexual, Trans) uprising in response to a police raid
  - June 28, 1969 in NYC (the Stonewall Inn)
- Gay Americans faced an anti-gay legal system
  - Limited access to education, healthcare, jobs and more
  - We had/continue to have similar issues in the Canada, the UK, and beyond
- Stonewall Riots were led by Black Trans Women



[IG:@honeydijon](https://www.instagram.com/honeydijon)

# Context: Stonewall Riots

• LGBT (Lesbian, Gay, Bisexual, Transgender)

**Black trans people are disrespected in life and barely acknowledged in death – our lives matter too**

There is no revolution if it does not centralise the lives, ideas, and the spirits of all black folk



**Melz Owusu** | @MelzDot  
Tuesday 2 June 2020 13:20 | 33 comments



**LIVES MATTER**

[IG:@honeydijon](https://www.instagram.com/honeydijon)

• Stonewall Riots were led by Black Trans Women

<https://www.youtube.com/watch?v=Ej82vOV1iIA>



*Privilege*

What does “privilege” mean to you?

Menti.com – 9532 2555

# In STEM/Academia, what does "privilege" mean to you?

Being given the benefit of the doubt, almost all of the time

Have access to spaces restricted to others

Lack of discrimination about who you are

Reduced barriers to success, less stereotypes associated with you.

the ability to not carry as much baggage into my space and have freedom to think/work/learn ect without extra mental load

easier access to success

The assumption that I don't have to worry about being questioned about why / how I'm doing something.

Feeling like you belong somewhere without having to change who you are

Undeserved advantages

Getting to represent yourself, rather than always representing the minority group to which you belong

To have opportunities available to you without restrictions



**Marie Beecham**

@mariejbeech



Replying to [@mariejbeech](#)

Privilege isn't the presence of perks and benefits. It's the absence of obstacles and barriers. That's a lot harder to notice. If you have a hard time recognizing your privileges, focus on what you don't have to go through. Let that fuel your empathy and action.

7:46 AM · Mar 30, 2021 · Twitter for iPhone

# Identity & Privilege

- To understand privilege we explore identity...
  - Often via characteristics/classes
  - (foolishly) binary or simple 'categories'
  - often unfounded in reality
  - Our understanding/identity/culture evolves
- Many of these are curated to sustain control
  - i.e. 'enable' sorting
  - Allocation of resource
  - Continue the status quo... (the census is political!)

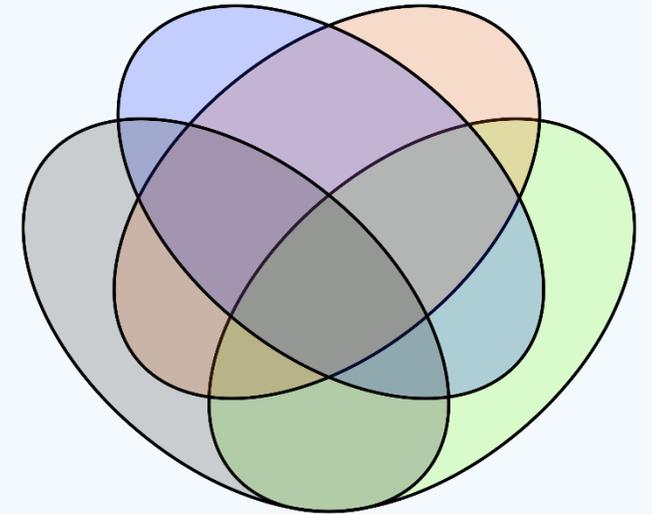
In EDI spaces -

Recognition of diversity often via (uncertain) proxies of visible status, with respect to the dominant group

Shifts the conversations to give power to the 'haves'

# Privilege and intersectionality

- People are complex & have multiple aspects to their identities
- Reductionist approaches help people count
- Intersectionality coined by Prof Kimberlé Crenshaw, Columbia Law School in 1989 (!)
- Reflects intersecting social identities empower & sustain oppression



“An intersectional analysis considers all the factors that apply to an individual in combination, rather than considering each factor in isolation.”

For more reading:

“Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics”

Kimberlé Crenshaw <https://philpapers.org/archive/CREDTI.pdf>

<https://www.vox.com/the-highlight/2019/5/20/18542843/intersectionality-conservatism-law-race-gender-discrimination>

<https://en.wikipedia.org/wiki/Intersectionality>

# Privilege and opportunity

- *Are the privileged better? (ha, no)*
- *People who 'fit' into the privileged category (e.g. white men) may be good enough...*

*... BUT why are people not able to participate fairly?*

# What is my Privilege?

- I am...

- White
- Male
- Cisgender
- Private school educated
- Born & working the global north
- Academic full time staff
- Able
- British / well spoken
- Still on good terms with family

- My 'otherness'

- Queer/gay
- Neurodivergent
- (recent) Settler

*Even this dissection of an individual favours the 'majority' aspects...*

*Human beings are a tapestry of identity, and STEM is hostile to hints of difference*

# What barriers and obstacles exist?

- *Individual vs systems based*
  - *Inherited within a context*
    - *historical perspective → colonisation, historical religion, geopolitics, changing attitudes)*
    - *Factors outside 'our control' → how do we create accommodations?*
- *Locked in → culture & systems*
  - *How people behave vs how people 'should behave'*
  - *How professional are you?*

# EDI – a dynamic journey, for everyone

- To support EDI – how do we build trust, understand priorities, and what's our end goal?
- Care with categorisation
  - gender → erasure of non-binary?
  - BAME → erasure of Black issues?
  - BIPOC → erasure of nuance / clustering of 'other'?
  - LGBTQ+ → erasure of B, (IAQ)+
- What about the intersection?
- Recognise that the journey is dynamic and we are still learning



**Sarah Greene**  
@carbonatefan

Lately, geoscientists seem to be interrogating historical diversity statistics for prizes & publications a fair bit. This work can involve assigning likely gender based on given names. This piece left me wondering if we should collectively hit pause: [arxiv.org/abs/1907.04893](https://arxiv.org/abs/1907.04893) 1/4

1:04 PM · Jul 17, 2020 · Twitter Web App

## The Nonbinary Fraction: Looking Towards the Future of Gender Equity in Astronomy

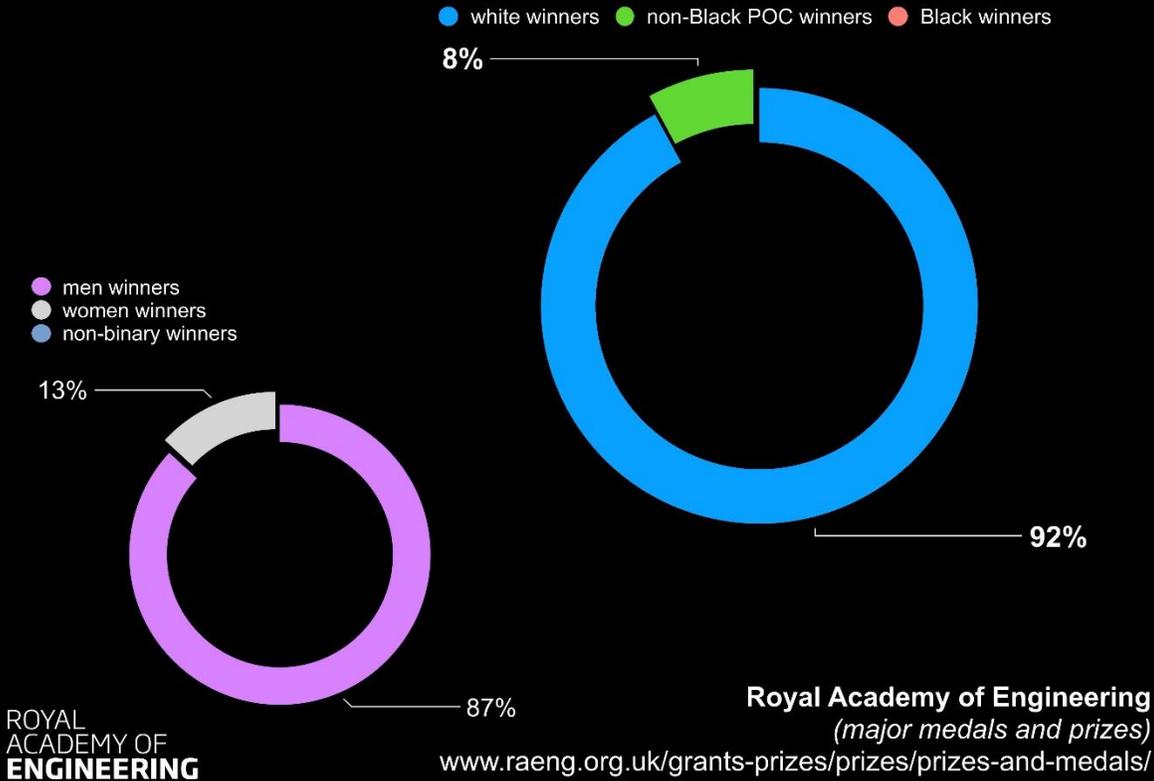
*A State of the Profession Consideration*

Kaitlin C. Rasmussen<sup>1,2,\*</sup> (she/they), Erin Maier<sup>3</sup> (they/them), Beck E. Strauss<sup>4,\*\*</sup> (they/them), Meredith Durbin<sup>5</sup> (they/them), Luc Riesbeck<sup>6</sup> (they/them), Aislynn Wallach<sup>5</sup> (they/them), Vic Zamloot<sup>7</sup> (they/them), Allison Erena<sup>8</sup> (they/them)

<https://arxiv.org/abs/1907.04893>

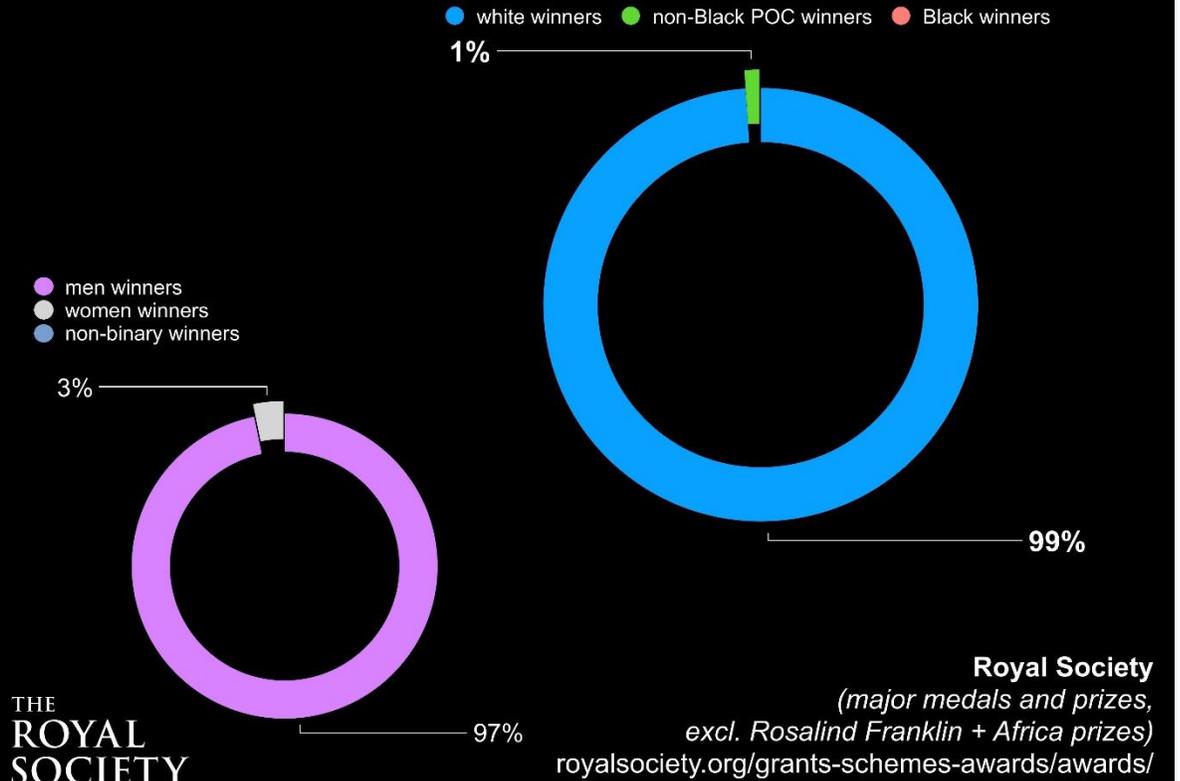
# Meritocracy – ‘stick with the science’?

## UK engineering medals and prizes



## UK science medals and prizes

Analysis by @jesswade



Limited data for LGBTQ+, TMS analysis not yet performed...  
(note... based upon static, ‘visible’ minority status)

# Read the room

- *In one room my “minority status” has an impact*
- *In the next, I’m just another white guy*

# Privilege – is it static?

- *If you are in difference spaces, does your (relative) privilege change?*

*in an 2SLGBTQ+ space, as a gay-white-man I am often in the majority...*

*... how does that change how I should consider my actions, my behaviour, and who I amplify/spend time with?*

# Check yourself...

- Take a few moments to think about your journey and what barriers you have and have not had to overcome.
- How do you find/know about these barriers?  
#AreYouReallyListening #WhoAreYouListeningTo
- How does this change what you take for granted?
- How does this change your access to opportunity?
- How does this impact your 'bad' days (and set backs)?



*Power*

What does “power” mean to you?

Menti.com – 9532 2555

# In the context of this talk, what does "power" mean to you?

Power is the ability to leverage one's identity to act in their favor, either knowingly or unknowingly

Ability to make decisions and influence outcomes for yourselves and others

You get your way more often than not.

Ability to impose on others

Ability to influence others

Who is in charge or in control

the ability make change, be heard, influence, and get your way with little struggle

Ability to erect and dismantle barriers for success for people who work for you.

A presumption of control or influence.

*We are the system*

*We create power, we share power,  
we bow to power, we are oppressed by power*

*(we often don't have a choice in this...)*

# Drivers to make change

- *Systems based problems*
  - *International,*
  - *N America, US/Can/UK-wide,*
  - *HE-sector,*
  - *your University,*
  - *your research group,*
  - *your teaching group,*
  - *your friendship group,*
  - *your family...*
- *Solutions are created by people*
  - *Context of power*
  - *We won't fix everything at once*
  - *We will make mistakes*
  - *People will have different priorities*
  - *People have different access to resource & influence*
  - *BUT the status quo is shit...*

# Power

*\*care with the minority tax...*

- *What is power?*
  - *The ability to effect change*
  - *Persuading others*
  - *Autonomy – being free to do what you want\*?*
- *In academia, how do people get it?*
  - *Credentials/qualifications*
  - *Being hired, invited, and more...*

World View | Published: 10 October 2019

## Academia is not a meritocracy

Alon Zivony 

*Nature Human Behaviour* **3**, 1037(2019) | [Cite this article](#)

**2155** Accesses | **87** Altmetric | [Metrics](#)

**Evaluating PhD students by their publications may have the outward appearance of a meritocracy, but as long as students from minority groups do not enjoy the same privileges as their peers, the playing field is anything but level, argues Alon Zivony.**



**Dr Claudia Antolini** 🌌🚀 #BLM she/her 🐾

@CA\_AstroComm



"I won't compromise quality for diversity"

You won't. Increasing diversity enhances an event.

If you believe the opposite, maybe the following is true:



**Dr L** @drperezdiaz · 19h

Going through public responses to a survey about some organisation's events & EDI... "The only criterion should be the quality of the event and should not be influenced by ideas of diversity which in my view are futile and counterproductive"  
#fml

11:48 AM · Feb 23, 2021 · Twitter Web App

# Gender and sexual minorities in astronomy and planetary science face increased risks of harassment and assault

**Christina R. Richey<sup>a</sup>, Katharine M.N. Lee<sup>b</sup>, Erica Rodgers<sup>c</sup>, and Kathryn B.H. Clancy<sup>b,d</sup>**

<sup>a</sup>Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, USA

<sup>b</sup>Department of Anthropology, University of Illinois at Urbana-Champaign, Urbana, IL, USA

<sup>c</sup>Space Science Institute, Boulder, CO, USA

<sup>d</sup>Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign, Urbana, IL, USA

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- *“The majority of scientists holding positions of high power, influence, or rank in astronomy and planetary sciences do not hold minority identities.”*
- *There is a significant difference between the frequency of hearing negative remarks from LGBTQPAN women vs cis-straight-women, including homophobia, transphobia, and about religion or lack thereof.*
- *62% of cisgender male respondents had heard sexist comments from their peers in the work environments. 78% of cisgender straight women. 81% for LGBTQPAN women.*

# Representation

Page  
The f

**Dr Jess Wade** @jesswade · Jun 1

Meet Prof Valerie Stone (@valstonemd), phenomenal physician and leader @harvardmed + @BrighamWomens. Stone has studied why HIV/AIDS is so prevalent in communities of colour; healthcare inequities now exposed w/#COVID19. New @wikipedia page: [en.wikipedia.org/wiki/Valerie\\_E...](https://en.wikipedia.org/wiki/Valerie_E...) #womeninSTEM

**Valerie E. Stone**  
From Wikipedia, the free encyclopedia

**Valerie Ellen Stone** (born 1958) is an American physician who is a Professor of Medicine at the Harvard Medical School. She serves as Vice Chair for Diversity, Equity, and Inclusion, Department of Medicine, Brigham and Women's Hospital. She specialises in the management of HIV/AIDS, health disparities and improving the quality of medical education.

|                            |  |
|----------------------------|--|
| <b>Valerie Ellen Stone</b> |  |
| <b>Born</b>                | 1958 (age 61–62)   |
| <b>Alma mater</b>          | Yale School of Medicine<br>Harvard T.H. Chan School of Public Health   |
| <b>Scientific career</b>   |  |
| <b>Institutions</b>        | Case Western Reserve University<br>Brigham and Women's Hospital<br>Brown University<br>Massachusetts General Hospital<br>Mount Auburn Hospital |

**Contents** [hide]

- Early life and education
- Research and career
  - Academic service
  - Awards and honours
- Selected publications
- Personal life



**Academic service** [edit]

Stone was appointed a Fellow of the American College of Physicians in 1996.<sup>[R]</sup> From 2001 to 2014 Stone directed the primary care residency programme at Massachusetts General Hospital, and used the opportunity to transform the curriculum.<sup>[11]</sup> As part of this effort Stone created training programmes in cross-cultural care, health policy and women's health.<sup>[11]</sup> She was elected to the American College of Physicians Board of Regents in 2008, and held this position for over 6 years.<sup>[R][12]</sup> From 2012 to 2014 she served as Chair of the Education and Publications committee.<sup>[R]</sup> She serves on the Advisory Board of the Fenway Institute National LGBT Health Education Alliance.<sup>[11]</sup>

**Awards and honours** [edit]

- 1996 Fellow of the American College of Physicians<sup>[R]</sup>
- 2012 Society of General Internal Medicine Elnora Rhodes Award<sup>[R]</sup>
- 2017 Action for Boston Community Development Hero Award<sup>[11]</sup>
- 2018 Massachusetts Chapter Laureate Award<sup>[14]</sup>
- 2020 American College of Physicians W. Lester Henry Award for Diversity and Access to Care<sup>[1]</sup>
- Justice in Health Award from Justice Resource Institute Health<sup>[15]</sup>



Valerie Stone, MD and 4 others

2 29 71

- Evan Davis
- Michael Dillon
- Michael Francis Fay

- Simon LeVay
- Anson W. Mackay

**Dr Jess Wade** @jesswade · Feb 16, 2019

Meet A/ Prof Jon Freeman, psychologist + neuroscientist @nyuniversity. Freeman studies how stereotypes impact visual processing using computational modelling + neuroimaging. He won the NOGLSTP LGBT scientist of the year. New @Wikipedia page: [en.wikipedia.org/wiki/Jon\\_Freem...](https://en.wikipedia.org/wiki/Jon_Freem...) #LGBTM19

**Early life and education** [edit]

Freeman received his BA from New York University in 2007, where he first studied social psychology.<sup>[1]</sup> He earned his PhD at Tufts University in 2012, where he worked with Heidi Ambady.

**Research and career** [edit]

After his doctorate, Freeman joined the faculty of Dartmouth College as an Assistant Professor.<sup>[R][2]</sup> He moved to New York University as an Assistant Professor in 2014, and was promoted to Associate Professor in 2018.<sup>[4]</sup> He directs the Social Cognitive and Neural Sciences Lab.<sup>[4]</sup> His research combines behavioural paradigms with computational modeling and human neuroimaging techniques such as functional magnetic resonance imaging.<sup>[1]</sup>

Broadly, Freeman investigates how we form social judgments and first impressions. In particular, his work has shown that, because facial cues are often complex and ambiguous, multiple "partial" perceptions must initially compete over fractions of a second. This dynamic competition is argued to be central to the ability to form social judgments.<sup>[6]</sup> His research has proposed





people in STEM are less represented than expected, reporting negative workplace experiences, and leaving STEM fields at a high rate.<sup>[R]</sup> Realising the importance of comprehensive data, he led a collaborative effort with the support of 17 scientific organisations asking the National Science Foundation to include questions about sexual orientation and gender identity in their national STEM workforce surveys.<sup>[R]</sup> LGBT data from these surveys is critical for researchers and policymakers to be able to understand and address potential disparities and disadvantages of LGBT people in U.S. STEM fields, and for potential inclusion in diversity initiatives. The National Science Foundation is currently piloting these questions for future surveys.<sup>[R]</sup>

**Awards** [edit]

- 2019 LGBT Scientist of the Year, National Organization of Gay and Lesbian Scientists and Technical Professionals<sup>[R]</sup>
- 2018 Association for Psychological Science Janet T. Spence Award for Transformative Early Career Contributions<sup>[R]</sup>
- 2017 Society for Social Neuroscience Early Career Award
- 2017 National Science Foundation CAREER Award<sup>[R]</sup>
- 2016 Innovation Award, Social and Affective Neuroscience Society
- 2016 Early Career Award, International Social Cognition Network<sup>[7]</sup>
- 2016 SAGE Young Scholar Award, Foundation for Personality & Social Psychology
- 2015 Rising Star Award, Association for Psychological Science<sup>[R]</sup>
- 2015 Forbes Magazine's 30 Under 30<sup>[R]</sup>
- 2014 Pacific Standard Magazine's Top 30 Thinkers Under 30<sup>[R]</sup>

Jon Freeman and 6 others

1 19 68

- Tom Welton
- Sophie Wilson
- Tristram Wyatt

n more).

# Speaking truth to power?

- Does everyone have free reign to do this?
- When do you have the power to do this?

e.g. I have tenure, I'm white, I'm a guy, I have been taught how the establishment works (private school), I have been taught to argue (Oxford)...

... BUT care to adhere to "nothing about us, without us"

amplify where possible, listen lots, these conversations are happening

# Methods to address power

- *Power is cultural, and sustained by people via systems & (learned) societies*
- *We can create tools to help...*
  - *Unionise (formal and informal) → 2SLGBTQ+ staff/student networks*
  - *Policy → but creating policy is not an ACTION*
  - *Anti harassment/anti discrimination enforcement & culture change*
  - *Transparency in communication & decision making*
  - *Audit distribution of power (representation!!! → a proxy assessment)*

# Questioning power & 2SLGBTQ+

- *Most conversations assume cis het norms*
- *Many activities/meetings/systems/approaches do not cater to "OTHER"*
- *If you are participating, considering whether you can force accommodations, e.g. an #AllyPledge*
  - *For 2SLGBTQ+ issues, AND for other advantage/disadvantage*

# Imposter syndrome

- Do I belong here?
- Society (broadly) has rejected 2SLGBTQ+ people
  - It is getting ~better
- BUT there are lots of bigots amongst us, AND lots of passive actions that sustain inequality
- In academia, this continual “are you good enough” question and ALL THE GATES creates & sustains imposter syndrome



*Space*

*Do 2SLGBTQ+ people have space in STEM?*

# In 2SLGBTQ+ in STEM , what does "pride" mean to you?



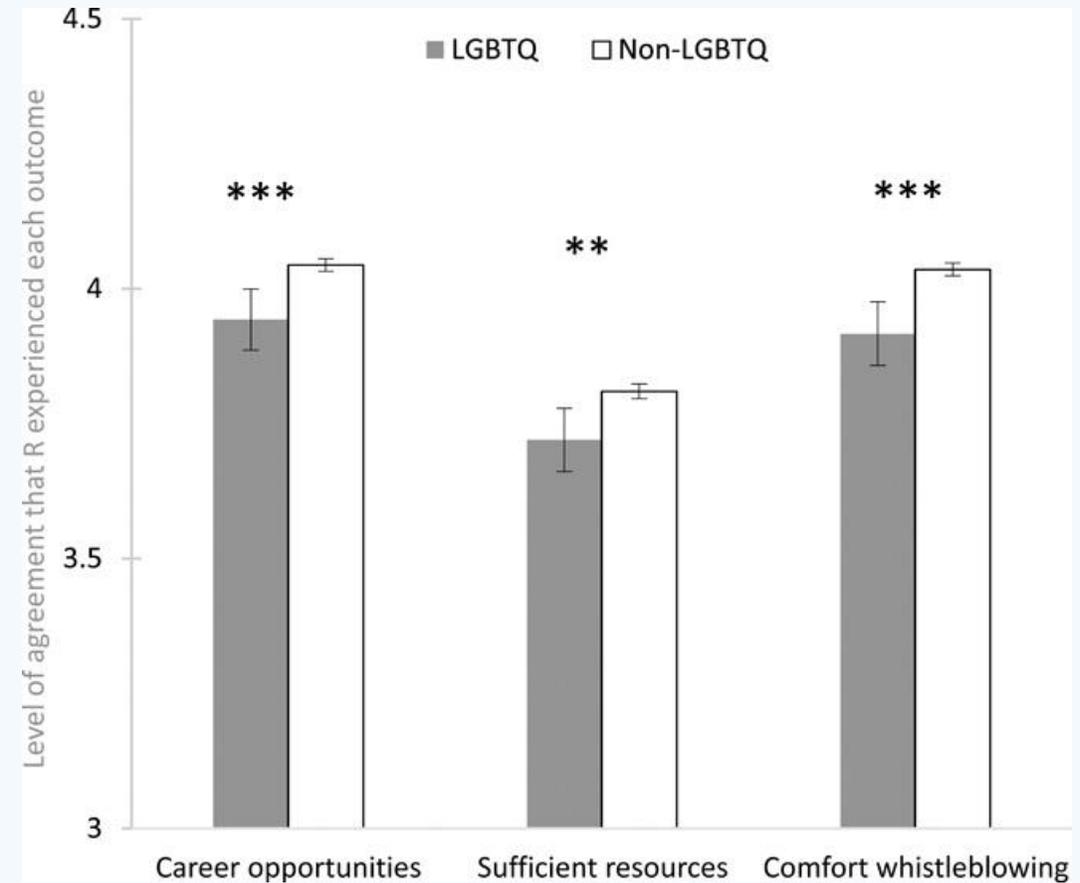
Acknowledgement of one's identity - either verbally or non-verbally.

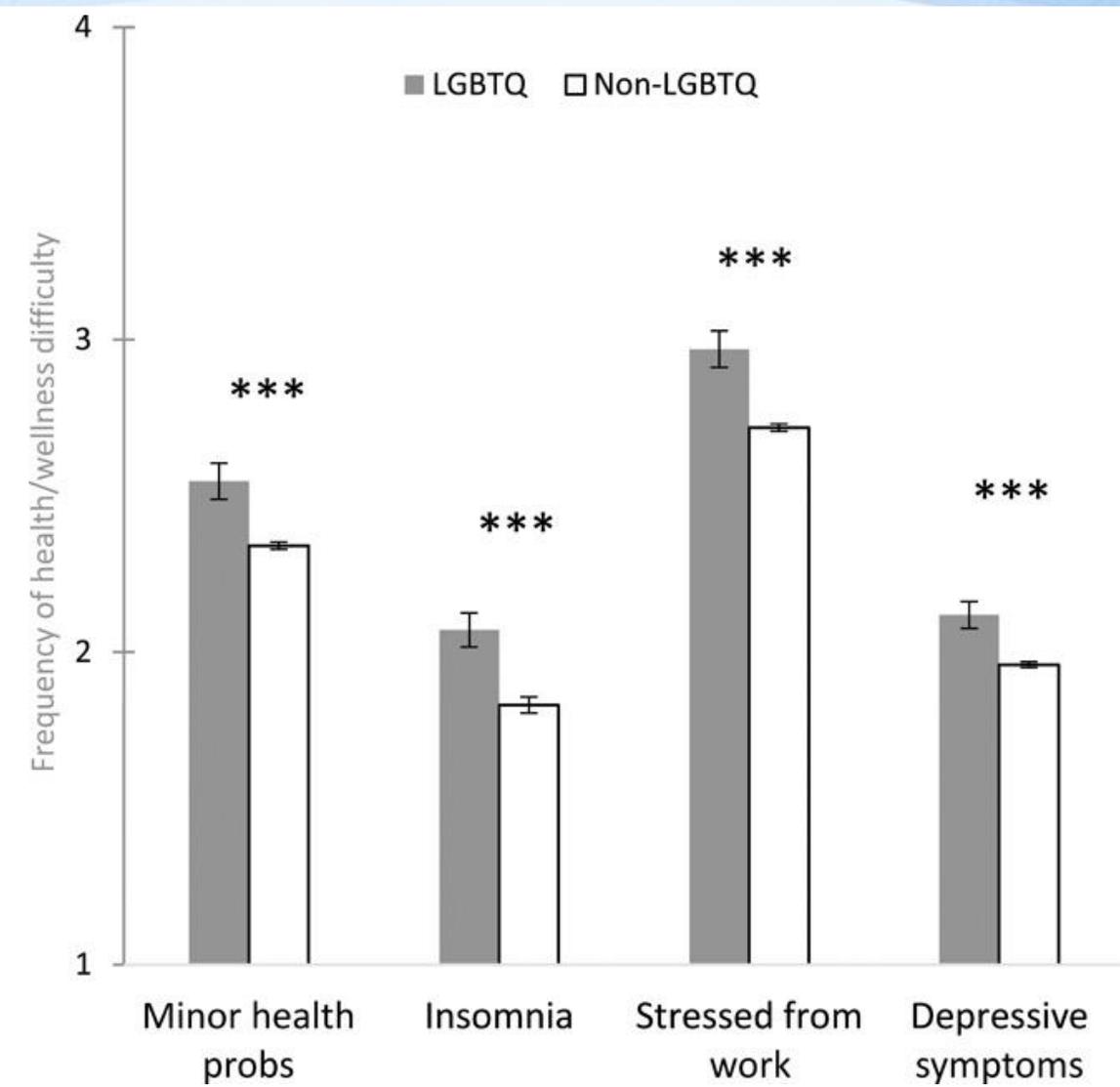
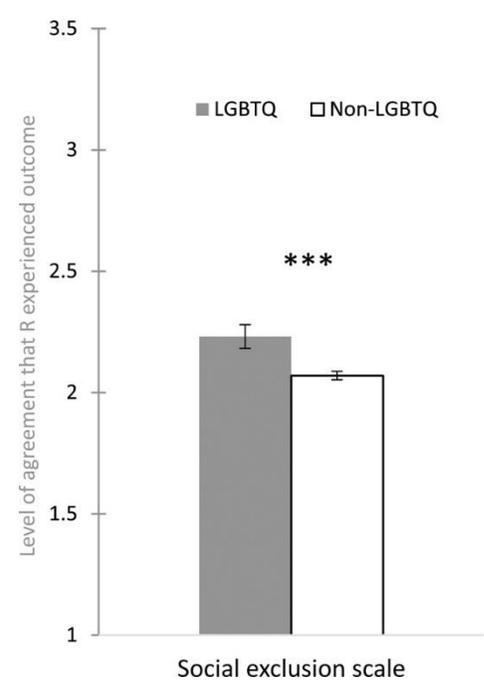
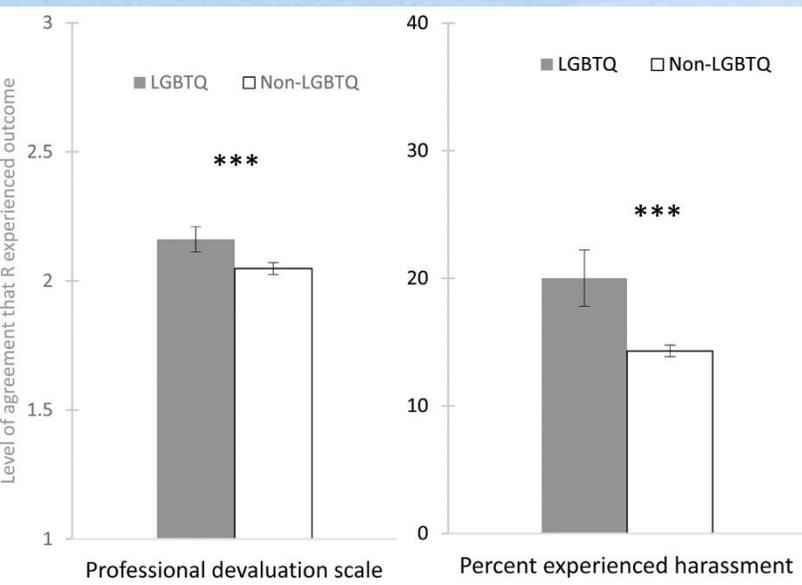
A sense of accomplishment in mutual success rather than success built on inequality or at the expense of others.

Being honest and open about my identity

# LGBT+ STEM Experience

- Significant evidence of widespread workplace experience inequalities for LGBT employees compared to non-LGBT colleagues [1]
  - Uncorrelated with age, tenure, and demographic diversity
- Systematic inequalities for LGBTQ professionals in STEM [2]





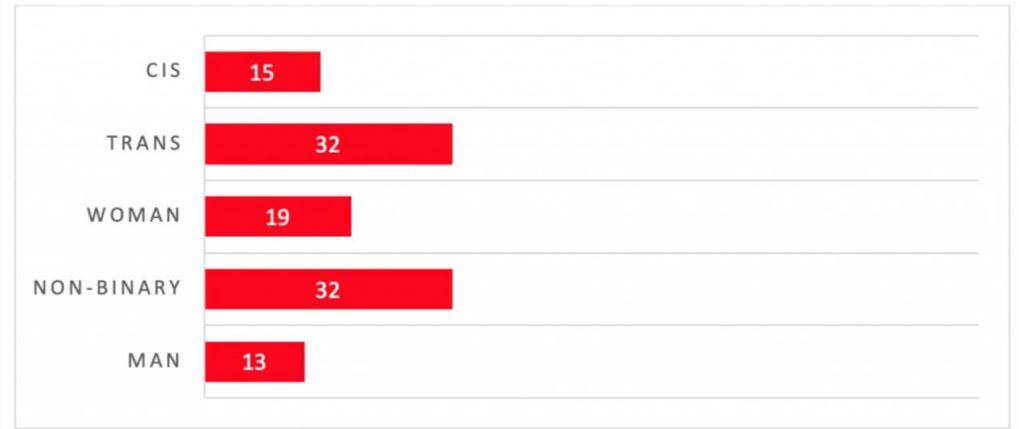
*(the stick to the science crowd can stick it right now)*

# EXPLORING THE WORKPLACE FOR LGBT+ PHYSICAL SCIENTISTS

A report by the Institute of Physics, Royal Astronomical Society and Royal Society of Chemistry



**Figure 1:** Percentage of respondent reporting their perceptions with regards to their comfort within their organisations environment by gender (excluding “comfortable” and “very comfortable”). Source Exploring the Workplace for LGBT+ Physical Scientists (2019)- Institute of Physics, Royal Astronomical Society and Royal Society of Chemistry



**Figure 2:** Percentage of respondents who have experienced exclusionary, intimidating, offensive or harassing behaviour with respect to their sexual or gender identity, as broken down by trans status and by gender. Source: Exploring the Workplace for LGBT+ Physical Scientists (2019)- Institute of Physics, Royal Astronomical Society and Royal Society of Chemistry

# EXPLORING THE WORKPLACE PHYSICAL SC

A report by the Institute of Physics, Royal  
and Royal Society of Chemistry

**nature**  
International journal of science

NEWS • 27 JUNE 2019

## Discrimination drives LGBT+ scientists to think about quitting

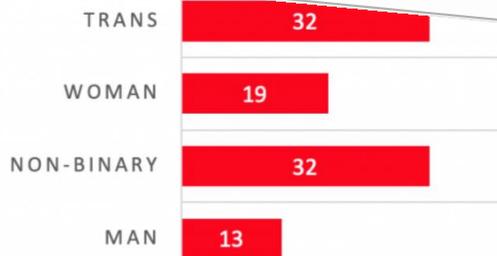
*Despite progress, many physical scientists from sexual and gender minorities experience  
exclusion or harassment at work, finds UK survey.*

Elizabeth Gibney

Very Uncomfortable Uncomfortable Neither comfortable or uncomfortable

WOMAN 19 20

receptions with regards to their comfort  
including "comfortable" and "very  
LGBT+ Physical Scientists (2019)- Institute  
of Chemistry



**Figure 2:** Percentage of respondents who have experienced exclusionary, intimidating, offensive or harassing behaviour with respect to their sexual or gender identity, as broken down by trans status and by gender. Source: Exploring the Workplace for LGBT+ Physical Scientists (2019)- Institute of Physics, Royal Astronomical Society and Royal Society of Chemistry



ROYAL SOCIETY  
OF CHEMISTRY

IOP Institute of Physics

EDITORIAL · 02 JULY 2019

# Nature is proud to support Pride in STEM

## This year's International Day of LGBTQ+ People in Science, Technology, Engineering and Maths has our fullest backing.



The charity Pride in STEM co-founded the International Day of LGBTQ+ People in Science, Technology, Engineering and Maths. Credit: Christopher Carpineti/Pride in STEM

portable or uncomfortable

[PDF version](#)

### RELATED ARTICLES

**Discrimination drives LGBTQ+ scientists to think about quitting**



**LGBTQ scientists are still left out**



**Stepping up to be a role model for LGBTQ inclusion in science**



th regards to their comfort  
portable” and “very  
Scientists (2019)- Institute  
stry

y, intimidating,  
identity, as broken

Scientists (2019)- Institute of Physics, Royal Astronomical Society and Royal Society of Chemistry



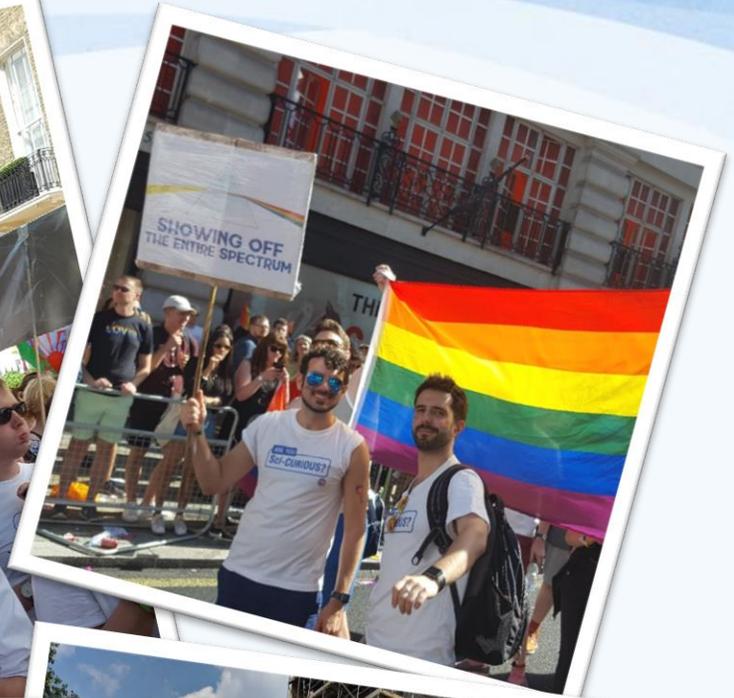
*Creating space &  
rebalancing power...*

What does “pride” mean to you?

Menti.com – 9532 2555

# @PrideinSTEM

- UK Charitable Trust
  - Founded in 2016,  
and led by Dr Alfredo Carpineti
- 'Queer up science space' &  
'Science up queer spaces'
- Outthinkers, #LGBTSTEMDay,  
policy work, outreach +more



PRIDE IN STEM

GOING TO PRIDE TO SHOWCASE AND  
SUPPORT ALL LGBTQ+ PEOPLE IN SCIENCE,  
TECH, ENGINEERING AND MATHS

#PrideMatters

prideinlondon.org



<https://www.youtube.com/watch?v=Sy200FOXrMk>



# *Improving Culture*

# Creating space



**Prof Ben Britton**

@BMatB



Hi 2SLGBTQ+ in STEM folks - how would you like people to "make space" for you in STEM?

What accommodations would you appreciate?

What opportunities would you like?

What barriers would you like torn down?

It's for a new talk I am writing - I will attribute (& may follow up)

7:20 AM · Feb 10, 2021 · Twitter for Android



**Alex Petrovnia is a double masker** ✨🗨️ @AlexPetrovnia · Feb 10



Replying to @BMatB and @GoWildForBees

Accommodations for queer students mean nothing without accommodations for disabilities, especially mental health issues. Without this support, the queer people who get platformed are those who have experienced minimal discrimination—and cannot speak to the community at large.



**Alex Petrovnia is a double masker** ✨🗨️ @AlexPetrovnia · Feb 10



I attribute this issue to why so many programs are well intentioned but largely useless. Celebrations for coming out day, hashtags, and buttons don't solve assault, homelessness, poverty or trauma. Academic institutions overwhelmingly serve the needs of affluent queers.



**A.W. Peet** @kiwinerd · Feb 11



Replying to @BMatB

trans inclusion isn't just about pronouns & chosen names in databases. we need access to material necessities of life, like access to binary-gender toilets of choice & all-gender toilets on campus & off. coverage for necessary trans-specific health care like hormones & surgeries.

 **ProfPhoebe** 🍌 🌹 ♣️ ♦️ ♥️ ♠️ 🏳️‍🌈 @ProfPhoebe · Feb 10 ...  
Replying to @BMatB and @TheLabAndField

I find it very hard to network at mostly-straight "beer hours" and I wish we would not celebrate those as the best way to talk about science, network, etc. "beer hour" is particularly comfortable for some people and not for others.

 **Dr. Jay Brett (they/them)** @JayBrett9 · Feb 10 ...  
Replying to @BMatB

I want the things that cost \$\$ to be done: update e-systems for more genders and used names (vs legal), have inclusive bathrooms, cover mental health and gender-affirmative care, include benefits for an adult of your choosing (not just a spouse)

 **Dr. Alex Bond** 🏳️‍🌈 🇨🇦 🐧 @TheLabAndField · Feb 10 ...  
Replying to @BMatB

a financially-supported staff network  
professional development funding for things like Stonewall's LGBT+ Leadership school  
checks/balances on risk assessments incl travel  
\*\*object permanence\*\* - we shouldn't need to be in the room to remind folks we exist

 **Queer Engineer** @QueerEngineers · Feb 10 ...  
Replying to @BMatB

Moving beyond "theoretical" inclusivity.

Holding mandatory workshops to educate folks (kindly) on how to respect LGBTQIA+ people (pronouns, inclusivity, intervention tactics).

Setting a precedent that discrimination will not be tolerated.

Not excusing bad behavior.

 **Becky Nisbet** 🏳️‍🌈 @becky\_e\_nisbet · Feb 10 ...  
Replying to @BMatB

- Anti-harassment policies that specifically cover homophobic/transphobic incidents.

- Stop with Mr/Mrs choices on forms

- Pronoun in email signatures; shows people are allies

- Stop being so cis/heteronormative

- Funding for those who b/c of LGBT stuff don't have family support

 **Chris Dao (He/His/Him)** @ChrisVDao · Feb 10 ...  
Replying to @BMatB

Strict standards on unacceptable behavior, for example, classify: attempting to out someone or gossiping about someone's potential sexual orientation/gender as "Sexual Harassment."

Treat recruitment at LGBT+ Professional Societies as DEI Initiatives, equally as Societies for Race

 **Prof Ben Britton** @BMatB · Feb 10 ...  
Replying to @BMatB

For some examples:

Lanyards, pronouns in emails, pronoun ribbons for conferences, consideration of travel issues, not making assumptions re partner status, anti-harassment policies that engage with 2SLGBTQ+ issues are on my list...

 **Prof Ben Britton** @BMatB · Feb 10 ...  
Broader items will include reading and actively engaging in understanding and addressing intersectionality

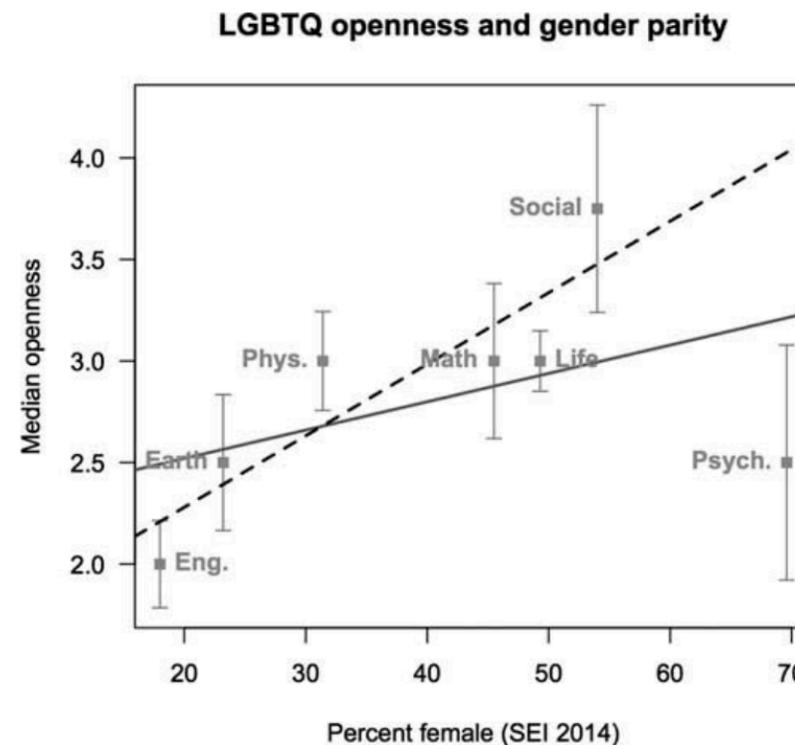
 **Dr. Andrea Grover** @AndreaKGrover · Feb 10 ...  
Replying to @BMatB

In many US institutions, diversity (& related aspirational goals) is evaluated only by # of non-white US citizens on faculty. It's such a narrow view.

I want to see queer & disabled people being counted too. The exclusively racial focus can devalue other forms of diversity.

# Diversity, equality & inclusion

- Diversity without inclusion is not enough
- Inclusion without equality is not enough
- Stamp collecting can be fun,  
if you are collecting stamps
- Varies by field, work culture, social culture, intersectional approaches...
- Engage with Athena SWAN + Stonewall Diversity Champion



**Figure 3.** Across major STEM fields of expertise, the relationship between proportion of employed scientists and engineers who are women and participants' median ( $\pm 95\%$  confidence interval) rating of openness to colleagues. A regression across all points is nonsignificant with  $p = .31$  (solid line). However, a regression excluding data from psychology, in which professional standards may prevent openness independent of workplace climate, is significant with  $p = 0.02$  (dashed line).

## But what should I do...?

1. Become a co-conspirator
2. Safeguard LGBTQ+ people in all contexts
3. Provide a flexible way for people to escape a hostile lab / workspace
4. Intervene for the LGBTQ+ person dealing with workplace discrimination / microaggressions
5. Support your LGBTQ+ staff when transphobes/homophobes aim to dox them/get them fired.
6. Provide new opportunities to offset those inaccessible for out LGBTQ people (e.g., campuses in Dubai).
7. Platform LGBTQ+ people in research conferences through invited / plenary talks
8. Acknowledge and reward (emotional) work of LGBTQ+ people
9. Consult your LGBTQ+ students
10. Appoint a department liaison (this should not be additional work thrown onto your resident LGBTQ+ faculty member(s), and not a student too...)
11. Track LGBTQ+ identities when you track other identities
12. Hire LGBTQ+ people in research
13. Allow diverse life experiences for researchers / postgrads
14. Confront problematic colleagues that do not use correct pronouns / gossip about LGBTQ+ people's personal lives
15. Recruit LGBTQ+ undergrads/postgrads/faculty
16. Make work on EDI a hiring criteria
17. Provide bias training for search committees
18. Care with the "meritocracy" - e.g. evaluate teaching & citation metrics with anti-LGBT sentiment as a context.
19. Acknowledge people discriminate against LGBTQ+ people citing other reasons for their discrimination
20. Use gender neutral language
21. Pronouns in emails and conference badges
22. Establish how your students want to be identified / their pronouns
23. Promote a safe LGBTQ+ experience in the workplace
24. Create safe spaces for LGBTQ people at work
25. Gender Neutral Bathrooms
26. Provide separate housing in conferences for LGBTQ+ people
27. Consider travel issues for LGBTQ+ people, and add LGBTQ+ issues to the risk assessment for fieldwork & trips
28. All editors should force their publishers to allow name changes for transgendered people
29. Join an Out List as an ally
30. Promote inclusion everyday

I don't know what to do → which should I do first?

you don't have to do ALL of these at once...  
do some, and track progress

## Areas for increased action

Exploring the workplace for LGBT+ physical scientists

### 4. Areas for increased action

“Only when all people feel comfortable to be themselves in the workplace, without any fear of discrimination, will global science truly be able to thrive. Even more importantly, only then will we stop wasting so much human capital.

*David Smith, RSC News, July 2018<sup>x</sup>*

| Individual   | Employer  | Learned Society   |
|--|---|---|
| <ul style="list-style-type: none"> <li>• Show visible support for the LGBT+ community by wearing rainbow lanyards and pins.</li> <li>• Be respectful to others particularly thinking of your use of language and always asking/using people's correct pronouns.</li> <li>• Include your LGBT+ status and pronouns in your online presence/email signature and through blogs, social media.</li> <li>• Speak out about LGBT+ issues.</li> </ul> | <ul style="list-style-type: none"> <li>• Set clear behaviour expectations for all staff.</li> <li>• Collect and publicise data on LGBT+ staff and their experiences to improve policies, practices and procedures.</li> <li>• Encourage senior managers to speak openly and publicly about LGBT+ issues.</li> </ul> | <ul style="list-style-type: none"> <li>• Repeat this survey every 3-5 years to collect and publicise data on the experiences of LGBT+ physical scientists.</li> <li>• Identify any particular areas in this report for follow-up research, e.g. teachers, undergraduates, or access to networks.</li> <li>• Encourage senior managers and leaders in the organisation and the community to speak openly and publicly about LGBT+ issues.</li> </ul> |

## What to do?

- [See LGBT in Physical Sciences Report:](#)
- <https://www.rsc.org/globalassets/04-campaigning-outreach/campaigning/lgbt-report/lgbt-report-web.pdf>

4 more pages of suggestions....

# As an LGBTQ+ person, I can...

- You have no obligations
- Be yourself
- If you can...
  - Be out & be a role model/exemplar
  - Share your story
  - Advocate & get involved
- You are not the 'only gay in the village'
  - Support each other
  - Listen to others
- Consider and support groups (intersectionality)



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# How to be an LGBT+ Ally

by Joby Razzell Hollis  
@Jobium

More than 50% of LGBT+ scientists are still in the closet to most people they work with,<sup>1</sup> and that's not going to change unless there's a concerted effort to make science more inclusive at every level.

The fear of a negative reaction or an adverse impact on their career leads to LGBT+ people hiding personal relationships and screening behaviour. The stress involved can have a profound impact on mental health, and when LGBT+ scientists are out, they report being happier and more productive.

**Even if you're not LGBT+, you can still make your lab a friendlier, more welcoming place by following our beginner's guide to being an ally**

The infographic is a vertical banner with ten horizontal, wavy sections, each with a different color and a specific tip. The tips are:

- Learn about LGBT+**: What does it stand for? Each letter is a community with its own issues. Stonewall provide free resources about LGBT+ issues<sup>2</sup>
- Think before you assume**: Let people come out on their own terms. Use gender-neutral language until you know for sure
- Be open about your support**: If you're an ally, don't be afraid to show it! Fly the flag, celebrate LGBT+ History Month, etc.
- Challenge discrimination**: If you hear or see something offensive, make it clear you find it offensive too
- Look out for role models**: Role models like Sally Ride, Tim Cook & Lynn Conway show that LGBT+ people can be successful in STEM. Talk about them!
- Support networks**: These networks provide specialist support for LGBT+ people. Find out which network covers your organisation<sup>3</sup> and advertise it
- Push for inclusivity**: Change is rarely achieved without the support of the majority. Help us fight for more inclusive policies
- Unconscious bias**: Discrimination isn't always a conscious decision. Take an implicit association test to look at your own biases<sup>4</sup>
- Accept your limitations**: Understanding take time, you may not always get it right. Listen to what LGBT+ people have to say

1. Queer in STEM. DOI: 10.1080/00918369.2015.1078632  
2. [https://www.stonewall.org.uk/sites/default/files/straight\\_allies.pdf](https://www.stonewall.org.uk/sites/default/files/straight_allies.pdf)  
3. [http://www.iop.org/policy/diversity/lgbt-network/page\\_68474.html](http://www.iop.org/policy/diversity/lgbt-network/page_68474.html)  
4. <https://implicit.harvard.edu/implicit/uk/selectatest.jsp>

- *Need more co-conspirators..*
  - *More allies = good*
  - *Need more people to speak truth to power, exercise social capital*
- *Break down current narratives & assumptions:*
  - *Colonialism*
  - *Heteronormative*
  - *Monogamous*
  - *Cis-gendered*
- *The tapestry of a human being is far more interesting...  
... beautiful people can create beautiful things.*

# I can ask my organisation to...

- *LGBT+ risk assessments*
- *Improve policies, specifically with respect to LGBT+*
- *Senior staff to lead by example*
- *Create professional networks*
- *Gender neutral communications*
- *Trans awareness training*
- *Stop assuming everyone is straight*
- *Recruit from LGBT+ community & support LGBTQ+ p*
- *Diversity training as standard*
- *Contribute & support local LGBTQ+ community*
- *Consider within framework of intersectionality*



## Further resources:

- <https://www.iom3.org/iom3-pride>
- [www.prideinstem.org](http://www.prideinstem.org) (see @prideinstem)
- [www.houseofstem.org](http://www.houseofstem.org)
- <http://www.iop.org/policy/diversity/>
- [IOP LGBT+ Physical Sciences Network](http://www.iop.org/policy/diversity/)
- [www.stonewall.org.uk/diversity-champions-programme](http://www.stonewall.org.uk/diversity-champions-programme)
- <https://www.aps.org/programs/lgbt/index.cfm>
- [www.tigerinstemm.org](http://www.tigerinstemm.org)

# Privilege

- “many STEM disciplines remain dominated by, and unconsciously biased towards, straight, white, non-disabled, middle-class, cis-gendered men” [1]
- You can't change your past but can acknowledge it, and improve the lives of others
- Recognise, listen and support individuals from underrepresented groups consider power dynamics too
- STEM is not a zero-sum game, create space, rebalance power, recognise privilege



*Due to be published in JOM*

## **Material goals towards equity along the STEM & LGBTQIA+ spectra**

### Authors

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### Bios

Ben Britton (he/him) is an associate professor in the Department of Materials Engineering at the University of British Columbia and a visiting reader at Imperial College London. He is a trustee of Pride in STEM and the winner of the 2021 TMS Frank Crossley Diversity Award.

Jennifer L.W. Carter (she/her) is an associate professor in the Department of Materials Science and Engineering at Case Western Reserve University (CWRU). She is a past chair and current member of the TMS Diversity, Equity, & Inclusion Committee.

Matthew Korey (he/him) is a postdoctoral researcher at the Manufacturing Demonstration Facility at Oak Ridge National Laboratory. He is the current chair of the TMS PRIDE working group and an active member of the TMS Diversity, Equity, & Inclusion Committee.

Liz Roccoforte (she/her) is the inaugural Director of the LGBT Center at Case Western Reserve University. She has over 10 years of experience managing policy and practice changes on campus and facilitating Safe Zone training to Allies in the Faculty and Staff on campus.



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- Sharing

For Program Outline  
and Updates:  
[www.tms.org/TMS2022/DMMM4](http://www.tms.org/TMS2022/DMMM4)

# Questions and answers

*Via the Q&A tool*

*ALSO feel free to follow up with ideas/comments/other stuff via [ben.britton@ubc.ca](mailto:ben.britton@ubc.ca)*