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# Does RSE have a diversity crisis and what can we do?

*With thanks to Caroline Jay and Jeremy Cohen*

Slides: <https://doi.org/10.6084/m9.figshare.12955094>

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# Diversity in RSE



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- Facts and figures - what's the situation?
- Issues and challenges - what can we do?
- Hopes and dreams - what will we do?

## Warnings:

- I'm not an EDI expert but do have experience
- Based on UK data, but internationally relevant




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# Let's start with a quiz

(figures based on the 2018 International RSE Survey -  
those in the UK may or may not have an advantage)


# What percentage of UK RSEs identify as female?

 Start presenting to display the poll results on this slide.

# What percentage of UK RSEs identify as being of non-white/mixed ethnicity?

 Start presenting to display the poll results on this slide.

# What percentage of UK RSEs identify as having a disability?

 Start presenting to display the poll results on this slide.

At least we're  
doing about as  
well as our  
sector, right?



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# So, how do we do?



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	UK RSEs	UK Academics	UK Software Developers	UK Working Age Population
<b>Gender (female)</b>	14%	46%	14%	50%
<b>Ethnicity (BAME/Mixed)</b>	5%	15%	21%	14%
<b>Disabled</b>	6%	4%	10%	19%

Sources:

- [2018 International RSE Survey](#)
- [HESA Staff by equality characteristics 2018/2019](#)
- [BCS Diversity Report 2020: ONS Analysis](#)

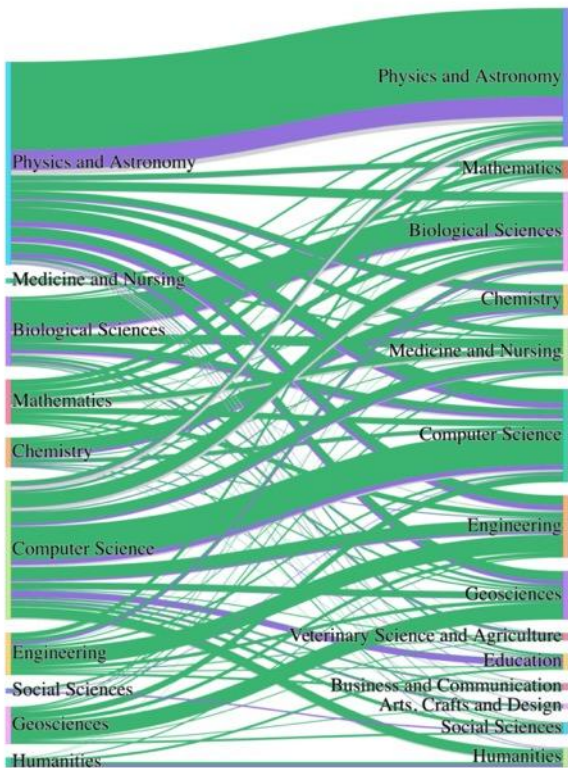


# Isn't this a pipeline problem?



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- Most UK RSEs are from physical sciences and computer science backgrounds, but...



	UK RSEs	UK Physical Sciences Students	UK Computer Science Students
<b>Gender (female)</b>	14%	41%	18%
<b>Ethnicity (BAME/Mixed)</b>	5%	21%	28%

Chue Hong, Cohen & Jay (2020), Does RSE have a diversity crisis?

Preprint: <https://doi.org/10.5281/zenodo.3989884>

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RSE demographics  
don't reflect what  
they studied or  
where they work



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diversity  $\neq$   
inclusion & equity

# What might be happening?



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- Safety in similarity
  - We want to work with people who are like ourselves
  - Yet research shows that diverse teams lead to higher quality science
- Our culture isn't inclusive enough
  - Even with Codes of Conduct

# Microbarriers




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Microbarriers: small things that diminish access and equity, and are often unnoticed by the majority

E.g.:

- Your website doesn't work at 200% zoom
- Meetings at inconvenient hours
- Not valuing people's time properly

What's a microbarrier you (or an RSE you know) have experienced that prevents an inclusive RSE culture?

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# Value lived experiences

# What is your lived experience?

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# The problem with “other”



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“We are particularly looking for great females / people of colour! Please pass along to your networks and let me know if there is anyone you think I should reach out to.”

- immediately reminds me of your lack of diversity and that you consider me a minority

# There isn't an easy fix



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- Addressing the diversity crisis in RSE is not a checkbox / checklist exercise
- We survey the community to check we're heading in the right direction, not to identify "areas of concern"
- Champion exceptional people from all walks of life, rather than relying on proxies


# Things you can do




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- What is your team / event culture?
  - Don't try to be all things to everyone
- Think about the role you're trying to fill
  - What you need done, not who you're looking for
- Test for skills rather than relying on CVs
  - Internships & opportunities, longer shortlists
- Learn from those with greater experience

# What has worked to improve equity, diversity and inclusion in your RSE group?

 Start presenting to display the poll results on this slide.

# What one thing are you going to do to next to improve Equity, Diversity and Inclusion in your RSE group?

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# EDI Resources



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NumFOCUS DISCOVER Cookbook:

<https://discover-cookbook.numfocus.org/>

Creating an inclusive working environment:

<https://www.recurse.com/manual>

Ally Skills Workshop:

<https://frameshiftconsulting.com/ally-skills-workshop/>

Women in HPC Resources:

<https://womeninhpc.org/community/resources>

# Rewatch the SORSE launch



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Dr Kari Jordan  
Executive Director, The Carpentries  
I wanna dance with somebody



Dr Mariann Hardey  
Associate Professor, Durham University  
Switching off the label “women in tech”

<https://sorse.github.io/programme/kickoff/>

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Photo by [Jordan Whitfield](#) on [Unsplash](#)



# Summary



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- RSE diversity is poor, but we're measuring it
- There are still many microbarriers to access and inclusion in the RSE community
- It's easy to get it wrong by "othering"
- This represents an opportunity to understand what we're really looking for in the RSE role

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Network


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# Spare slides

# In your view, which is the biggest diversity barrier to getting a first job as an RSE?

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# Multichoice options

# What %age of UK RSEs identify...



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... as female?

- 8%, 14%, 22%, 46%

... as being of non-white/mixed ethnicity?

- 5%, 14%, 21%, 27%

... as having a disability?

- 4%, 6%, 10%, 19%

# Diversity barriers to RSE jobs



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Which is the biggest diversity barrier to getting a first job as an RSE?

- Age; Gender; Ethnicity; Sexuality; Visible disability; Invisible disability; Other; None of these are barriers

# Lived experience



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I have a skill that others in my RSE group don't possess

I have collected data "in the field"

I studied a subject which is different from the main area I work in

I have another job or volunteer position which doesn't involve software development

I speak to my peers in a language which is not my primary language

I work in a different country from where I or my parents were born

I have caring responsibilities

I have used, or helped someone use, assistive technology

I have performed in front of a paying audience

I've played a team sport competitively

I knit / crochet / cross-stitch

I have run a business

I was born after the World Wide Web (1989)

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