

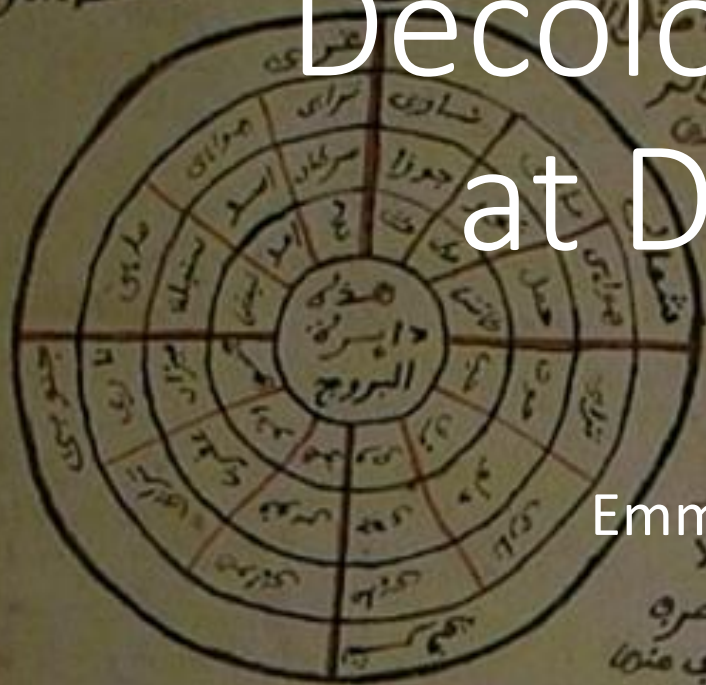
# Decolonising Mathematics at Durham University

Emmanuel Ogundimu and Claire de Korte



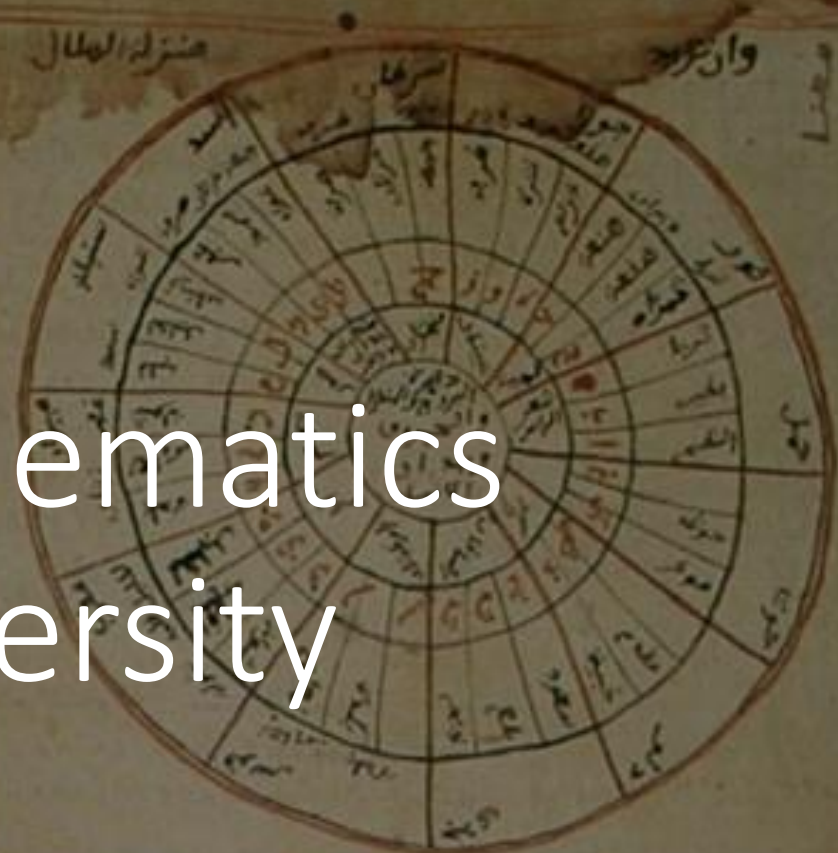
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# Decolonising The Curriculum Overview

- In Nov 2020, Durham University launched its Decolonising the Curriculum initiative.
- Student-led “Bottom-top” approach.
- Paid internship for work on the project (faculty and departmental interns).
- Decolonisation may have different meanings for each module/field.



# Why Decolonise?

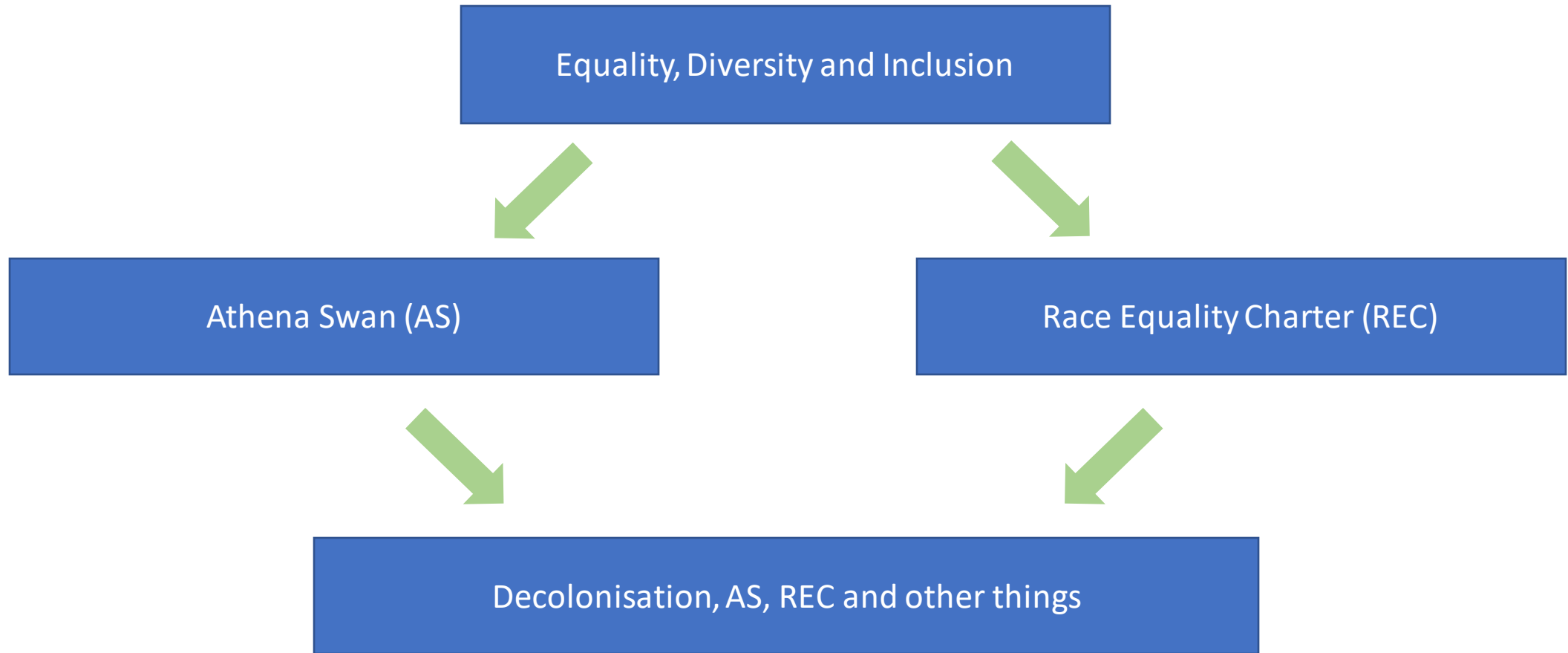
**Eurocentricity:** *Focusing on European culture or history to the exclusion of a wider view of the world; implicitly regarding European culture as pre-eminent.*

A definition of **Decolonisation:**

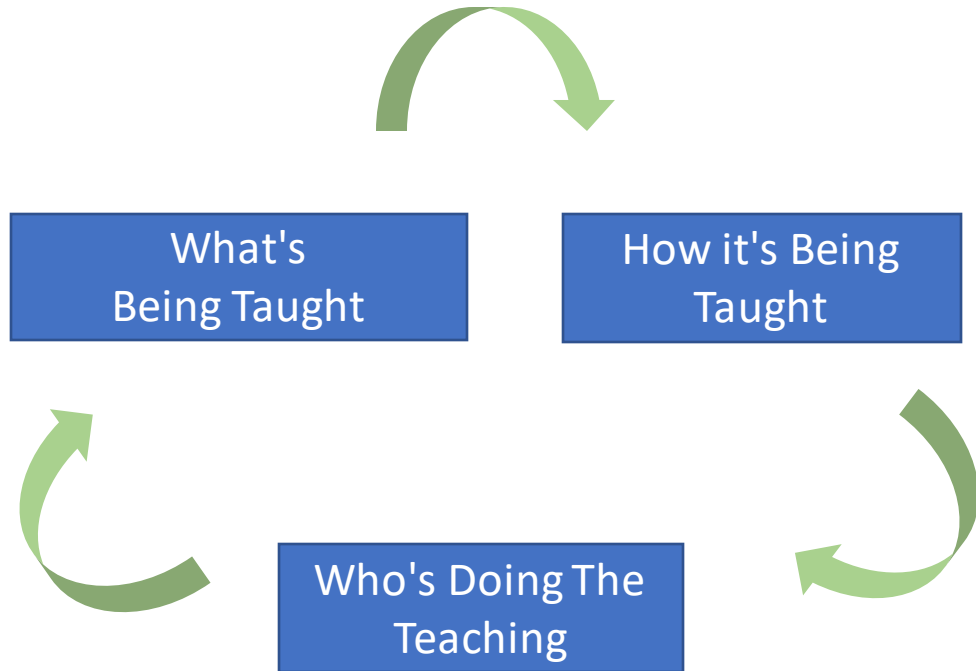
*The restructuring of beliefs and institutions with the goal of renouncing **Eurocentricity** while adopting and performing inclusive, open-minded and contentious ideals and actions.*



# A Common Ground



# Decolonisation Cycle



**What:** Expanding the scope of the curriculum beyond Eurocentric perspectives.

**How:** Pedagogical approaches to teach mathematics that prioritise critical thinking, cultural sensitivity and the recognition of diverse perspectives.

**Who:** promoting the recruitment and retention of academic staff from underrepresented backgrounds.

# Diversity vs Decolonisation

Diversity policies are often limited to tackling issues of representation

Decolonisation: challenges mindset/conditions that produces need for diversity policies

Representation politics does not equal equality nor decolonisation if the root of the harm continues to stay in place.

# Backlash

## 'Decolonising' maths is a dreadful idea

Academics need to stand up for their disciplines against this woke crusade.

### 'Decolonise' maths by subtracting white male viewpoint, urges Durham University

A new guide says professors must question themselves if they are citing work from 'mostly white or male' mathematicians

By Ewan Somerville  
9 April 2022 • 7:00pm

*John Armstrong*

### The sinister attempts to 'decolonise' mathematics

📅 13 November 2022, 6:30am

EDUCATION

### Universities told to 'decolonise' maths courses

**We've got your number! Academics hit out at plans to 'decolonise' maths at universities and say degrees are being 'politicised'**



# Our Response to the Backlash

- Interview with Nature
- Clearing up misconceptions



**MATHS PLOTS A COURSE TO CULTURAL EQUALITY**

## Work / Careers

who teach courses that range from a few weeks to two months in length. Bringing in outside researchers exposes students to top talent while they continue to expand their roots in Africa's mathematical communities.

Now, Tabiri is cultivating Ghana's future mathematical talent in another way. She's the academic manager of AMS's Girls in Mathematical Sciences, a free nine-month programme for secondary-school students.

The scheme was founded because too few women were applying to AMS. It equips girls with free books, a laptop and internet access. "Some of them haven't even seen computers," Tabiri says. Through virtual masterclasses, academic and industry mathematicians discuss "research in a way the students can engage with".

Each girl is paired with a mentor, and students visit AMS Ghana during school breaks, with free meals and lodging, to attend mini-courses in finance and physics. In the first cohort of students, 33 girls attended from 11 of Ghana's 16 regions, Tabiri notes. They graduated from the programme in November 2021. "For those who have applied to university, 25 of them are doing STEM courses."

Tabiri is confident that, in a decade from now, "the girls will be leading in research and innovation in the mathematical sciences".

### Facing misconceptions

The next generation also leads the way in the decolonization efforts at Durham's maths department – but these haven't been without bumps in the road. Sometimes, the efforts have led to confusion or political backlash, but using "that word 'decolonization' may mean a lot of opposition that you should be ready for", says Emmanuel Ogundimu, co-director of Durham's bioinformatics unit, who leads the decolonization initiative. But he thinks that, with patience, this work can create meaningful change.

Durham's maths decolonization work is part of a wider movement in the United Kingdom to "decolonize the curriculum across all universities and across all subjects", says Parker, who is white British. He says that departments were asked by the university to think about what they could do.

The Black Lives Matter movement, which accelerated following the murder in 2020 of George Floyd by a police officer in the United States, moved "the whole agenda into the forefront in this system", says Ogundimu, who hails from Nigeria and is of Black African descent. Ogundimu and Ric Crossman, a statistician at Durham, selected three undergraduate interns to work on the decolonization project, from a pool of students who applied. Those interns – Itarini Pradeep, who is of South Asian descent, and Claire De Korte and Leah Parry, who are both white – are an integral part of the project. From the onset, the interns "knew there



Students and staff at Durham University, UK, discuss how to decolonize the maths curriculum.

would be misconceptions" in the outside world about what they're working to accomplish, Ogundimu notes. Sometimes it's even challenging for mathematicians and other researchers to imagine how to decolonize a quantitative subject such as maths, because they're not used to identifying how their curriculum might be affected by colonialist or racist mindsets. Some might initially even view this work as detracting from the rigour of their instruction by focusing on what might seem to be strictly social issues. But mathematicians who have thought deeply about decolonization say that it is essential to creating an academic environment that is welcoming and conducive to the success of maths students and scholars of all backgrounds.

First, the Durham interns asked other UK maths departments about their institutions' decolonization processes. This has revealed that other departments are also struggling to

**"Nobody says, 'Middle-aged white men shouldn't be cited.' That is not the thing."**

define what the process means for them – it is about rooting racism out of the curriculum, adding more inclusive examples, diversifying who is teaching and learning maths, or all of the above?

This year, the students plan to poll other students at Durham about their understanding of decolonization and how it should be accomplished in the maths department, Ogundimu notes. Finally, they are developing a decolonization handbook for faculty members, which will "guide them through the principles of what decolonization is and how that could translate into what we want to achieve overall".

The handbook will focus on three things: "what students are being taught, how it's being taught and who is doing the teaching," Ogundimu says. "What happens in other cultures? How does this impact how mathematics

is communicated in general?" he asks. These curriculum changes demonstrate to students that white Wessex men aren't the only people doing mathematics.

"These ideas go a long way for getting people engaged," Ogundimu says. "Who says that an example in statistics cannot come from some data set from ancient Egypt?" he asks.

Last year, the department faced scrutiny after some media outlets criticized its decolonization webpage, which was written mainly by Crossman, who is white. One publication even described the decolonization attempts as "vulgar". The efforts were misrepresented in the media, Ogundimu says.

"Nobody says, 'Middle-aged white men shouldn't be cited.' That is not the thing." Instead, he asks, if these are the only people you have referenced in courses, then what can you do differently to include other people?

The negative coverage shows "just how easy it is to misunderstand this message", Crossman says. And it's "very clear evidence that the message needs to be broadcast more, not less. Because perhaps some people aren't necessarily engaging in good faith with what we're saying. But there's an awful lot of other people who clearly just don't quite understand yet where we're coming from," he notes.

"It's always easy to not do the right thing because you're too busy," Parker says. But he encourages non-minoritized, white mathematicians such as him to empathize with "people who don't hear people from their nation or culture mentioned".

Durham's union mathematics fellows feel that their curricula reform process had to be led by the students, because otherwise "we're in the awful situation of deciding for ourselves what's best for them", Crossman says. That, Parker adds, would be at odds with the concept of decolonization, because "decolonization" was some group of people thinking they know best for some other group of people".

Rachel Crowell is a freelance journalist near Des Moines, Iowa.



# Current Decolonising Projects



بسر جفتها وريها  
من الركوبة مثل الـ

ثلثها من الر  
طوبى وثلاث

من الحرارة  
وثلاث

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وهذه

الدوائر

هي اصل الـ

عمال ليتصره  
في كل صنف منها

ما يوايقه في العمل صعبة

ما يعمل في وضع وجوع في عم زيادة لما يكفه بعد عدله وجملة  
ما ضلعه بعد طله تنزيه عليه عشر وتنقص بوه سيطا وللغير  
بمزج فيه بوه شرحه انك تستعمل الوبق مثاله ط



معلمنا علم عم وهو من غير بزار في عم وزدنا عليه عشر هذا  
النشر ثم نقصنا من جملة العدد ثمانين ونزلنا ما بقى في الوبق وان  
حاز التغيير بتزويد على جملة بوز وهو ما لا واورطان للنشر  
في انقص من جملة الوبق سيكنا وهو ٨٥ وتزدنا ما بقى في الوبق  
الزوج وهو ٤٥ في عم وهو اذا اخذت جملة عدد النصيب وما  
تزيد ان تجعل بوز من النشر في ضرب جملة ذلك العدد في عم وزدنا  
عليه عشر وهو ٤٥ بوز واستقطنا من جملة العدد سيكنا وهو  
٨٥ ونزل ما بقى من العدد في بيوت الوبق في ما اع برطان  
العمل في غير منزلة على جملة بوز وهو لا فيم ولا تنقص من الجملة  
في ونزلها في الوبق في ما اع سعيد والله اعلم وهذا الوبق في الجوز







# Ethnic Breakdown of Survey Responders

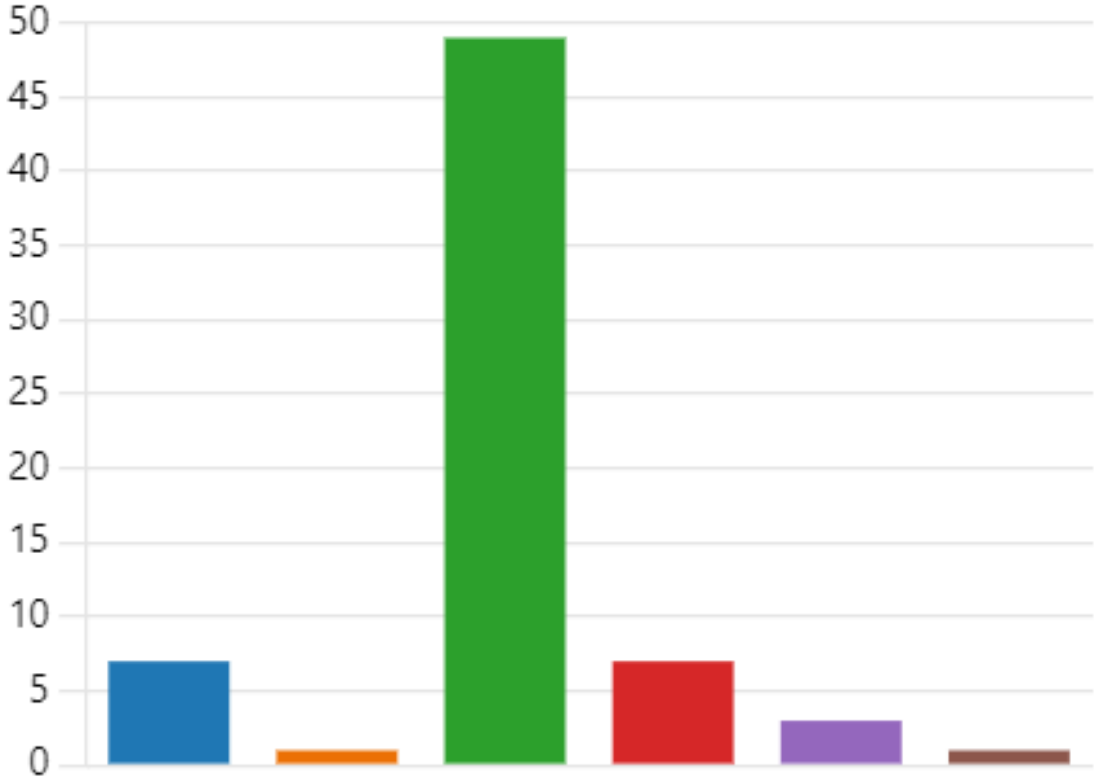
2. Which ethnic group do you most identify with?

N = 68

[More Details](#)

 Insights

	Asian or Asian British	7
	Black, African, Caribbean or Blac...	1
	White	49
	Mixed or multiple ethnic groups	7
	Prefer not to say	3
	Other	1



# Exclusion of Minority Groups

5. Have you ever felt excluded from academic discourse due to your race, ethnicity, gender or sexual orientation?

[More Details](#)

[Insights](#)

● Yes	10
● No	52
● Maybe	4
● Prefer not to say	1



7. Within the maths department, have you ever felt excluded from social discourse due to your race, ethnicity, gender or sexual orientation?

[More Details](#)

[Insights](#)

● Yes	4
● No	57
● Maybe	6
● Prefer not to say	0



# Defining Decolonisation

Removing biases from the curriculum to the greatest possible extent, in order to further the quality of education, and the inclusion of both academic staff, non-academic staff, and students, as well as anyone else involved in the department. It should extend beyond the curriculum into the department and university as a whole.

It is ensuring that sources are taken from people with a range of different backgrounds and that the history of a person is considered as well as their content when choosing what to include and discuss.



# Student Concerns and Misconceptions

Decolonising the maths curriculum is not necessary at all. We should embrace the positive and negative moments of history without trying to rewrite it. I am on this degree to learn about mathematics and objective facts. This includes the history of mathematics. I would urge you to reconsider any effort into "Decolonisation".

Quite against decolonisation in maths - I don't think that a person's history affects the maths they have produced and we shouldn't try and include it when we don't need to.

I don't really get it. Because Europe had greater levels of technology and exchange of ideas for hundreds of years, European mathematicians discovered a disproportionate amount of maths, relative to their share of the global population. Other mathematicians deserve recognition, but there just weren't many of them, simply because they wouldn't have had access to the same knowledge that people studying in European cities had.

# How we are Decolonising Mathematics

- We are **not** saying that  $1+1 \neq 2$  - decolonising maths will **not** make maths '**less logical**'
- We are **not** 'subtracting the white male viewpoint'
- We **are** giving guidance to professors on how to make their courses **less eurocentric**
- We **are** educating people on the **history of mathematics**
- We **are** getting people to recognise and confront their **internal biases**

## Current Projects:

- Decolonising mathematics handbook for staff
- Decolonising mathematics blog
- Collating stories, experiences and data from staff and students
- Spreading and sharing ideas through conferences
- Creating a decolonising network between universities
- Adding to lecture notes
- Developing a History of Maths Module

*“Decolonisation is going to happen in the mind” - Dr Siyanda Makaul*

# Decolonising Mathematics Curricula Handbook

The structure of this handbook:

- Introduction to decolonisation
- Why decolonise?
- Why decolonise the maths department in particular?
- The next steps
- Finding and addressing your internal biases
- Good practice
- Further reading

Good Practice Example:

*"Calling out mathematicians that are/were racist, sexist, homophobic, etc. when they come up. This shows students that these views are not tolerated in academic circles and can make students from minority groups feel less alienated from their course."*

# Conclusions

- Decolonising Maths is contentious, but it can be done. It needs to be focused.
- Consider giving short biographies of the mathematicians whose work you present in your modules. If, in doing so, you realise that they are almost entirely (or even completely) white and/or male, ask yourself why this is. See if you can find contributions to the field from mathematicians of other genders/ethnicities.
- Include BAME researchers in **modern** mathematical research.
- Role Model for students: activities such as Black Heroes of Mathematics during Black History Month.
- Decolonising is an ongoing process- patience is needed.



# Useful Resources

