



Engineering and  
Physical Sciences  
Research Council

# Ethnicity and Race Inequity In Our Portfolio:

Findings of our community engagement and actions for change



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# Introduction

Increasing representation and inclusion for researchers and doctoral students from Black, Asian and other ethnic minority backgrounds in the Engineering and Physical Sciences (EPS) and, in particular, in our grant and doctoral training portfolio as well as in our advisory and governance groups, is one of our Equality, Diversity and Inclusion (EDI) challenges.

Ensuring a research and innovation system which supports EDI for all will help us attract growing numbers of people from diverse backgrounds into EPS research careers, and build diverse teams with the skills and experiences to create new knowledge and world-class outcomes.

This report provides an update on our work on addressing ethnic and racial inequality in our portfolio – including actions we have completed and those underway. We present the findings of our community engagement on participation in our portfolio, peer review and advisory processes and detail our next steps and actions.

The interventions outlined in this report also draw many parallels with the recommendations for addressing gender inequality outlined in the gender disparity [‘have your say’ survey findings report](#) which was published earlier in 2022.

We recognise that the report findings make difficult reading and that some members of our community may feel disenfranchised by the findings but, we hope that in sharing our findings and actions, we can promote greater discussion and understanding of the challenges that we as a community face and must address by working together.

The actions detailed here will form a part of the EPSRC EDI action plan that will be published later in 2022.

# Acknowledgements

We benefit from being a part of a strong and active research community that is committed to addressing inequalities. We all play a role and your insights gathered through these surveys and conversations are vital to inform our work.

We would like to thank everyone who gave their time to participate in the business and university senior management conversations as well as all the academic researchers, postdoctoral researchers and doctoral students who completed the 'Have your say' surveys. Respondents shared personal experiences and detailed accounts of navigating the grant funding system as well as details of discrimination and exclusion – all of which have enriched our understanding of what needs to change and improve. Many people gave comprehensive feedback and ideas on how we can work together to achieve our vision for a research and innovation system in the UK, where everyone has the opportunity to contribute, to be themselves and to benefit.

All contributions have been anonymised to protect confidentiality.

We would also like to thank members of the EPSRC Equality, Diversity and Inclusion Strategic Advisory Group (EDI SAG) and the EDI champions from the EPSRC theme Strategic Advisory Teams (SAT) for their contributions to reviewing the recommendations and shaping the actions for implementation.

# Ethnicity data publication and community engagement

UKRI and EPSRC-specific publications consistently show that there is under-representation and disadvantage for ethnic minority researchers receiving our funding and engaging with EPSRC.

In 2021, we published our [detailed analysis of EPSRC ethnicity data](#) focused on our grant holders and our doctoral student population, as well as exploring participation in our peer review processes. Our investigation highlighted that:

- ethnic minority researchers are underrepresented in our portfolio
- award rates for Principal Investigators (PIs), Co-Investigators (Co-Is) and Fellowship applicants from White ethnic groups are consistently higher than those applicants from ethnic minority groups
- researchers who identify as Chinese and Indian form the largest proportion of applicants and awardees from the Asian ethnic group for PI's, Co-I's and Fellows. Collectively, these two ethnicities are well represented as applicants and awardees when compared to their HESA Engineering and Physical Sciences (EPS) academic population<sup>1</sup>
- the proportion of PI awardees who identify themselves as Black, Bangladeshi and Pakistani are underrepresented compared to the HESA EPS academic researcher population
- whilst there has been an increase in the proportion of ethnic minority researchers participating in peer review, this is still not representative of the EPS academic population.

Following the data report, we sought input from our research and business communities to explore the issues encountered by our ethnic minority researchers. This engagement provided knowledge and insights to better understand the factors that influence the inclusion of Black, Asian and ethnic minority researchers and doctoral students in our portfolio, as well as the challenges colleagues from ethnic minority backgrounds encounter as they enter into and progress their research careers.

Our engagement consisted of:

- Strategic dialogues with university senior management and with our business partners to increase our knowledge of current activities and explore how we might work in partnership. The organisations that took part are presented in Annex 1.
- 'Have your say' community surveys to obtain the views of our EPS academic researchers, postdoctoral researchers and doctoral students to better understand their lived experiences and gain knowledge of the complexities of the challenges.

<sup>1</sup> HESA data is used to understand the diversity profile of the academic and student community. This enables us to compare the diversity data for funding recipients with the diversity profile of the postgraduate research (PGR) population in the UK and that of the academic population who are likely to apply for funding. All data can be found in our [detailed analysis of EPSRC ethnicity data](#)

# Data context, methodology and demographics

The **university senior management** engagement was done in two parts:

- **Stage 1:** Information gathering
- **Stage 2:** Focused discussions with university partners informed from the information gathered.

The discussions focused on the participation and experience of ethnic minority researchers and doctoral students in EPS disciplines. Although our engagement was concentrated on the research perspective, we are aware of the wider context and holistic view that it is important for a university to consider, for example around undergraduate teaching and the Black, Asian and ethnic minority attainment gap and inclusion for technical and professional staff.

With this dialogue our aim was to gather insights and experiences of our university partners to help us better understand the factors that influence the inclusion of ethnic minority researchers and doctoral students in our portfolio and across the landscape, as well as explore the role of university policies and interventions to enhance our understanding of ‘what works’ and where EPSRC can further support and work in partnership with universities to improve representation and add value.

We focused our exploration on:

- the barriers students from Black, Asian and ethnic minority backgrounds may face when accessing doctoral studies
- the attractiveness of a transition to an academic career for people from a Black, Asian and ethnic minority background
- the challenges facing Black, Asian and ethnic minority researchers as they progress their research careers
- the experiences of Black, Asian and ethnic minority researchers when accessing and securing research funding

- the effectiveness of current interventions and support for Black, Asian and ethnic minority researchers – particularly in relation to recruitment, career progression, enabling greater inclusion and addressing bias and prejudice.

The initial information gathering phase consisted of a series of exploratory questions which were co-created with our [EDI Strategic Advisory Group](#) and focused on six areas for discussion:

- 1 Role of **leadership** and **governance**
- 2 Enabling greater **inclusion** and more inclusive environments
- 3 Broadening the talent pool – **attracting** diversity amongst EPS researchers
- 4 Career progression – **supporting** and **retaining** diversity in EPS research
- 5 Experiences in accessing and securing research **grant funding**
- 6 Use of **data** and **evidence**

The organisations that took part are presented in Annex 1.

Our **business partner** engagement consisted of an information gathering exercise to help us better understand the factors that influence the diversity and inclusion of ethnic minority staff across the technical and scientific landscape. The engagement focused on five areas:

- 1 Role of **leadership** and **governance**
- 2 Enabling greater **inclusion** and more inclusive work practices
- 3 **Opportunities** and **objective decision making** in **promotion** and **recruitment** processes
- 4 Support for **career progression**
- 5 Use of **data** and **evidence**.

The organisations that took part can be found within Annex 1.

Overall, we received valuable strategic input from **46 universities** and **7 businesses**.

We launched three **'Have your say' Surveys** **focused on academic researchers, postdoctoral researchers and doctoral students**. Each survey consisted of different question types, including yes/no, numerical scoring from 1 to 10, multiple choice (where more than one option could be selected), opportunities for free-text answers and

demographic data collection that included career stage, contract type, job position, discipline/subject area, caring responsibilities, age, gender identity, sexual identity, ethnicity, nationality and disability. The questions were co-created with the EPSRC EDI Strategic Advisory Group, members from our [Inclusion Matters portfolio](#) and our community.

The questions were focused on the following areas:

<b>Your Organisation</b>	<ul style="list-style-type: none"> <li>■ Experiences in your local environment</li> <li>■ Inclusion in the workplace</li> <li>■ Opportunities to progress career</li> <li>■ Having a voice</li> <li>■ Support from others</li> </ul>
<b>Challenges encountered in academia</b>	
<b>Impact of the Covid-19 pandemic</b>	
<b>Awareness of EPSRC opportunities</b>	
<b>Applying to EPSRC for funding</b>	<ul style="list-style-type: none"> <li>■ Peer review process</li> <li>■ EPSRC interview experiences</li> <li>■ Experiences and barriers of applying for EPSRC funding</li> <li>■ Peer review comments (received)</li> </ul>
<b>Peer reviewing and prioritisation panel experience</b>	<ul style="list-style-type: none"> <li>■ Experiences and participation in the EPSRC peer review process</li> <li>■ Peer review college</li> </ul>

# Demographics of survey respondents

We received 1,257 responses to the three 'Have your say' surveys<sup>2</sup>. After performing data cleaning and removing incomplete survey responses (N=499) where no options were selected within the demographic section, 60% of survey responses received were usable. In total we received **758 usable responses** to the 'Have your say' surveys.

All 'free text' responses to the 1,257 responses were considered in the qualitative analysis. We received over 3,500 free text box submissions within the survey responses that provided a richness of evidence of experiences as well as ideas for how the research and innovation system can be enhanced and barriers and discrimination addressed.

Of the 758 total usable responses to the surveys<sup>3</sup>, 38% (N=291) identified their sex as Female and 55% (N=415) as Male, with 7% (N=52) preferring not to say. A proportion of respondents (2%) said the gender they identified with was not the same as their sex registered at birth. The majority of respondents identified as White (59%, N=449) with 34% (N=258) self-identifying as an ethnic minority. 47% (N=356) of respondents identified as non-UK nationals.

The full survey respondent demographics are presented in Annex 2.

Due to the relatively small number of people who responded to the three surveys, compared with the EPS research population<sup>4</sup>, we must exercise caution when analysing the results for trends in the data and building conclusions that are statistically valid. The small numbers for some of the ethnic groups means in some cases the disaggregated analysis by individual ethnic group is of limited value. Nevertheless, the findings and insights are invaluable overall. Therefore, our analysis focuses on the observable trends and lived experiences.

<sup>2</sup> Survey responses: Academic survey: N=360; Postdoctoral survey: N=171; Doctoral student survey: N=726.

<sup>3</sup> Survey responses (usable): Academic survey N=208; Postdoctoral survey N=96; Doctoral Student survey N=454.

<sup>4</sup> Higher Education Statistics Agency (HESA) [Data run: 2019/20]: The academic population in the Engineering and Physical Sciences in 2019-20 is of the order of 17,000. Within this population, the gender balance is poor, in comparison to the population of the UK, with 20.5% women and 79.4% men. Of those disclosing their ethnicity, 71% of our Engineering and Physical Sciences community are White, with 22% disclosing their ethnicity as ethnic minority (excluding White minority), compared with 15.2% of the UK population [Office of National Statistics (2019)]. The largest ethnic minority groupings within our community being Asian (16%) followed by Other (3%), Black (2%) and Mixed (2%). We have a highly international research community, with 40% of our Principal Investigators in our portfolio in FY 2019-20 awarded to non-UK nationals. This highly international research base means we compare to HESA populations rather than only to the UK Population (Census 2011/ONS Population estimates update 2019) or UK labour force survey (ONS). The UK domicile doctoral student population in the Engineering and Physical Sciences (in academic year 2019-20) is of the order 17,200. The gender balance is better at the student level with 33% women and 66% men. Of those disclosing their ethnicity 76% are White with the next largest groupings being Asian (10%), Black (4%), Mixed (4%), Other (3%).



# Ethnic group categorisation

For ethnicity, respondents were provided with Office for National Statistics (ONS) harmonised options to select from – Level 3 – described in Table 1. In this report where data is accessible, all the analysis follows a Level 3 breakdown structure of the ‘all ethnic group’ into the disaggregated ethnicities. Where this is not possible, due to small numbers, we use level 2.

**Table 1: Ethnic Group Categorisation**

Ethnic group Level 1	Ethnic group Level 2	Ethnic group Level 3 (options provided in the survey)
Ethnic Minority	Mixed	<ul style="list-style-type: none"> <li>■ White and Black Caribbean</li> <li>■ White and Black African</li> <li>■ White and Asian</li> <li>■ Any other Mixed / Multiple ethnic background</li> </ul>
	Asian	<ul style="list-style-type: none"> <li>■ Indian</li> <li>■ Pakistani</li> <li>■ Bangladeshi</li> <li>■ Chinese</li> <li>■ Any other Asian background</li> </ul>
	Black	<ul style="list-style-type: none"> <li>■ African</li> <li>■ Caribbean</li> <li>■ Any other Black background</li> </ul>
White	White	<ul style="list-style-type: none"> <li>■ British</li> <li>■ Irish</li> <li>■ Any other White background</li> </ul>

# Key findings from the community engagement

## Summary

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The most prevalent barriers that **ethnic minority academic** respondents encountered were having **no sense of belonging, experiencing a lack of opportunities, having no voice and no visible role models**, with people from all ethnic groups having suffered **racial comments and microaggressions**.

The majority of ethnic minorities reported feeling **isolated** in their own work environments. Significant barriers that **disproportionately** affect ethnic minority researchers applying for funding were **reduced chances of success, attributed to unfair and distressing biases** (perceived or actual) in peer review as well as in their own **institution selection processes**.

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A consistently reported barrier for **ethnic minority postdoctoral researcher** respondents was **establishing informal networks**. This is a culmination of several points raised including a **lack of belonging, working harder to gain the trust and respect of colleagues and not feeling a part of the majority group**, which led to a **lack of networks and opportunities for some**. The lack of effective networks led to ethnic minority postdoctoral researchers being less aware of opportunities available for career progression. The challenge of **job insecurity** – exacerbated by the pandemic – and **constant relocation** were consistent independent of ethnicity.

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A greater proportion of **ethnic minority doctoral student** respondents found an **academic career appealing** compared with their White colleagues. However, a greater proportion also believe they were **not given the same opportunities to progress their career** and felt a much greater level of **isolation and pressure** to represent their ethnic group and break down barriers.

Lived experiences of **disadvantage, unequal opportunities and poor inclusion practices** become more pronounced as an ethnic minority person progresses through their academic career pathway.

# Overarching thematic routes towards success and inclusion



# Key challenges from our business partners

We surveyed our business partners to help us understand the factors that influence the diversity and inclusion of ethnic minority staff across the technical and scientific business landscape.

We found that, although all organisations had a well-developed and embedded EDI corporate strategy, a specific focus on race equality was at an early stage with few having any targeted support for ethnic minority groups.

Activities highlighted as being particularly effective in attracting greater workforce diversity and ensuring inclusive work practices included:

- **Embedding the organisations' EDI strategy across the organisation:** by using objectives that cascade from the senior executives into objectives for each team. These objectives are translated into goals and measures for teams locally which are monitored for progress. It is imperative to have senior leader 'buy in' which is both visible and credible.
- **Paying attention to all aspects of the recruitment process:** ensuring diverse interview panels, removing identifiers in CVs, using gender neutral language in job adverts and considering where to advertise to attract a diverse set of applicants. Many business organisations use well established university communication routes and organisations such as [WISE](#) to highlight opportunities. For those businesses with dispersed operations, recruiting globally rather than just the 'home nation' can play a major part in attracting the best talent.
- **Taking the long-term view and developing skills from within the business:** where skills are difficult to find in the populace, businesses are developing from within which means making sure that there are mentors, role models and diverse representation from the senior executive level through to local teams, as well as in future leadership and management programmes. It was considered that mentoring programmes which are on a voluntary basis are more effective. Many organisations have outreach programmes that inspire ethnic minority students into industry sectors.
- **Promoting and ensuring inclusive workplaces:** from the top executives through to local teams. Listening to employees' views on what makes an inclusive work environment through staff surveys and networks was important. The [Business in the Community Race at Work Survey](#) was also highlighted as a useful way for individuals to share experiences of race at work and give their voice to drive change on workplace equality.
- **Training provision on diversity and inclusion is vital:** to have the greatest impact all employees should attend including the senior executive team. Training opportunities ranged from unconscious bias and inclusive recruitment training for hiring managers, to inclusive leadership training for managers, as well as reciprocal mentoring programmes particularly aimed at partnering Black talented employees with senior leadership. An Inclusion Allies programme which helps employees understand what it means to be a good ally and resilience training aimed at tackling imposter syndrome were also effective interventions.

# Key challenges from university senior management

The main concerns raised by university senior management, which were also echoed by academic survey respondents, clustered around five headings:

- I. **Social Inclusion:** as well as ensuring an inclusive university environment, universities also discussed the community outside the university estate. Hostility to ethnic minority groups within the local area is a barrier to attraction and retention.
- II. **International Dimension:** the EPS community is highly international with non-UK national ethnic minorities experiencing additional barriers (e.g. language, cultural stereotyping) compared with UK national ethnic minority staff and students. The understanding of these different experiences and providing targeted support is key.
- III. **Diversity of Voice:** the low numbers or absence of ethnic minorities particularly in leadership roles was acknowledged and seen as a challenge. Improving representation e.g. in university advisory groups, decision making committees was recognised but can prove difficult with small populations and not wanting to over burden people. Ways to improve promotion and recruitment to increase diversity are being explored including finding ways to create a level playing field. Celebrating role models and people's contribution to research and innovation is welcomed and is beneficial.
- IV. **Sense of Belonging and Inclusion:** almost every institution reported that a sense of belonging and inclusion is severely lacking amongst ethnic minority researchers with concerns around isolation, with Black researchers and students feeling invisible with a lack of role models.
- V. **Systemic Bias in Peer Review:** almost every institution raised that their ethnic minority researchers had a significant lack of trust in the peer review process. This was primarily due to the researchers' feeling they experienced bias, particularly at the reviewer stage. The

lower award rates observed for ethnic minority researchers particularly Black, Bangladeshi and Pakistani researchers compared with their White colleagues – can significantly impact on the career trajectory and opportunities available to individuals.

## What was considered by the institutions to be working well?

- **Education on Race:** many institutions were offering a range of education materials on race and racism, such as podcasts, articles, videos, focus groups, book clubs, reading and research lists. The emphasis was for everyone to educate themselves, rather than putting the responsibility solely on Black and ethnic minority people while also recognising that listening to other people's experiences was still important. The effort is on building education, knowledge and confidence to change behaviours and help build allyship.
- **Capturing Lived Experiences:** of university staff and students through focus groups and support networks – enabling universities to listen and act.
- **Reciprocal Mentoring:** several university senior management boards were undertaking highly successful reverse and/or reciprocal mentoring with their Black and ethnic minority staff network members, to better appreciate and understand barriers to career progressions and inclusion. Many of the examples originated from EPSRC's [Inclusion Matters projects](#).
- **EDI Book Clubs:** groups discuss recent EDI papers and topics helping to educate people on inequalities.
- **Using EPSRC Impact Acceleration Account funding:** to evolve the impact of 'local' EDI interventions more broadly across an institution and beyond to accelerate an improved research culture and greater social inclusion.

- **EDI as an Assessment Criterion:** EDI is included within individuals' objectives and is assessed at the end of year appraisal, counting towards performance related pay increases. Contributions to EDI are also considered in academic promotions.
- **EDI Training:** for all hiring managers before being on promotion panels.

Many institutions already held or were in the process of applying for the [Advance HE Race Equality Charter](#). They considered that this process was valuable for prompting analysis, dialogue, consultation and reflection.

There was a significant appetite for working together across the sector to share good diversity and inclusion practices of what works. Many institutions suggested that EPSRC can add value at a national level by providing a route to connect organisations.

# Challenges encountered in academia by ethnic minority academic researchers

The survey covered a broad range of topics such as the support offered by the host organisation, experiences in the local environment, how included respondents feel in their workplace, whether they feel comfortable to have a voice and opportunities to progress their career.

Throughout the responses to the survey, it is observed that respondents from the White ethnic group provide answers that tend to be majority categorised into one of the options provided i.e. they either predominantly agree or disagree. Whereas the answers provided by respondents from within different ethnic minority groups tend to show a greater variance across all available options, sometimes presenting no clear trend. This might suggest that the experiences of ethnic minority respondents vary substantially (more so than their White colleagues) depending on their local environment, access to support and opportunities to date in their career pathway. This could also be a reflection of the variation in lived experiences from different ethnic groups.

Respondents to the survey said that the most prevalent challenges and barriers encountered in academia by ethnic minority academic researchers were:

- **Lack of belonging, opportunities and voice:** people from all ethnic groups had experienced racial comments and microaggressions in their work environment, but this was particularly notable for Bangladeshi, Pakistani and Black British African respondents. All Bangladeshi and Black respondents, three quarters of Chinese, two thirds of all Pakistani and just over half of all Indian respondents worry about how their race and ethnicity effected how they are perceived at work. The majority of ethnic minorities reported feeling isolated in their own local environments and were much more likely to be uncomfortable voicing their own opinions, with many stating that their ideas and opinions were valued less compared to

the same ideas/opinions spoken by White colleagues. Although all ethnic groups felt they had received opportunities to progress their career, most considered that opportunities were more available to White colleagues. Respondents were asked if they felt they were a valued member of the team they work in. As a proportion, more ethnic minority researchers did not feel valued, notably only 20% of Black respondents said they felt valued.

- **Networking and visible role models:** finding a mentor can be difficult for everyone regardless of ethnicity or gender identity but was notably more difficult for Pakistani and Black British Africans compared to White men. Whilst most White respondents said they found it easy to network with colleagues, all Bangladeshi, Pakistani and Black British Africans tended towards finding networking more difficult. All ethnic minorities agreed that there was a lack of role models where they worked, particularly in leadership roles. This is a challenge for both attraction into an Engineering and Physical Sciences research and innovation career, and an individual's career progression.
- **Awareness of EPSRC opportunities and staff:** all Bangladeshi, Pakistani, and Black British African respondents said they would not contact EPSRC for advice or support with their funding application. Of those who said they would make contact, 63% were White. In addition, 42% of respondents said they were not familiar with who their primary EPSRC contact was in their relevant area of research. The low levels of interaction with EPSRC staff is a concern as this suggests that individuals are either hesitant to contact EPSRC to find out more information and/or they do not know who to contact and/or how to find out who to contact and/or they perceive a barrier to the communication channels. If individuals are not aware of opportunities, they are less likely to make strong applications to funding opportunities.

■ **Experiences of applying for EPSRC funding** – the barriers identified when applying for funding that disproportionately affected ethnic minority researchers, in order of prevalence were:

- (1) Lack of visible ethnic minority researchers in EPSRC’s grant portfolio – by far the greatest barrier raised by everyone – regardless of gender identity and ethnicity.
- (2) Reduced chance of success due to unfair biases (perceived or actual) in the peer review process.
- (3) Entry requirements for applications, e.g. calls with a requirement for an existing grant portfolio.
- (4) Institutional selection processes and demand management processes.
- (5) Lack of institutional support with the application.

Of the respondents to this survey, just under 70% had applied previously to EPSRC as a Principal Investigator (PI), with 18% being a current PI of a research grant. The proportion of applicants that had previously applied but had been unsuccessful was 45% of ethnic minority and 49% of White respondents respectively.

Most respondents regardless of their ethnicity considered that they were well supported by their institutions and colleagues prior to submission of a funding proposal. Notably, White British respondents considered themselves very well supported by colleagues and their institution.

Under half (40%) of the respondents considered the EPSRC peer review process to be transparent and fair, with over half of all White British and White non-UK nationals agreeing. However, 42% of all respondents did not consider the process to be fair and transparent and notably within this group were 100% of all Black British African, Bangladeshi and Pakistani respondents, and nearly two thirds of all Indian respondents. It was also perceptible that while half of all men consider the EPSRC peer review process to be transparent and fair, only 22% of women agreed. This suggests that the experience of the process and the support throughout the peer review process differs considerably for different groups, with some underrepresented ethnic minorities and women experiencing non-transparent and unfair treatment.

■ **Experience of bias in reviewer comments** based on the ethnicity and/or nationality of applicants are impacting funding opportunities and causing distress. The predominant concern was the uneven playing field created, where biased reviewers can unjustly ‘sink’ proposals. Ethnic minority grant applicants are also receiving reviewer comments that are condescending and dismissive, that White colleagues do not receive.

10% of respondents said that they had received a review for their EPSRC application where they considered that some of the comments could be viewed as racially motivated. Of these respondents just over half were ethnic minority respondents which included all Black British African respondents, half of Bangladeshi and Pakistani, a quarter of all Indian respondents and 15% of all White non-UK nationals. Of those respondents that considered they had received racially motivated comments, 20% raised their concerns with EPSRC. Of those respondents who did not raise their concerns with EPSRC, the primary reasons for this was the belief that EPSRC staff would not take action, or they considered that the comment was not serious enough and/or the individual worried that their interpretation was incorrect. A small proportion felt uncomfortable in raising their concerns, with some worrying about what would happen to the success of their proposal if they did.

■ Two thirds of respondents who had attended an **EPSRC interview** as a candidate considered the process to be well conducted, unbiased and fair, notably most were White men (80%). However, over half of all women and ethnic minority respondents considered the interview process to be biased against them and unfair. While half of all men consider the EPSRC peer review process to be transparent and fair, only 22% of women agreed. Many respondents wanted feedback on their interview performance (positive or negative) that would help them to develop skills to succeed in the future.

■ **Experiences of participation in EPSRC peer review:** just over a third (37%) of respondents identified themselves as EPSRC Peer Review College members, with the majority of respondents (59%) not being a member of the College. Of those respondents that identify as



College members, over two thirds were White and a quarter identify as ethnic minorities. Just under two thirds of people responding to this survey did not know that people can self-nominate to be on the EPSRC Peer Review College.

The only respondents who identified as having panel member experience were White. All Black British Caribbean, three quarters of all Black British African and a half of all Bangladeshi and Mixed: Asian and White respondents had no participation in peer review in any capacity. Some ethnic minority respondents are not being approached to review proposals or to serve as panel members even though they are a member of the EPSRC Peer Review College. The lack of diverse participation in peer review is a concern and a focus of our actions already in progress. Nearly 10% of respondents who have served as an EPSRC panel member said they had witnessed what they felt to be an inappropriate comment related to the race and/or ethnicity of the applicant or applicant team. Half of these respondents considered the inappropriate comment to be well managed by both the Panel Chair and EPSRC staff, with half considering that it should have been managed better.

- **Notable positive experiences:** included praising EPSRC staff for being helpful and friendly, for running the process professionally and being very clear with their guidance. There were also positive experiences of interview panels whose members were diverse, friendly and patient giving applicants confidence in the decision making. Notable negative experiences included concerns about reviewers who write inappropriate statements with clear bias in their scores; short call deadlines and calls that are not equally accessible; institutional gatekeeping; and experiencing how a non-English-sounding name affects how people perceive written ideas.

Overall, respondents felt their experience of applying to EPSRC was 'Mostly positive'. Although, when exploring the findings through a gender and ethnicity lens there is no clear trend, with different groups – and even respondents who share the same gender and/or ethnic group – experiencing considerably different positive and negative experiences. However, the respondent data shows that White men

tend to have had a more positive experience when applying to EPSRC for a research grant than women and ethnic minority groups, particularly Black respondents.

- **Impact of COVID-19 Pandemic:** the pandemic has highlighted and exacerbated structural inequalities and high levels of anxieties around job security. A tighter academic job market will likely reduce opportunities for career progression for everyone, but particularly for ethnic minority researchers – in an already unfair environment. Follow on roles for Post-doctoral researchers was particularly highlighted as a concern. Other concerns raised included a lack of in-person interaction to gain soft skills that enable researchers to navigate the academic system, with many considering that this will have a tremendously negative impact in future career development. It was thought that this was particularly true for ethnic minority researchers who might not be able to easily network and find collaborators, with cultural differences demanding more of researchers in extended family settings which is disadvantaging some ethnic minority colleagues, resulting in individuals becoming less visible. This has also had a significant impact for doctoral students who have been entirely cut off from informal networking and cohort level interactions, making it much harder for minority students to draw on networks needed later for finding opportunities. However, some felt that the pandemic had helped because there was less in-person networking and less office politics which often disadvantage ethnic minorities due to people making assumptions from how someone looks at an in-person meeting or having less likelihood of being invited to a meeting in the first place. Due to home working, some respondents felt that there were more opportunities for skills and capabilities to be recognised, whereas in in-person settings these can be obstructed by what your ethnic background is.

To support the research community, respondents considered that the top three actions EPSRC should take are:

- 1 **eradicate systemic bias** and ensure fairness in peer review ensuring a diversity of voice within

assessment and decision making, as well as training peer reviewers,

- 2 **pilot alternative methods of assessment** such as double-blind peer review, and
- 3 **work with others across the sector to enhance access and improve research culture** e.g. institutions to publish their pre application selection statistics and processes, and for

everyone to find ways to create a level playing field.

Respondents also considered and recommended that institutions could give more guidance and encouragement to ethnic minority researchers to apply for larger grants, provide more mentors and ethnic minority role models and ensure diversity in the decision makers.

## Primary Concerns

### The primary concerns raised by **ethnic minority academic** respondents

#### Securing funding to support research in a system with bias: covert racism

- Institutional gatekeeping

#### Dismissive behaviour: ethnic minority researchers are assumed to be inferior

- Disrespectful attitudes from colleagues and students – forced to accept you are less valued even when work is of equal value
- Ideas / opinions being valued less compared with the same ideas/ opinions spoken by White colleagues
- Difficult to show credibility or even be heard
- High levels of isolation- Feeling like an ‘outsider’ of an established academic community

#### Stereotyping attitudes

- Language barriers / Having a non-western sounding name
- Experiencing microaggressions - from mispronunciations of names to broad assumptions about the country of people’s birth
- Cultural differences that are wrongly perceived

#### Difficulty finding collaborators

- Receiving a lack of support for career progression
- Being pushed towards teaching tracks over research

#### Lack of ethnic diversity in senior university management

#### Lack of role models particularly in leadership roles with ethnic minority background

### The primary concerns raised by **White academic** respondents

How to be better **allies** to our ethnic minority colleagues

- A want to improve knowledge on how best to support and challenge behaviours that are inappropriate

Early career researchers feeling the **burden of correcting for historical racial inequalities** whilst the ‘top levels’ remain the least diverse

**Perceptions of privilege** when White and coming from a socio economically disadvantaged background and/or with hidden disabilities

- Subtle and persistent messaging that White men didn’t have to work to achieve success.

**Language barriers:** being a White non-native English speaker

- Many White non-UK nationals considered that it was an individual’s cultural background that drives discrimination and not the ethnic background

## Challenges encountered in academia by ethnic minority postdoctoral researchers

The survey covered a similar broad range of topics compared with the academic researcher survey but with more of a focus on career progression and awareness of EPSRC. The summarised key challenges encountered in academia by ethnic minority postdoctoral researchers were:

- **Opportunities and voice:** in contrast to academic respondents, ethnic minority postdoctoral researchers were more comfortable in voicing their opinions in their own local environments than their White colleagues. Yet, over twice the proportion of ethnic minority postdoctoral researchers **did not feel their working environment was inclusive** but did consider they were able to be themselves in the workplace to the same extent as White respondents. Independent of ethnicity, most respondents felt they had received opportunities to progress their career. Over a third of ethnic minority postdoctoral researchers were **worried about how their race and/or ethnicity affected how they were perceived**, with only a small number (N=<5) of respondents from the Asian ethnic group saying that they had experienced racial comments in their work environment.
- **Networks:** a consistently reported barrier for ethnic minority postdoctoral respondents was in **establishing informal networks**. This is a culmination of several points also raised that included a **lack of belonging, working harder to gain the trust of colleagues and not feeling part of the majority group**. The lack of effective networks meant ethnic minority postdoctoral researchers were less aware of opportunities available for career progression which has a clear impact on future career paths. This also impacted their ability to gain informal mentorship and role models.
- **The main challenges** detailed by postdoctoral researchers were consistent independent of ethnicity: **job insecurity** (exacerbated by the COVID-19 pandemic) and **constant relocation**. However, there were added barriers present for ethnic minority postdoctoral researchers – **primarily unconscious bias**. There was a common view that many ethnic minority postdoctoral researchers had to **work twice as hard to achieve the same** (and sometimes less) as White colleagues and that their successes were **less likely to be recognised and celebrated**. The impact of this on achieving funding and permanent positions was expressed strongly. Overall, it was felt by respondents, independent of ethnicity, that the lack of opportunities and larger number of barriers faced by ethnic minority postdoctoral researchers was not taken into account when allocating funding or in hiring practices.
- **Impact of COVID-19 Pandemic:** the pandemic has exacerbated the issues already present in the academic system. There were concerns that a reduced postdoctoral and academic job market would increase the likelihood of postdoctoral researchers leaving academia to pursue more lucrative and stable career paths, especially so for ethnic minority individuals. Concerns were also raised about the lack of conference attendance and the informal chats which often lead to future career opportunities limiting the prospects for many postdoctoral researchers. This lack of networking opportunity, both international and in the local environment, will impact those who already struggle to gain a network more so than others. It was noted that due to the strained situation generated by the pandemic, individuals tended to rely on their informal networks for support, meaning those who already had them in place were much better supported. A proportion of respondents felt that the pandemic had impacted all researchers equally regardless of race and/or ethnicity. The vast majority of those who provided this opinion were White men.

Several respondents suggested that EPSRC could promote flexible working and continue to raise awareness of racial issues in the academic sector.

- **EPSRC Peer review process:** the respondents who had applied to EPSRC before (N=19) were asked whether they thought the peer review process was transparent and fair. The majority (44%) agreed with this statement with a third disagreeing. Respondents considered that the EPSRC peer review process provided clear instructions on how to apply, gave exposure to the grant writing and application process as well

as the first comparative assessment of their scientific visions. Some of the negative aspects included the length of time to get a result, that it was stressful to apply and upsetting when rejected. Some respondents raised the issue that their institution had told them to apply to a scheme at the last moment which added extra stress to the process. Specific to peer review, some were not convinced of the unbiased nature and transparency of the review process and noted the exasperation at receiving contradictory reviews.

## Primary Concerns

The primary concerns raised specific to **ethnic minority Postdoctoral** researchers:

**Unconscious Bias** – awareness, acceptance, understanding and willingness to challenge

**Lack of recognition** – successes not being highlighted as much as White colleagues

**Difficulties in making informal networks:**

- Mentors, role models, collaborations

- Career opportunities

- Support and guidance

**Assumptions about ability** – language proficiency, understanding, education

**Barriers not taken into account in funding allocations and hiring practices**

The concerns raised by **All** respondents:

**Job insecurity** – short term contracts, unpaid work

**Need to constantly relocate** – not conducive to family life, owning a house, stability.

**High barriers to success** – quantity over quality is valued (grants, papers, students etc)

# Challenges encountered in academia by ethnic minority doctoral students

The doctoral student survey provided the largest number of usable responses (N=454) from the three surveys. Due to the career stage, no questions were asked about the EPSRC peer review process and there was less of an emphasis on what EPSRC and UKRI could do and more on lived experiences in the respondents' institutions.

Key findings from ethnic minority doctoral students were:

- When compared with the findings from the academic and postdoctoral researcher surveys, a greater number of ethnic minority doctoral students spoke about **wanting to break down barriers and act as an advocate for their race, ethnicity and/or gender in STEM subjects**. But they also felt a greater pressure to represent their ethnic group and break down barriers compared with their White counterparts.
- It was found that a greater proportion of ethnic minority doctoral students (52%) find an academic career appealing compared with their White colleagues (46%). However, a greater proportion also believe they are **not given the same opportunity** to progress their career when compared with their White colleagues, with Black and Mixed ethnic students feeling particularly disadvantaged.
- Ethnic minority doctoral students felt a much greater level of **isolation and pressure** than their White colleagues, as well as feeling **uncomfortable to voice their own opinions** in their workplace.
- Close to half of all ethnic minority respondents **worried about how their race and/or ethnicity effects how they are perceived**. This included 62% of Black respondents and 53% of Mixed ethnicity doctoral students. This was also true for many, albeit a lower proportion, of the Indian and Pakistani respondents. Chinese doctoral students were split equally between agreeing and disagreeing in worrying about how their race and/or ethnicity affected how they were perceived.
- 9% of respondents said they **had experienced racial comments** in their work environment, and this was spread across all ethnic minority groups.
- 42% of respondents said that they found it easy to find colleagues who could play a **mentoring role** with a third of respondents disagreeing. When looking at the respondent's ethnicity, a higher proportion of ethnic minority students found it difficult to find a mentor compared with their White colleagues. This was particularly true for Black and Mixed ethnicity respondents. The majority of Female respondents said they struggled to find a mentor. It was also found that at this career stage **difficulties in networking** were present independent of ethnicity.
- In general, the **positives of working in the academic sector** were consistent across the board – interesting work, teaching, freedom, flexibility. There were added benefits raised by a number of ethnic minority doctoral students that including being a role model for other minority STEM students and being a valued member of a group.
- There were also consistent **negative aspects of academia** raised, these included not being able to be yourself, not being able to form informal networks, lack of awareness around bias and feeling you have to work twice as hard as White colleagues to achieve the same or even less. Several respondents pointed out the **lack of financial security** in the academic sector unfairly impacting those from a lower socio-economic background independent of race and gender identity. Several, often White male, respondents raised **'lack of free speech in their institution'** and the perceived view that due to diversity 'quotas' many women and ethnic minority colleagues were preferentially given funding and support, independent of quality of work. Many respondents noted that **social events were not inclusive**, e.g. group pub trips, and instances of colleagues not taking reports of racist abuse seriously, or minimising its impact.

The institution, research discipline and local environment had a large effect on how doctoral students viewed the academic sector, hence the differences in response and often contradictory statements.

### Primary Concerns

<b>The primary concerns raised specific to ethnic minority doctoral students:</b>
<b>Bias</b> – lack of awareness, the impact and understanding of
<b>Pressure</b> to represent their ethnic group and break down barriers
Social events not being inclusive (e.g. social trips, drinking culture)
Difficulties in forming <b>informal networks</b>
Not being able to <b>be yourself</b>
Lack of <b>role models</b>

<b>The concerns raised by All respondents:</b>
Culture of overworking
Highly competitive
Number of publications over quality is valued more
Isolation
Lack of formal management

## Next steps: implementing action

UKRI is developing the first edition of the EDI strategy which is planned to be published in the coming months. Each Council, and other parts of UKRI, are developing action plans to implement this strategy.

Implementation of the actions detailed in the following pages has already begun and will form part of the EPSRC EDI action plan that will be published later in 2022.

We are working on race and ethnicity challenges with colleagues across UKRI. More information on activities in other Councils and central UKRI functions was published recently: [UKRI activities to address underrepresentation and systemic disparities](#).

The interventions presented in this report draw many parallels with the recommendations for addressing gender inequality outlined in our gender diversity [‘have your say’ survey findings report](#).

# Our commitments to action

After consideration of the key findings from our [detailed ethnicity data investigation](#) and community engagement we have identified the following interventions to improve ethnic and race equality in our portfolio and support the career progression of ethnic minority researchers and doctoral students. All our proposed interventions are focused on making the system fairer for everyone. The interventions taken forward will be

actively monitored and evaluated. EPSRC Council has approved this approach and actions.

All actions are to be undertaken within the next 3 years with some actions already underway.

For more information on other UKRI race equality activities see here: [UKRI activities to address underrepresentation and systemic disparities](#).

## Foster an inclusive and diverse research and innovation system and work in partnership with our community to support action

### We will:

- 1 **Publish our findings** from the race inequality community engagement and our commitment to action and update this with our progress through the EPSRC EDI Action Plan
- 2 **Connect together Research Organisations** to create a 'Community of practice' across the UK
- 3 Explore **new ways to engage with a diversity of groups** from our community. With a focus on the peer review process, building trust and creating active listening routes.
- 4 Systematically **engage with our partners** (Learned and Professional Societies) to explore how we can work together to take collective coordinated action on race equity issues and enhance the current provision of networking opportunities for underrepresented ethnic minority groups.
- 5 Continue to **investigate our portfolio, build our analytical capabilities and engage with our community to take into consideration lived experiences** to support inclusive decision making, and to better understand barriers to participation and mitigate against them:
  - a. **partner with expert groups** (e.g. Royal Statistical Society and London Mathematical Society) to support the sophisticated analysis of our portfolio data to reveal further insights and challenges to address and provide focus
  - b. **engage with social scientists** to expand our quantitative and qualitative data capability
  - c. continue to **engage with our community** particularly people with lived experiences
  - d. **develop our intersectional data capability** focusing on ethnicity and gender as well as exploring the international dimension of our portfolio. We will publish our findings and associated actions.
- 6 Focus on **role models in our portfolio to highlight and make visible the varied and important contributions** people from underrepresented groups make across the Engineering and Physical Sciences, with a particular focus on women, ethnic minorities, people with disabilities and/or colleagues who represent the LGBTQ+ community.



## Embed inclusive practices in the way we work to reduce inequities across our portfolio and improve trust

### We will:

- 7 Work with UKRI colleagues to **understand the role of university selection processes on our portfolio** with the aim of providing clear communication on accepted good practices for fair selection
- 8 **Explore all the routes (e.g. cognitive overload, time pressures) in which bias manifests within our peer review approach** and further adapt our processes and **provide guidance to reviewers to reduce the impact of bias on decision making.**
- 9 Review our process for monitoring **discriminatory comments from peer reviewers.**
- 10 Commission an **independent investigation of bias in peer reviewer comments and scores** (racism/ sexism/ ableism/ sexuality/ ageist/.../). To understand the depth of implicit reviewer bias and subsequently to reduce this impact using alternate approaches to ensure a fair funding system. This investigation will be undertaken to complement the UKRI Review of Peer Review detailed in the UK Government People and Culture Strategy.
- 11 **Explore how we can reduce bias in our decision making.** We will work with peer review prioritisation / interview panel members to ensure fair decision making. Working with our community and experts, we will design our panel process to further strengthen the operation and transparency of our peer review panels to promote improved trust and confidence in our assessment and selection processes.
- 12 **Investigate and evaluate alternative peer review assessment methods** e.g. double blind peer review and separating the assessment of the research idea from the track record as well as exploring lottery type models. We will evaluate funding calls 1 and 2 of New Horizons, and the implementation of the Resume for Research and Innovation within our Fellowships scheme. This work will be linked to the development of the new UKRI Funding Service and implementation of actions set out in the UK Government People and Culture Strategy, specifically the UKRI Review of Peer review.
- 13 **Improve our use of 'plain English' in Calls for funding** as part of the UKRI Simpler Better Funding, being mindful that English is not everyone's first language.
- 14 **Evaluate the process used for our NPIF Innovation Fellowships.** This process resulted in the most diverse cohort we have funded, and which included a step for universities to inform us how they were ensuring diversity in the applications submitted.
- 15 **Create an evidence base on the broader impact of EPSRC's successful mixed gender panel (peer review and advisory) policy.** Since its launch in 2016 we have seen an increase (from 18% to 33%<sup>5</sup>) in the proportion of women on funding panels and advisory groups. We will explore the impact (direct and indirect) on the broader community and peer review process. To be able to demonstrate the benefits of our intervention, articulate the impact it has had (positive and negative) and to explore broadening this policy to include ethnicity.
- 16 **Ensure no short deadlines to funding opportunities.** Thoughtful deadlines to enable a greater diversity of people to apply. We will commit to funding opportunities to be open for a minimum of 8 weeks unless an urgent business requirement dictates otherwise and/or for reasons not within our control.

5 <https://epsrc.ukri.org/files/funding/edi/epsrc-peer-review-participation-diversity-data-to-2020/>

## Encourage and enable greater access and participation in Engineering and Physical Sciences research careers through embedding EDI practice in our portfolio and the wider research community.

### We will:

- 17 Work with the Learned Societies to enhance the current provision of **networking opportunities for underrepresented ethnic minority groups**
- 18 **Gather intelligence from our Inclusion Matters portfolio and share the findings of 'what works'** with our community via a good practice resource hub to empower researchers to embed and enact change in their own environment.
- 19 **Monitor and evolve our [EDI Expectations guide](#)** including good practice examples collecting and sharing good practices via a resources hub. Providing recognition and visibility for EDI good practice to help improve practices in our research and training grants. The aim to embed and empower our researchers in their local environment to create inclusive workplaces.
- 20 If funding allows, **increase support for vacation internships provided through our Doctoral Training Partnership** funding for local university action to support or facilitate involvement of under-represented groups in postgraduate study.
- 21 Encourage our doctoral training grant holders to ensure inclusive and fair recruitment. Including processes that are accessible to people following a variety of different career paths.
- 22 Assist those who deliver our doctoral training investments in developing and sharing good EDI practice to ensure **inclusive workplaces and practices**.

## Increase diversity of voice in our advisory groups

### We will:

- 23 **Increase the representation of ethnic minority researchers on our Peer Review College to 20%** by actively encouraging self-nominations to the Peer Review College from all our researchers but particularly seeking nominations from ethnic minority colleagues. In the first 6 months of the campaign, we observed a positive response with a 2.5x increase in self-nominations compared to the previous year.
- 24 **Increase the membership of ethnic minority representation on our strategic advisory bodies: SATs, SETB and SAN to 20%.**
- 25 **Ensure we have a diversity of voices advising us on our EDI activities and plans.** We will:
  - a. **Refresh our membership of our EDI SAG**, and evolve our approach to work more closely with our Strategic Advisory Teams (SAT's) and other stakeholders.
  - b. When working on specific issues, create **forums for people who have different lived experiences**, representative from various career stages and pathways, to facilitate engagement with us and to participate in the development of our actions. We will seek expert advice on how to create **safe and inclusive spaces** for people engaging in conversations about their lived experiences and pilot and **embed approaches to inclusive dialogue and engagement** that value and celebrate different voices, expertise, experience and perspectives

## Investigating the barriers to greater access and participation to provide better support for people in our community

### We will:

- 26 Work with colleagues across UKRI to explore further how **socioeconomic background affects the participation and success of people** in research with a particular view to ensuring widening access and participation to our doctoral education investments working with our training grant holders

# Annex 1

## University and business partners

Questionnaires were completed by 46 universities and 7 businesses. To date we have had follow up conversations with 28 universities. Completed questionnaires and follow up conversations (**Bold \***) have been undertaken with the following organisations:

### University organisation

Aberystwyth University  
 Aston University  
 Bangor University  
**University of Bath \***  
**University of Birmingham \***  
 University of Brighton  
**University of Bristol \***  
**Brunel University London \***  
**University of Cambridge \***  
**Cardiff University \***  
 Cardiff Metropolitan University  
 Coventry University  
**Cranfield University \***  
 De Montfort University  
 University of Dundee  
**Durham University \***  
 University of Edinburgh  
**University of Exeter \***  
**University Glasgow \***  
 Goldsmiths, University of London  
 University of Hull  
**Imperial College London\***

University of Kent  
**Lancaster University \***  
 The University of Leeds  
**The University of Lincoln \***  
 Loughborough University \*  
**The University of Manchester \***  
 Middlesex University London  
**Newcastle University \***  
 Northumbria University  
**The University of Nottingham \***  
**The University of Oxford \***  
 Queen Mary University of London  
 The University of Reading  
**Royal Holloway, University of London \***  
**The University of Sheffield \***  
**The University of Southampton \***  
**The University of St Andrews \***  
**The University of Strathclyde \***  
**The University of Surrey \***  
**The University of Sussex \***  
**Swansea University \***  
**University College London \***  
 The University of York

### Business organisation

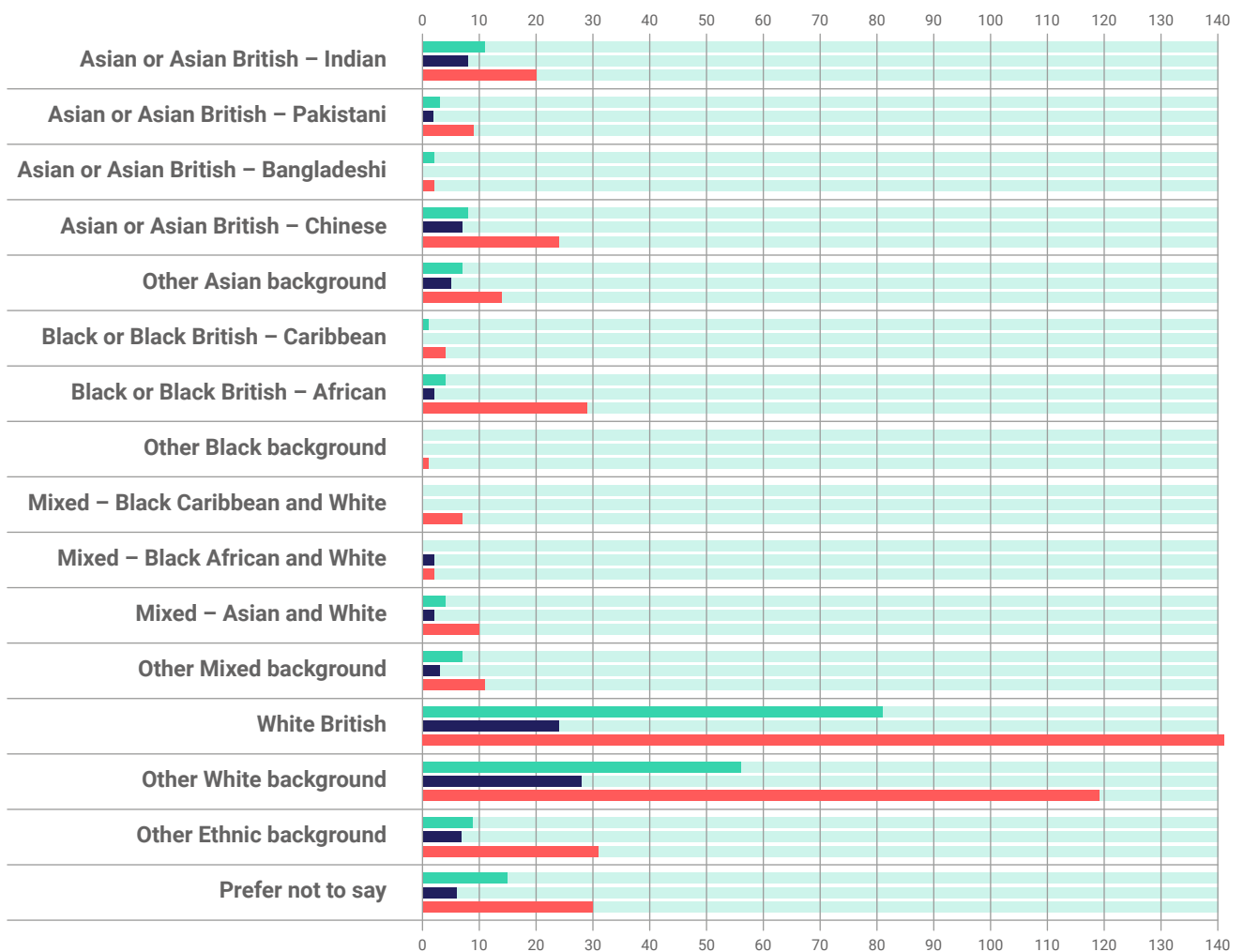
Lubrizol Limited  
 QinetiQ  
 Shell  
 Arup  
 National Physical Laboratory  
 Leonardo UK Ltd.  
 MBDA UK

# Annex 2

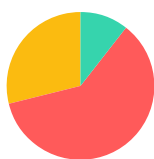
## 'Have your say' survey respondent demographics

Summary of the respondent ethnicity across all three 'have your say' surveys.

**Key**  
 Top = Academic Respondent Ethnicity  
 Centre = Post Doctoral Researcher Ethnicity  
 Bottom = Doctoral Student Ethnicity



Academic



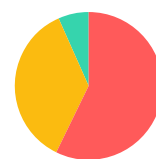
White 137  
 Ethnic minority 56  
 Not disclosed 15

Post doctoral



White 52  
 Ethnic minority 38  
 Not disclosed 6

Student



White 260  
 Ethnic minority 164  
 Not disclosed 30

## Academic ‘Have your say’ survey respondent demographics

Of the 208 responses, 29% identified their **sex** as Female and 61% as Male, with 11% preferring not to say. One percent of respondents identified that the **gender they identified with** was different to their sex registered at birth. The majority of respondents identified themselves as White (66%) with 27% of respondents self-identifying as an ethnic minority. The breakdown of respondents by their identified **ethnicity** is as follows:

Ethnicity	Number of respondents (N)	Percentage (%)
Asian or Asian British – Indian	11	5.3%
Asian or Asian British – Pakistani	3	1.4%
Asian or Asian British – Bangladeshi	2	1.0%
Asian or Asian British – Chinese	8	3.8%
Other Asian background	7	3.4%
Black or Black British – Caribbean	1	0.5%
Black or Black British – African	4	1.9%
Other Black background	0	0.0%
Mixed – Black Caribbean and White	0	0.0%
Mixed – Black African and White	0	0.0%
Mixed – Asian and White	4	1.9%
Other Mixed background	7	3.4%
White British	81	38.9%
Other White background	56	26.9%
Other Ethnic background	9	4.4%
Prefer not to say	15	7.2%

118 (57%) respondents recorded their **nationality** as the United Kingdom (UK) with 69 (33%) respondents identifying as non-UK nationals, the remaining 21 (10%) respondents did not disclose their nationality.

Respondents represented various **career stages**. 53 (26%) respondents identified themselves as early career, with 73 (35%) and 69 (33%) respondents identifying themselves as mid-career and senior career respectively. The remaining 13 (6%) preferred not to say.

The majority of respondents 174 (84%) identified as having permanent **contracts**, with 21 (10%) on Fixed Term contracts and the remaining 13 (6%) not disclosing this information. As a proportion, there are more women (52%) respondents on fixed term contracts compared to men (38%). Of all the respondents it is noticeable that a quarter of both Black British Africans and Mixed: Asian and White were on fixed term rather than permanent contracts.

The majority of respondents identified their **sexual identity** as Heterosexual/straight (153, 74%) or preferred not to say (39, 19%). 8 (4%) identified as being a Gay man, 4 (2%) Bisexual, 3 (1%) preferred to self-describe and 1 (0.5%) identified as a Gay woman/Lesbian.

Respondents represented various **disabilities**. The majority of people (154, 74%) identified with having no known disability and 27 (13%) preferred not to say. 9 (4%) identified as having a mental health condition, 4 (2%) identified as having a long standing illness, 4 (2%) said they were blind/partially sighted and 3 (1%) had a learning difficulty such as Dyslexia/Dyspraxia/ADHD. A further 2 people, (1%) identified with autistic spectrum disorder, 1 person (1%) a deaf/partial hearing impairment and another 1 person (1%) a physical impairment.

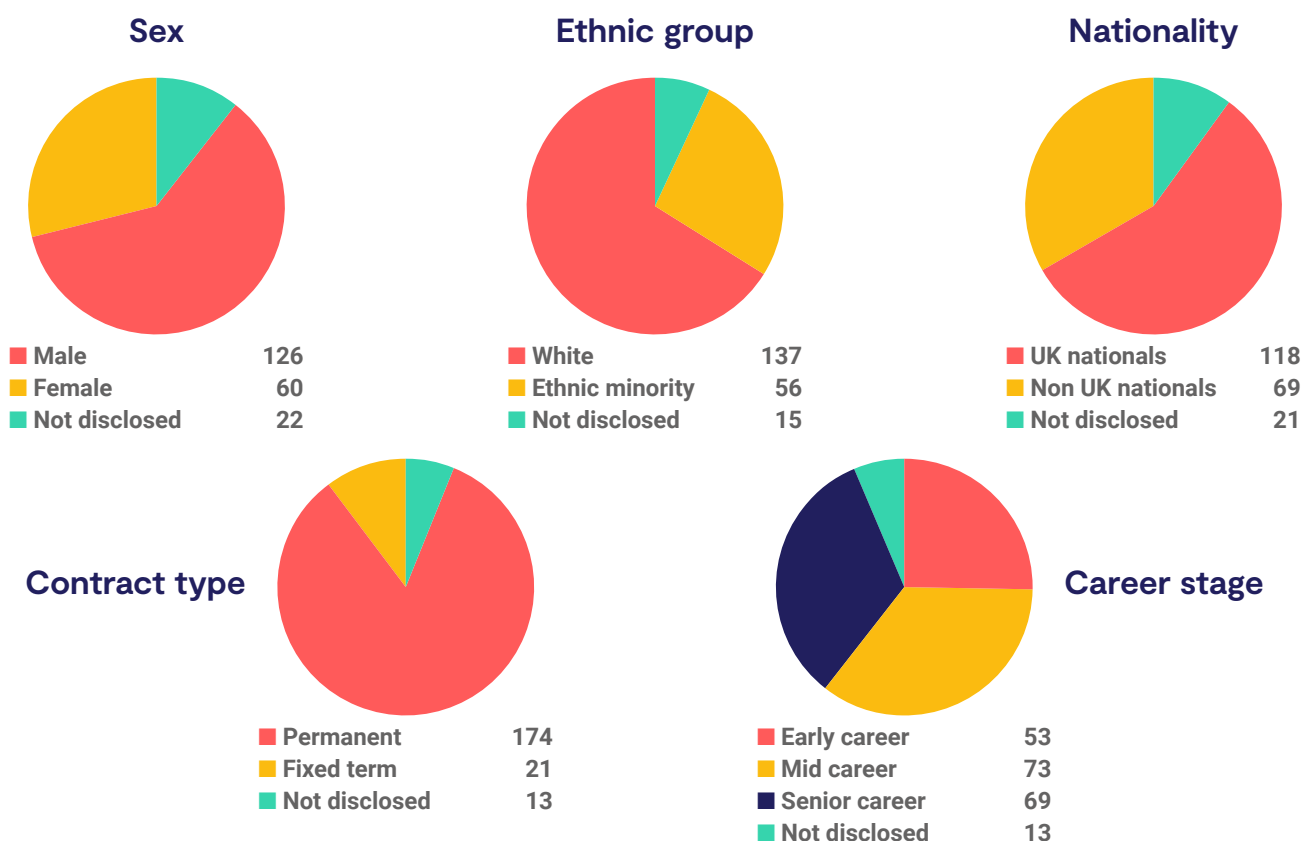
The majority of respondents work in the mathematical sciences, engineering and physics related disciplines. **The disciplines that best described respondents' area of work are as follows:**

Discipline	Number of Respondents (N)	Percentage (%)
Chemistry	12	5.8%
Mathematical Sciences	70	33.7%
Physics	21	10.1%
Materials	12	5.8%
Engineering	42	20.2%
ICT	4	1.9%
Manufacturing	4	1.9%
Energy / Net Zero	2	1.0%
Healthcare Technologies	11	5.3%
Digital Economy	0	0.0%
AI and Robotics	4	1.9%
Quantum Technologies	0	0.0%
Other (please specify)	15	7.2%
Prefer not to say	11	5.3%

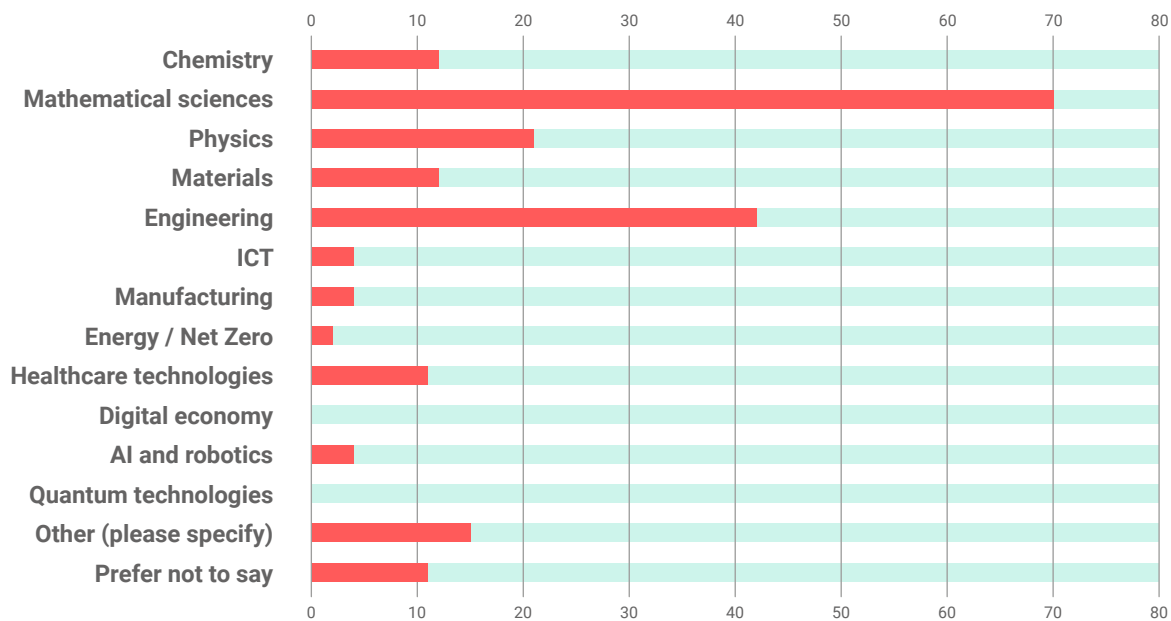
The small numbers of survey respondents for some of the ethnic groups means the disaggregated analysis by individual ethnic group can be statistically limiting. Our reporting focuses on observable trends and lived experiences.

Due to some information being recorded as 'not disclosed' and a number of questions in the survey being optional and/or respondents were able to select more than one option not all counts will add up to 100%.

**Breakdown of respondent demographics to the academic 'have your say' survey**



Discipline area





## Postdoctoral Researcher Respondent demographics

Of the 96 responses, 34 (35%) identified their **sex** as Female and 56 (58%) as Male, with 6 (6%) preferring not to say. One person (1%) identified that the gender they identified with was different to their sex registered at birth.

The breakdown of respondents by their identified ethnicity is as follows:

Ethnicity	Number of respondents (N)	Percentage (%)
Asian or Asian British – Indian	8	8.3%
Asian or Asian British – Pakistani	2	2.1%
Asian or Asian British – Bangladeshi	0	0%
Asian or Asian British – Chinese	7	7.3%
Other Asian background	5	5.2%
Black or Black British – Caribbean	0	0%
Black or Black British – African	2	2.1%
Other Black background	0	0%
Mixed – Black Caribbean and White	0	0%
Mixed – Black African and White	2	2.1%
Mixed – Asian and White	2	2.1%
Other Mixed background	3	3.1%
White British	24	25%
Other White background	28	29.2%
Other Ethnic background	7	7%
Prefer not to say	6	6.3%

40% of the respondents were ethnic minority researchers. It is important to note a particularly low response from postdoctoral researchers who identified as Black (2% in total).

39 (41%) respondents recorded their **nationality** as the United Kingdom (UK) with 55 (57%) respondents identifying as non-UK nationals, the remaining 2 (2%) respondents did not disclose their nationality.

Respondents represented various **career stages** with the majority, 83 (87%) identifying themselves as early career. 9 (9%) and 2 (2%) respondents identified themselves as mid-career and senior career respectively. The remaining 2 (2%) preferred not to say.

The majority of respondents had 1–3 years **post-doctoral experience** (33, 34%), followed by 1 year (23, 24%) and then 3-6 years (22, 23%). 7 (7%) researchers had 6-9 years' experience and 8 (8%) over 9 years. 3 (3%) preferred not to disclose their length of experience.

For **sexual identity**, the vast majority of people identified as Heterosexual/straight (72, 75%) or preferred not to say (14, 15%). 8 (8%) identified as Bisexual and 2 (2%) preferred to self-describe.

In terms of **disabilities**, 77 (80%) responded as having no known disability and 6 (6%) preferred not to say. 2 (2%) identified as having an autistic spectrum disorder, 1 (1%) a deaf/partial hearing disability, 8 (8%) a mental health disability and 2 (2%) learning difficulties. None of the respondents were blind/partial sighted, had a longstanding illness or physical impairment/mobility disability.

The majority of respondents work in the mathematical sciences, engineering and physics related disciplines. **The disciplines that best described respondents' area of work are as follows:**

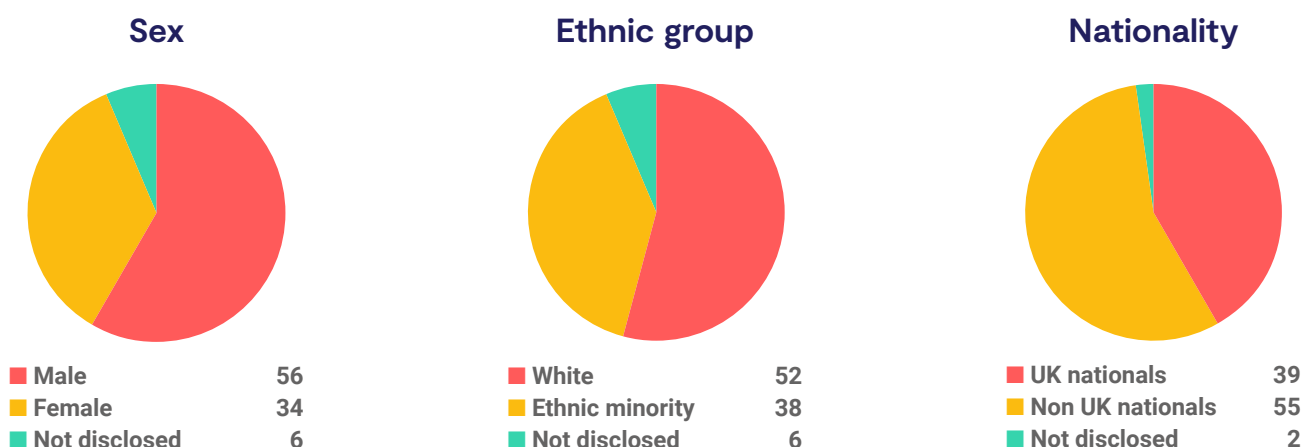
Discipline	Number of Respondents (N)	Percentage (%)
Chemistry	12	12.5%
Mathematical Sciences	22	22.9%
Physics	28	29.2%
Materials	7	7.3%
Engineering	32	33.3%
ICT	4	4.2%
Manufacturing	1	1.0%
Energy / Net Zero	4	4.2%
Healthcare Technologies	4	4.2%
Digital Economy	0	0%
AI and Robotics	2	2.1%
Quantum Technologies	4	4.2%
Other (please specify)	7	7.3%
Prefer not to say	1	1.0%
Multiple areas selected	22	23.2%

Respondents could select multiple options therefore the counts will not total 100%

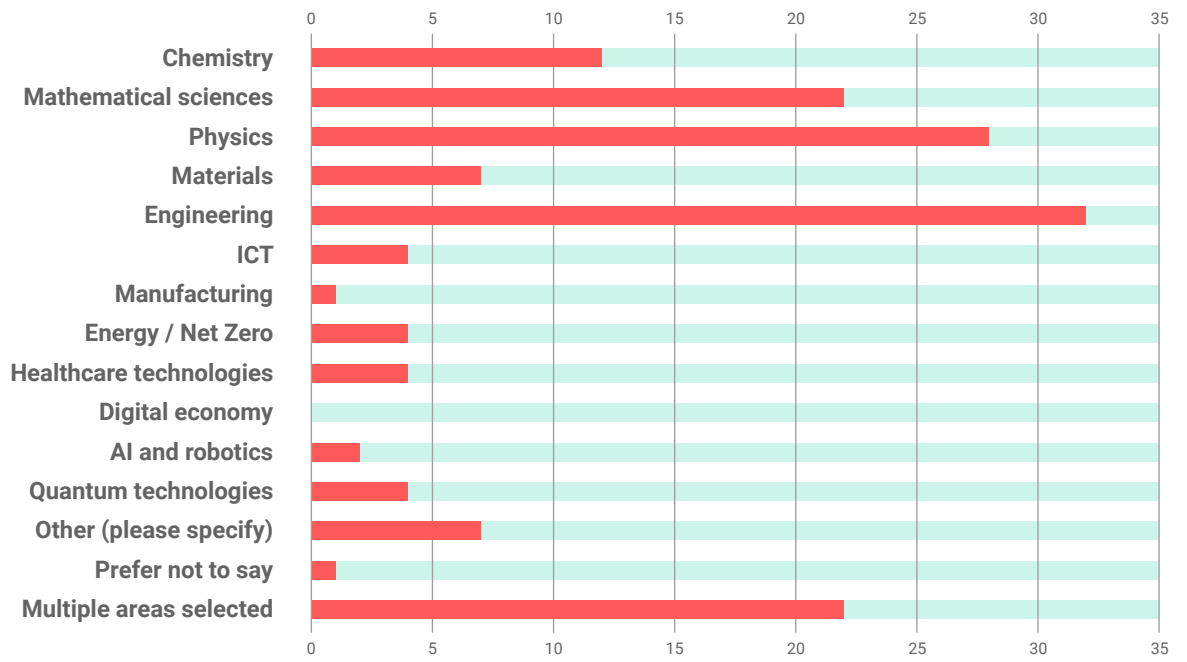
The small numbers of survey respondents for some of the ethnic groups means the disaggregated analysis by individual ethnic group can be statistically limiting. This report will focus on observable trends and lived experiences.

Due to some information being recorded as 'not disclosed' and a number of questions in the survey being optional and/or respondents were able to select more than one option not all counts will add up to 100%.

**Breakdown of respondent demographics to the postdoctoral researcher 'have your say' survey**



Discipline area



## Doctoral Student Respondent demographics

Of the 454 responses, 197 (43%) identified their **sex** as Female and 233 (51%) as Male, with 24 (5%) preferring not to say. 13 people (3%) identified that the gender they identified with was different to their sex registered at birth.

The breakdown of respondents by their identified **ethnicity** is as follows:

Ethnicity	Number of respondents (N)	Percentage (%)
Asian or Asian British - Indian	20	4.4%
Asian or Asian British - Pakistani	9	2.0%
Asian or Asian British - Bangladeshi	2	0.4%
Asian or Asian British - Chinese	24	5.3%
Other Asian background	14	3.1%
Black or Black British - Caribbean	4	0.9%
Black or Black British - African	29	6.4%
Other Black background	1	0.2%
Mixed – Black Caribbean and White	7	1.5%
Mixed – Black African and White	2	0.4%
Mixed – Asian and White	10	2.2%
Other Mixed background	11	2.4%
White British	141	31.1%
Other White background	119	26.2%
Other Ethnic background	31	7%
Prefer not to say	30	6.6%

36% of the respondents identified as an ethnic minority researcher. It is important to note a particularly low response from students who identified as Bangladeshi (0.4% in total), Caribbean (0.9%), other Black background (0.2%) and Mixed – Black African and White (0.4%).

219 (48%) respondents recorded their **nationality** as the United Kingdom (UK) with 232 (51%) respondents identifying as non-UK nationals, the remaining 3 (1%) respondents did not disclose their nationality.

Respondents were from various **years of study** towards a doctorate with the majority, 147 (32%), being in their 1st year. This was followed by 3rd year (22%), 2nd year (20%), 4th year (16%) and then 4 year + (7%). 3% preferred not to say.

The doctoral students who responded to this survey were **funded via several routes**. 33% were funded through Centres for Doctoral Training, 23% other routes, 19% Doctoral Training Partnerships, 12% Null, 8% preferred not to say, 3% Industrial CASE Award and 2% multiple routes.

For **sexual identity**, the vast majority of people identified as Heterosexual/straight (69%) followed by Bisexual (12%) and preferred not to say (10%). 4% preferred to self-describe, 3% identified as a Gay man and 2% as a Gay woman/lesbian.

In terms of **disabilities**, 71% responded as having no known disability and 10% with some form of mental health disorder. 7% preferred not to say and 4% stated they had multiple disabilities. 3% had a learning difficulty, 2% a long-standing illness and 1% an Autistic spectrum disorder. 0.4% had a physical impairment/mobility disability and no one recorded a blind/partial sight or deaf/partial hearing disability.

The majority of respondents selected multiple categories (24%) when selecting an area of study. **The disciplines that best described respondents' area of work are as follows:**

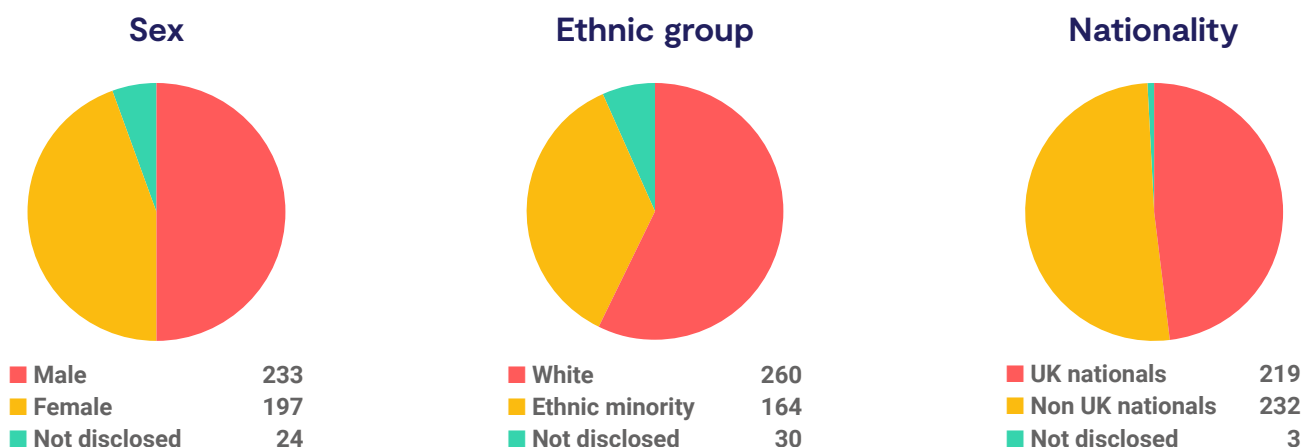
Discipline	Number of Respondents (N)	Percentage (%)
Chemistry	56	12.3%
Mathematical Sciences	92	20.3%
Physics	73	16.1%
Materials	34	7.5%
Engineering	153	33.7%
ICT	14	3.1%
Manufacturing	18	4.0%
Energy / Net Zero	25	5.5%
Healthcare Technologies	28	6.2%
Digital Economy	4	0.9%
AI and Robotics	47	10.4%
Quantum Technologies	10	2.2%
Other (please specify)	69	15.2%
Prefer not to say	8	1.8%
Multiple areas selected	108	23.8%

Respondents could select multiple options therefore the counts will not total 100%

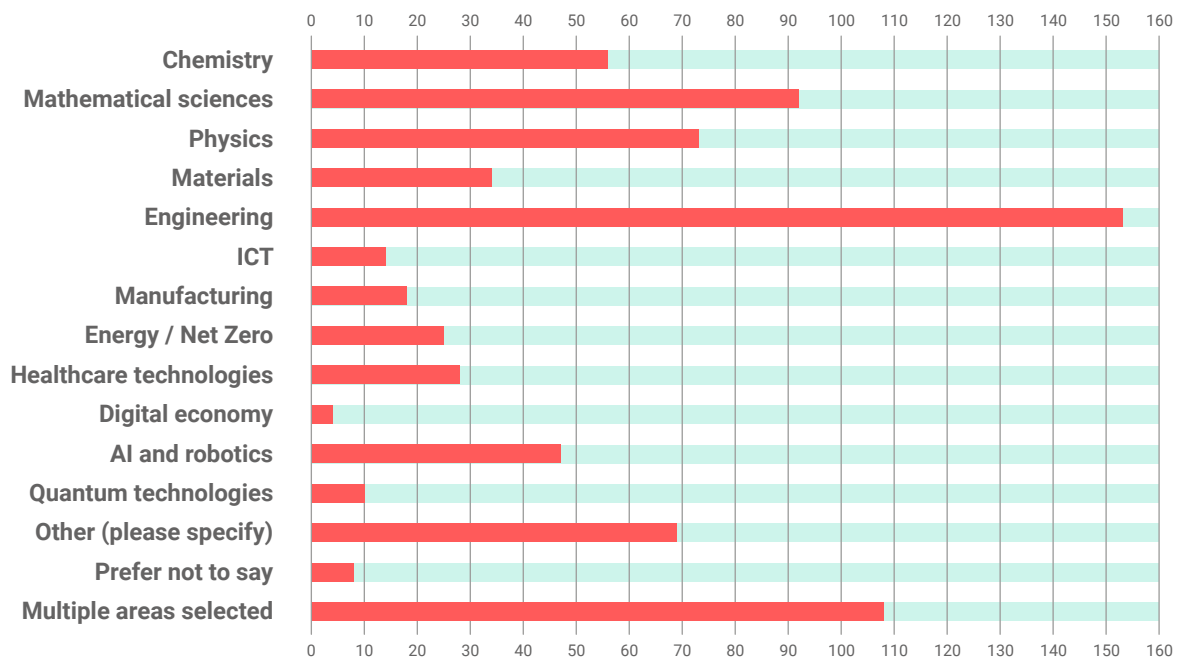
The small numbers of survey respondents for some of the ethnic groups means the disaggregated analysis by individual ethnic group can be statistically limiting. This report will focus on observable trends and lived experiences.

Due to some information being recorded as 'not disclosed' and a number of questions in the survey being optional and/or respondents were able to select more than one option not all counts will add up to 100%.

**Breakdown of respondent demographics to the doctoral student 'have your say' survey**



Discipline area



## **Accessibility**

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