

Academic staff in UK physics departments

The Institute of Physics (IOP) is the professional body and learned society for physics in the UK and Ireland. We seek to raise public awareness and understanding of physics and support the development of a diverse and inclusive physics community. As a charity, the IOP's mission is to ensure that physics delivers on its exceptional potential to benefit society.

This briefing outlines statistics on academic staff in physics departments in UK universities in the 2017/18 academic year

alongside statistics on selected STEM subjects (biosciences, mathematics, chemistry, and electrical, electronic and computer engineering) and all subjects (physics, selected STEM subjects and all other subjects). The data source is the Higher Education Statistics Agency (HESA).¹

The data is broken down by gender and age, and includes comparisons between Russell Group and non-Russell Group universities.

Summary

Physics saw a

26% increase

in overall academic staff numbers from 2012/13 to 2017/18, including a **38%** increase in the number of female staff; the largest relative increase in female staff among the subjects compared.

There has also been a

91% increase

in the number of female professors in physics over the same period, from **55 to 105**.

There were

18 UK universities¹

in 2017/18 where more than **20%** of their academic physics staff members were female; the highest number over the last six years.

In 2012/13, there were

12 UK universities

with more than **20%** female physics staff.

Physics still had a much higher proportion of male staff in 2017/18 than across all subjects;

81%

of physics staff were male, compared with **55%** across all subjects

Physics staff in younger age groups had a more even gender split than older age groups

79% male for staff aged 30 and under, 89% male for staff aged 56 and over,

but the difference is minor compared with biosciences and chemistry, where younger staff are much more likely to be female than older staff.

Physics had a higher share of staff from outside of the UK than across all subjects

46% compared with 30%.

This was especially the case among female physics staff,

53%

of whom were from outside the UK compared with

29%

of female staff across all subjects.

¹ With 10 or more academic physics staff

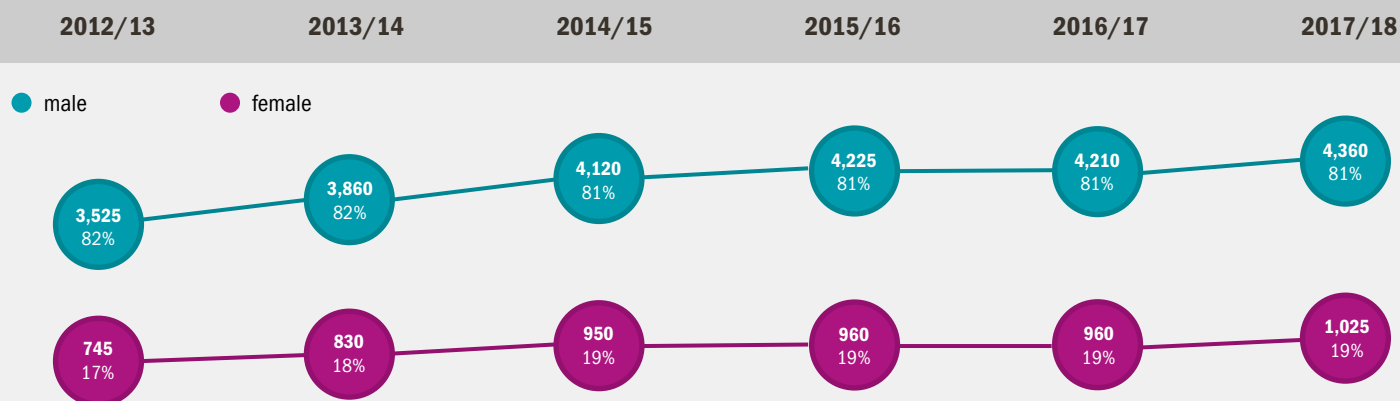
² Source(s): HESA Staff Record 2012/13; HESA Staff Record 2013/14; HESA Staff Record 2014/15; HESA Staff Record 2015/16; HESA Staff Record 2016/17; HESA Staff Record 2017/18. Copyright Higher Education Statistics Agency Limited. Neither the Higher Education Statistics Agency Limited nor HESA Services Limited can accept responsibility for any inferences or conclusions derived by third parties from data or other information supplied by HESA Services.

Gender split of academic staff over time

There were 1,115 more academic physics staff members in UK universities in 2017/18 than in 2012/13 – an increase of **26%**. Of these additional staff, 280 were female; a **38%** increase. The gender split has slowly narrowed over time.

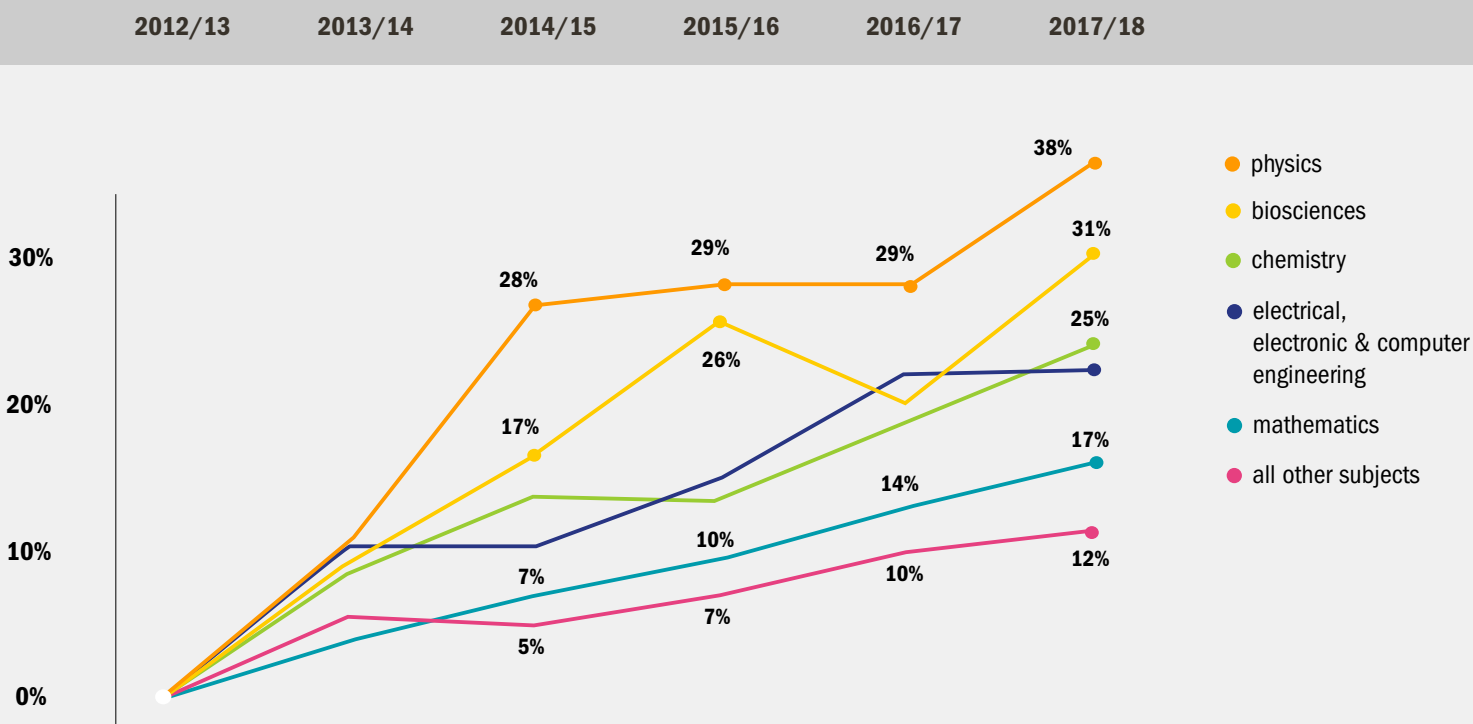
Gender split for all academic positions in physics

The 38% growth in female staff numbers was higher than in any of the other subjects.



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Growth in number of female staff relative to 2012/2013



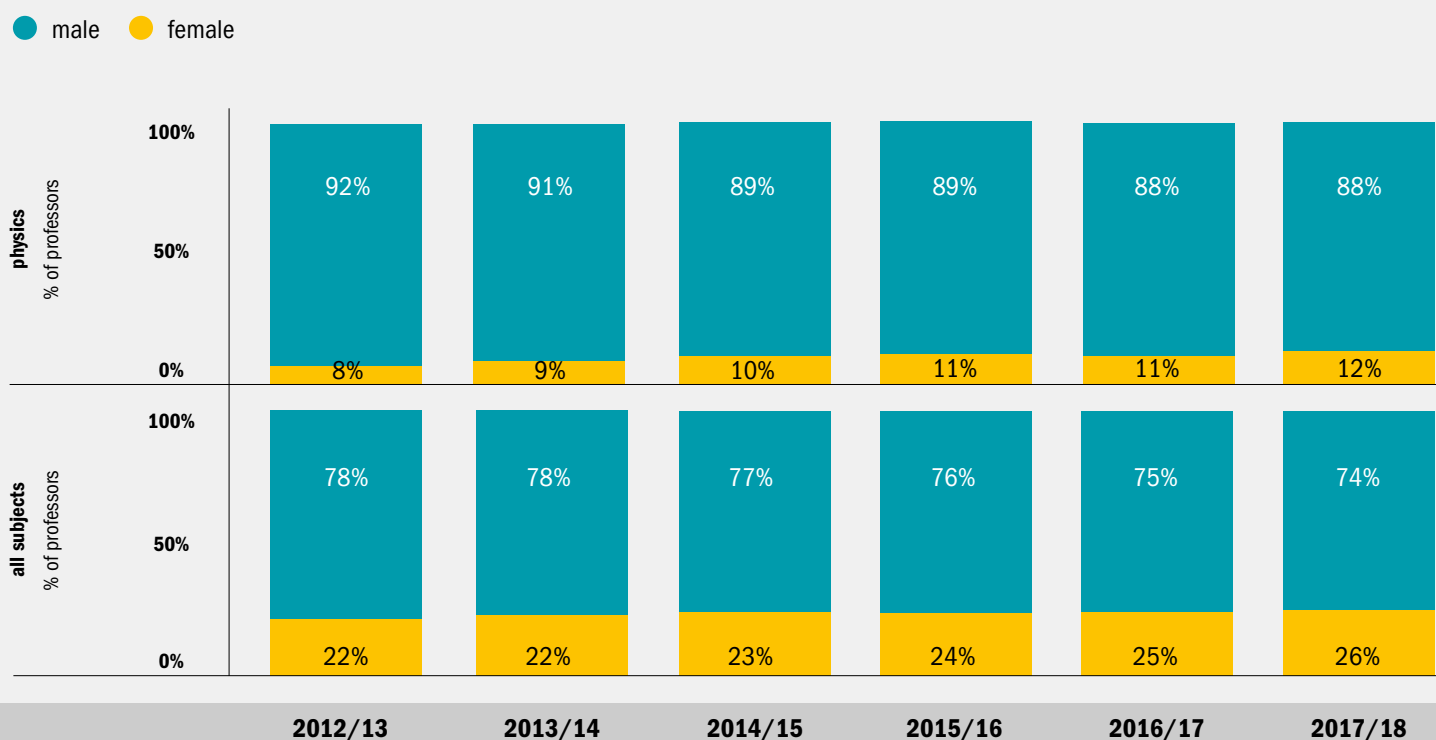
³ Underlying figures rounded to the nearest five. Percentages are rounded to the nearest 1%. Figures include staff where gender is marked as other, but aren't shown. As a result, some breakdowns don't add to 100%. Academic staff are defined as any staff members with an academic contract. The Y axis is based on the raw number of staff, not the percentage.

Gender totals are derived from HESA's Sexual Identification data field, which broadly reflects staff members' gender identity; 'other' includes intersex, androgyne, intergender, ambigender, gender fluid, polygender and genderqueer <https://www.hesa.ac.uk/collection/c17025/a/sexid>

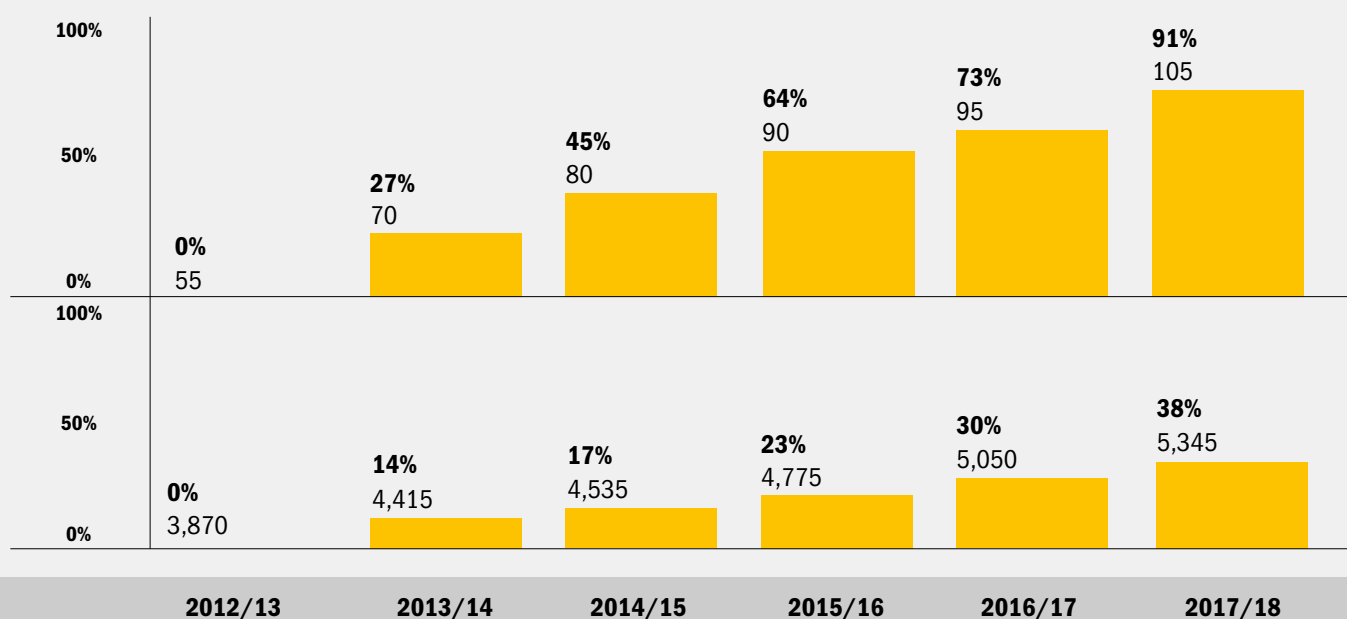
Gender split over time for professors of physics and all subjects

Over the last six years we have seen a gradual increase in the proportion of female professors across physics and all subjects. However, the number of physics female professors has grown much more quickly than female professors across all subjects since 2012/2013.

Professors: Change in gender split over time, and growth in number of female professors relative to 2012/13



% of difference compared with 2012/13



⁴ Growth from the 2012/13 figure is calculated using the rounded totals shown (eg. the 91% growth in female physics professors uses the numbers 55 and 105, while the real figures and hence the real percentage growth could be slightly different).

Academic staff by position and gender for physics and all subjects

Physics had a much greater proportion of male academic staff (**81%**) than across all subjects (**55%**). Likewise, **88%** of physics professors were male, compared with **74%** of professors across all subjects.⁵

Split of academic positions by gender and subject, 2017/18

● male ● female



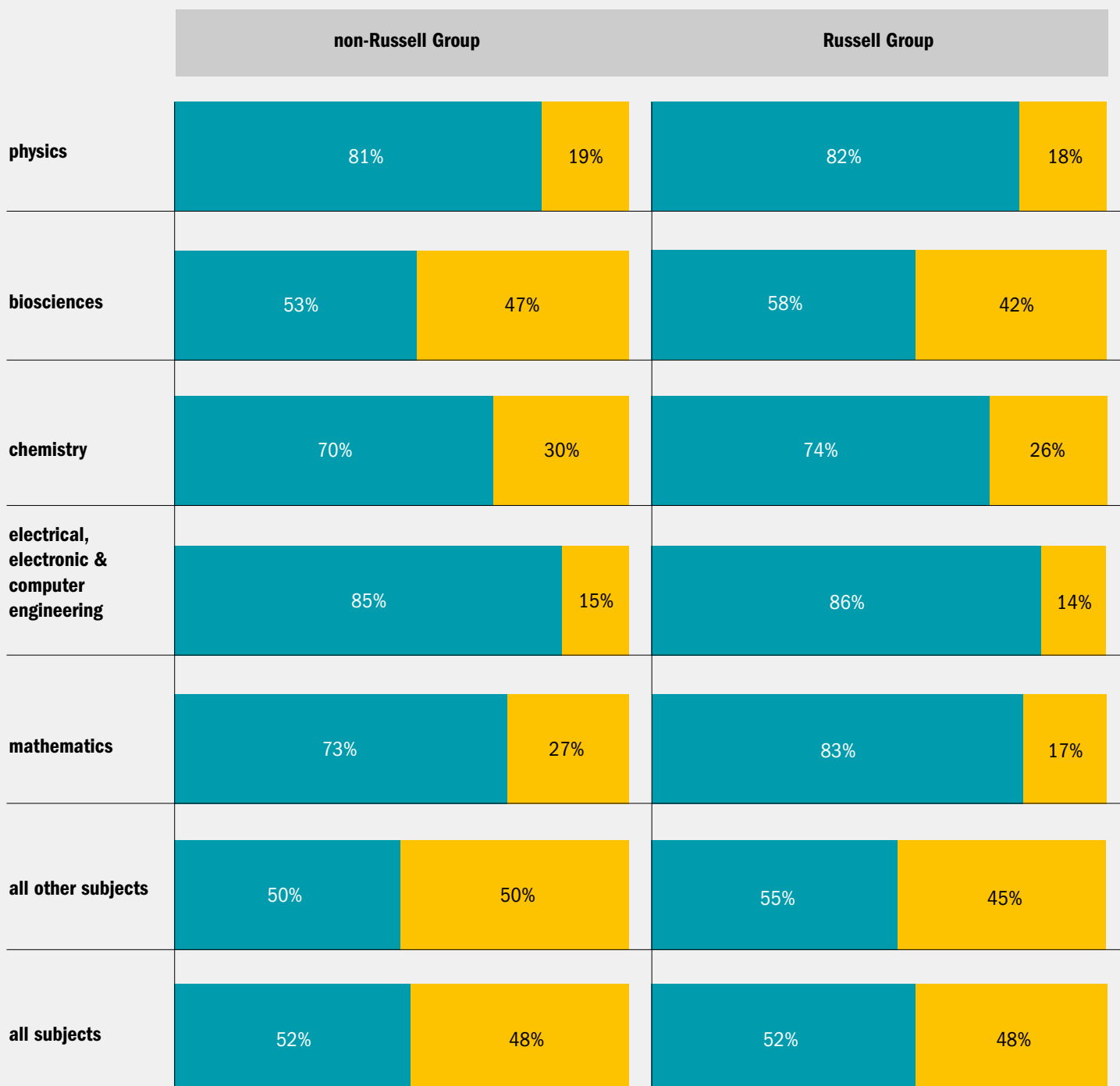
⁵ Levels refer to combined levels, defined by HESA. Only includes staff with academic contracts. Underlying figures rounded to the nearest five. Percentages include "other" genders, but aren't shown. As a result, some breakdowns don't add to 100%. Our identification of postdoctoral research staff is a proxy - by marking levels K0, and "fixed term" for terms of employment and "academic contract" on the academic employment marker. Level K0 academic staff not on fixed term contracts or with non-research contracts are included in "other academic staff". Further staff definitions can be seen on the HESA website at hesa.ac.uk/support/definitions/staff.

Academic staff by gender at Russell Group and non-Russell Group universities

No significant differences are seen in the gender profile of physics staff between Russell Group universities and non-Russell Group universities. However, when looking at other STEM subjects (excluding electrical, electronic and computer engineering) there was a slightly greater proportion of female staff in non-Russell Group universities.

All academic staff by gender, subject and whether at Russell Group institutions, 2017/18

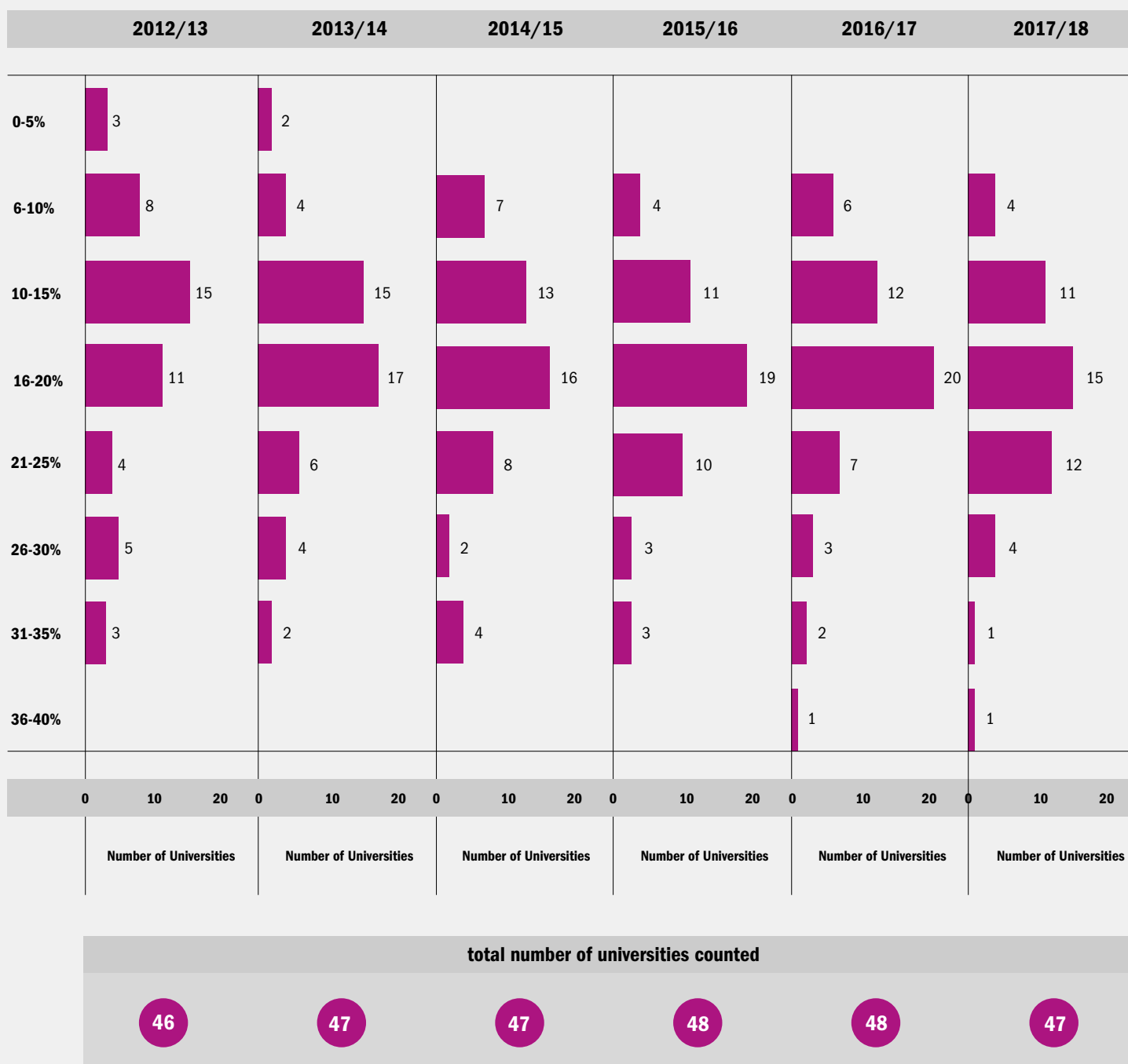
● male ● female



Proportion of female physics academic staff across universities

There were 18 UK universities in 2017/18 where more than **20%** of their academic physics staff members were female, up from 12 in 2012/13. However, there were only two universities where more than **30%** were female; down from four in 2014/15. There were 15 universities in 2017/18 with **15%** female staff members or less, down from 26 in 2012/13.⁶

Proportion of physics academic staff who are female by university: Distribution



⁶ In each year, only universities with 10 members of academic staff or more under the physics cost centre are shown.

All academic staff and professors by gender and nationality

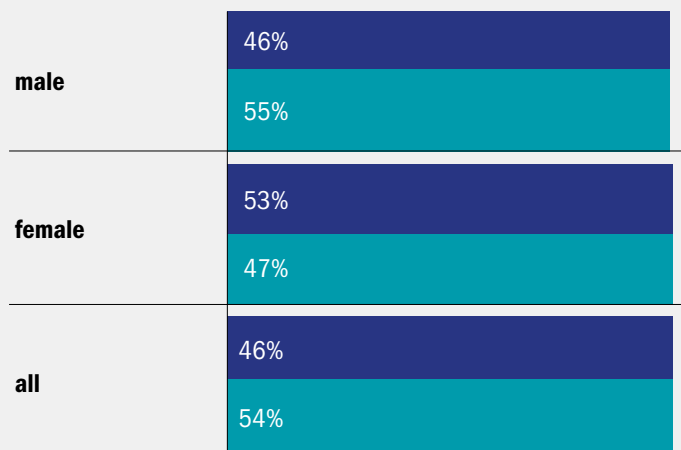
Physics academic staff members were more likely to be from outside the UK than staff across all subjects; **46%** of physics academic staff members were from outside the UK, compared with **30%** across all subjects.

This difference is particularly pronounced among female staff; **53%** of female physics staff members were from outside the UK, compared with **29%** across all subjects. Likewise, **43%** of female physics professors were from outside the UK, compared with **23%** across all subjects.

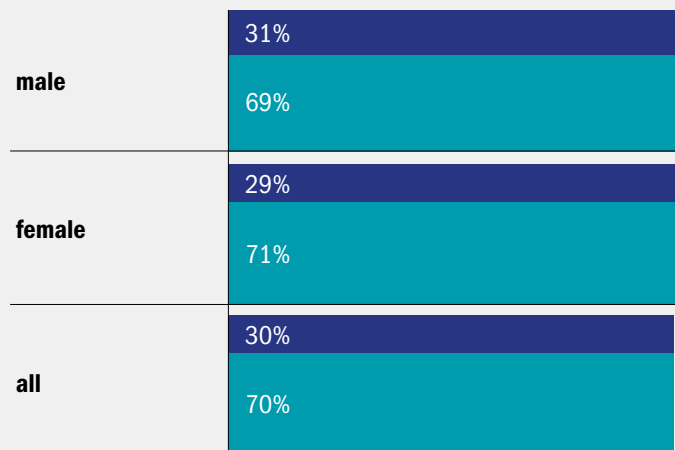
All academic staff by domicile, 2017/18

● non-UK ● UK

academic physics staff

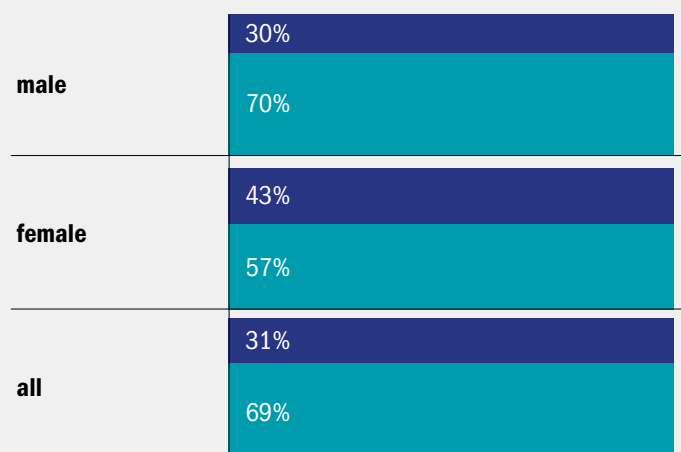


academic staff all subjects

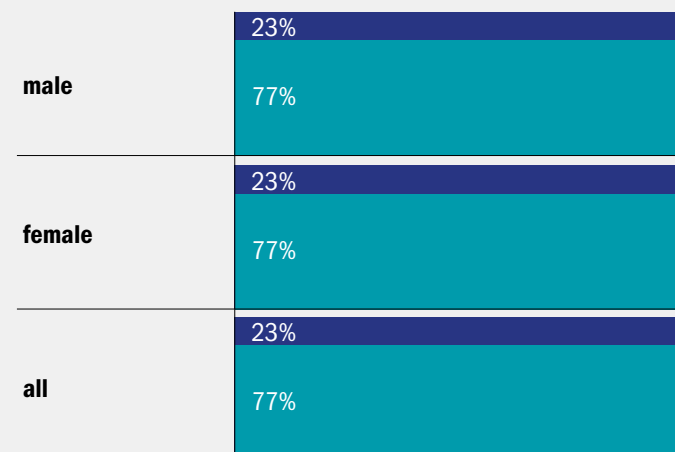


All academic staff by domicile, 2017/18

physics professors



professors in all subjects

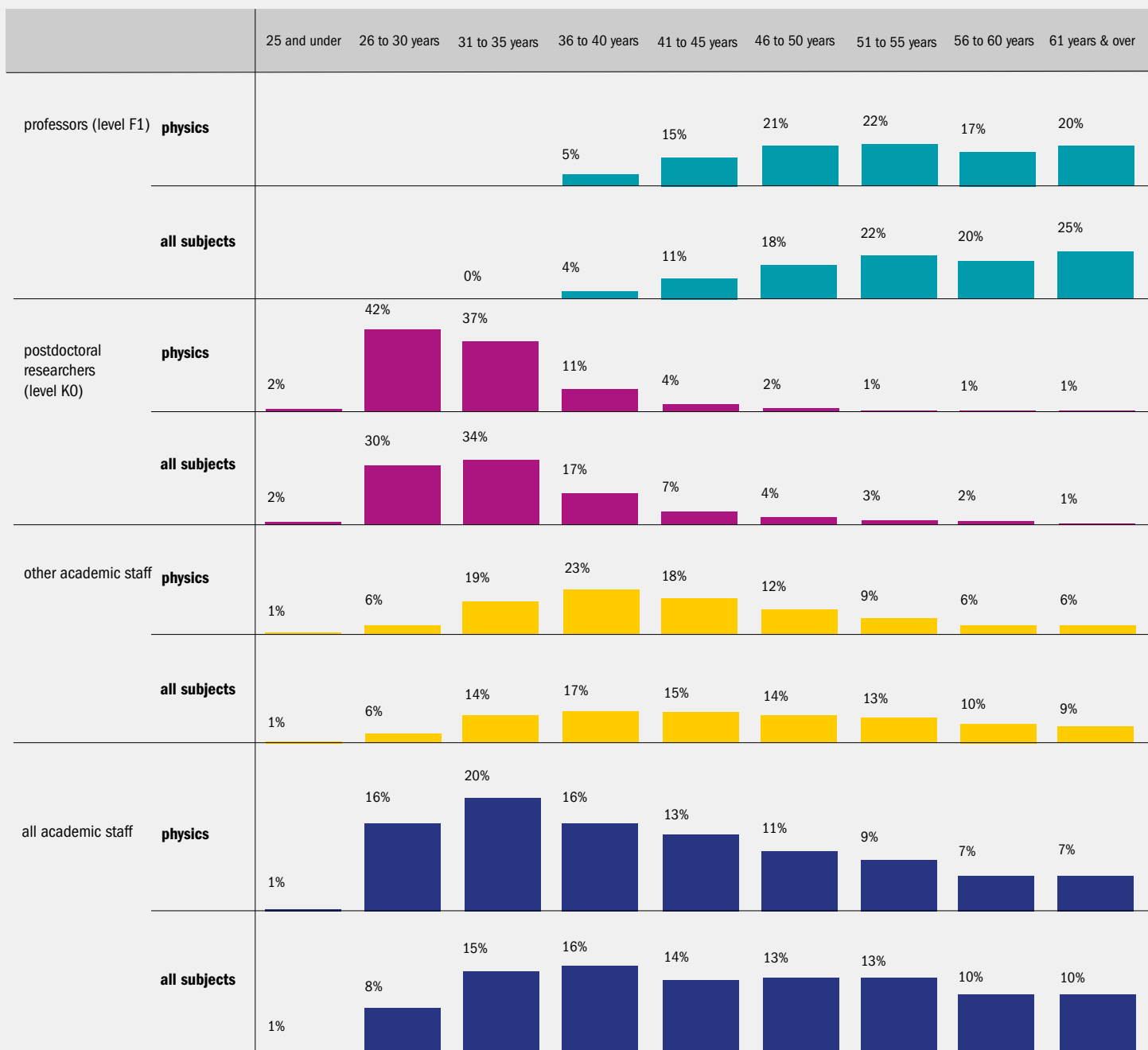


Academic staff by position and age for physics and all other subjects

The age profile of physics staff was similar to that of staff for all subjects, but there were some points of difference. Physics had a greater proportion of postdoctoral researchers under 36 (**81%** compared with **66%**). While the most common age range among physics professors and all professors was 51-55, **45%** of all professors were over 55, compared with **37%** of physics professors.

Distribution of academic positions by age and subject, 2017/18

● all academic staff ● professors (level F1) ● postdoctoral researchers (level K0) ● other academic staff



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⁷ Underlying figures rounded to nearest 5, and used to calculate the percentages shown. Percentages are also rounded to the nearest one percent and so may not add to 100%.

Academic staff by age and gender

Across physics, selected STEM subjects and all subjects combined we see that the older the staff, the higher the percentage of male staff. For physics we see an increase of 10 percentage points across the age ranges from **79%** male staff at 30 years and under, to **89%** at 56 and over. This is much greater across other subjects, such as chemistry, where we see an increase of 22 percentage points across the age ranges from **64%** male to **86%** male for the same age range.

Gender split by age and subject for all academic positions, 2017/18

● male ● female

