



## Observations on gender equality in a UK Earth Sciences department

Jonathan Imber (1), Mark Allen (1), Katy Chamberlain (1), Gillian Foulger (1), Emma Gregory (1), Jill Hoult (1), Colin Macpherson (1), and Sarah Winship (2)

(1) University of Durham, Earth Sciences, Durham, United Kingdom (jonathan.imber@durham.ac.uk), (2) University of Durham, Human Resources, Durham, United Kingdom

The progress of women to senior positions within UK higher education institutes has been slow. Women are worst represented in science, engineering and technology disciplines, where, in 2011, only 15% of professors were female. The national position is reflected in the Department of Earth Sciences at Durham University. The Department's gender profile shows steadily increasing proportions of females from undergraduate (ca. 38%) to postgraduate (ca. 42%) to postdoctoral (ca. 45%) levels, before dropping sharply with increasing seniority to 33% (n=1), 14% (n=1), 14% (n=1) and 13% (n=2), respectively, of lecturers, senior lecturers, readers and professors. The data suggest there is no shortage of talented female postgraduates and postdoctoral researchers; however, females are not applying, not being shortlisted, or not being appointed to academic roles in the expected proportions. Analysis of applications to academic positions in the Department during the period 2010-2015 suggests that "head hunting" senior academics, in some cases driven by external factors such as the UK Research Excellence Framework, resulted in a small proportion (between 0% and 11%) of female applicants. These results can be explained by the small number of senior female Earth Scientists nationally and, probably, internationally. Junior lectureship positions attracted between 24% and 33% female applicants, with the greatest proportion of females applying where the specialism within Earth Sciences was deliberately left open. In addition to these externally advertised posts, the Department has had some success converting independent research Fellowships, held by female colleagues, into permanent academic positions (n=2 between 2010 and 2015).

Data for academic promotions show there is a significant negative correlation between year of appointment to first academic position within the Department ( $r=0.81$ ,  $n=19$ ,  $p<0.01$ ), and the time taken to achieve first promotion at Durham. Data for our promoted female staff fall at the extreme ends of this distribution. Recently appointed female staff achieved promotion within 3 years of first appointment, compared with up to 13 years for long-standing female colleagues. The reasons for this discrepancy are complex, but probably include changing attitudes towards gender equality issues, and greater awareness of conscious and unconscious biases against women.

The Department's long term goal is fairness of opportunity for all, with a gender balance amongst academic staff that reflects the balance at postgraduate and postdoctoral levels. Our strategy is to attract greater numbers of high quality female applicants to academic positions, by making the application process more transparent, and by promoting positive cultural changes at all levels within the Department. As an example, we have recently introduced a mentoring scheme for postdoctoral staff, and plan to extend the scheme to academic staff. Nevertheless, we are conscious that achieving a representative gender balance amongst academic colleagues will take many years, based on historic staff turnover rates, and that lasting cultural change can be difficult to achieve.