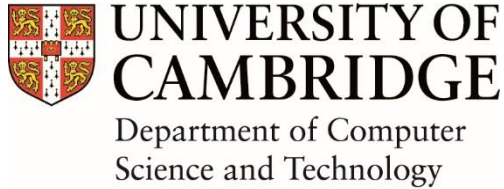


1. LETTER OF ENDORSEMENT

(496 / 500 words)



Ann Copestake

Professor of Computational Linguistics
Head of Department

30 November 2018

Dr Ruth Gilligan
Athena SWAN Manager
Advance HE, First Floor, Westminster Tower
3 Albert Embankment
LONDON SE1 7SP

Dear Dr Gilligan,

I confirm that the information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the department.

I took over as head of department from Professor Hopper on May 1st but was fully involved in Athena SWAN activities during a six-month transition period before that. I also led the department's previous applications for the Bronze award.

The department has been my intellectual home since 1985, apart from seven years at Stanford. Our overarching strategic goal, to become an international model for women in Computer Science, is of immense importance to my leadership of the department and to me personally. I am only too aware of the insidious effects of being a woman in a male-dominated subject. The environment I experienced here was never overtly hostile or unpleasant, but there are powerful effects of being the only academic woman in the room, sometimes being ignored or not acknowledged as the source of ideas. Seeing the change as the department wholeheartedly engaged with issues such as unconscious bias and stereotype threat, prompted by the Athena SWAN process, has therefore been deeply meaningful to me. The process was also personally enlightening, causing me to check my own practices. I am very proud that we have made huge progress, most strikingly by doubling the female academic staff since our Bronze Award from 10.5% to 21% and increasing female undergraduate admissions from 14% to 24% (at the time of writing). I know that the department as a whole shares my commitment to continue to address

Department of Computer Science and Technology
William Gates Building
15 JJ Thomson Avenue
Cambridge CB3 0FD

Tel: +44 (0)1223 334615

PA: +44 (0)1223 334607

aac10.cam.ac.uk

<https://www.cl.cam.ac.uk/~aac10/>

gender equality and more general issues of diversity. Recruiting the best people and making sure that the department is a friendly and supportive place to work for everyone, staff and students, is the core of our strategy.

The main part the HoD team plays in the Athena SWAN process is to demonstrate commitment and to act as role models to promote positive change. Members of the HoD team are present on hiring committees and can ensure that care is taken to avoid unconscious bias and that female candidates are proactively identified and encouraged. The Deputy Heads (currently one female, one male) are members of most of the main committees and can therefore ensure that gender equality is considered across departmental activities.

There are still many challenges. The lower overall exam performance of female undergraduates is a concern. We will undertake an in-depth analysis and collaborate with the colleges to resolve this. The female postgraduates perform at least as well as the men, but improvement in the gender ratio has been slower than at undergraduate level. women@CL is a resounding success but communication remains an issue, despite the previous action plan. This is not specific to Athena SWAN activities, but reflects a resourcing problem across the department, which we will address specifically with new hires. Induction of new staff and workload management requires refinement as the department grows, and the Athena SWAN process has been invaluable in highlighting issues here.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ann Copestake'.

Professor Ann Copestake

HEAD OF DEPARTMENT

ABBREVIATIONS

BA	Bachelor of Arts
CS	Computer Science
CSAT	Computer Science Admissions Test
DHoDR	Deputy Head of Department (Research)
DHoDT	Deputy Head of Department (Teaching)
DOS	Director of Studies
DS	Departmental Secretary
E&D	Equality & Diversity
EDC	Equality & Diversity Committee
EPSRC	Engineering and Physical Sciences Research Council
HESA	Higher Education Statistics Agency
HoD	Head of Department
MEng	Master of Engineering
MPhil	Master of Philosophy
NSS	National Student Survey
PDRA	Postdoctoral Research Associate
PhD	Doctor of Philosophy
PI	Principal Investigator
PPD	Personal and Professional Development
PSS	Professional Support Staff
RA	Research Associate
REF	Research Excellence Framework
SAP	Senior Academic Promotions
SAT	Athena SWAN Self-Assessment Team
SoT	School of Technology
SRA	Senior Research Associate
SSCOF	Staff Student Consultative Forum
TMC	Tripos Management Committee



Figure 1. A photograph highlighting one of the first female computer operators is prominently displayed above the Reception desk as you enter the Department (Rosemary Hill, Operator, 1950)

2. DESCRIPTION OF THE DEPARTMENT

(478 / 500 words)

Please provide a brief description of the department including any relevant contextual information. Present data on the total number of academic staff, professional and support staff and students by gender.

The Department of Computer Science & Technology is an academic department within the University of Cambridge centred around Computer Science (CS) with aspects of Engineering, Technology, and Mathematics.

We are active in the local technology ecosystem. Our Industrial Supporters Club is a group of companies, from large multinationals to small start-ups, which actively support our teaching and research. We host an annual Recruitment Fair where students meet with members to discuss graduate career opportunities. Our graduate association, The Cambridge Ring, provides information, contacts, assistance, and social and business events programmes for members. It was founded in 2002 to give graduates lifetime benefit from their Cambridge degrees, professionally, technically and socially. We hold regular social events for staff and research students, e.g., Social Teas, Welcome to the Department, Happy Hours, Summer BBQ and Christmas Quiz.

IMPACT

The Department is known for its friendly atmosphere and culture:

- 'It is a great place to work' 83% (91% female) cf SoT 68%
- 'The Department values individual differences [cultures, backgrounds, working styles, ideas]' 82% (85% female) cf SoT 72%
- 'They are treated with fairness and respect in the Department' 87% (91% female) cf SoT 81%

(Staff Survey 2015)

- 'The enthusiasm of the lecturers and supervisors is one of the best things about the course'
- 'The culture is really welcoming to women' (female undergraduates)

(Student Feedback 2017)

The senior management team comprises of the Head of Department (HoD) (female), the Deputy Head of Department (Teaching) (DHoDT) (male), the Deputy Head of Department (Research) (DHoDR) (female) and the Departmental Secretary (DS) (female). This team oversees the work of the Department including workload allocation and quality assessment. Academic staff are responsible for lectures, while Senior Research Associates (SRAs) may give guest lectures.

Table 1. Members of the Department, November 2018

Position	Total	Female
Academic Staff (Permanent University-paid lecturers)	45	9 (20%)
Senior Research Fellows (Fixed-term, independently funded, may contribute to teaching)	5	3 (60%)

Position	Total	Female
Contract Research Staff (Fixed-term, usually funded from an awarded grant)	103	23 (22%)
Professional and Support Staff (comprising Administrative, Technical and Support Services)	33	21 (64%)
Graduate Students (working towards a PhD or MPhil)	195	37 (19%)
Undergraduates (working toward a BA or MEng)	352	62 (18%)

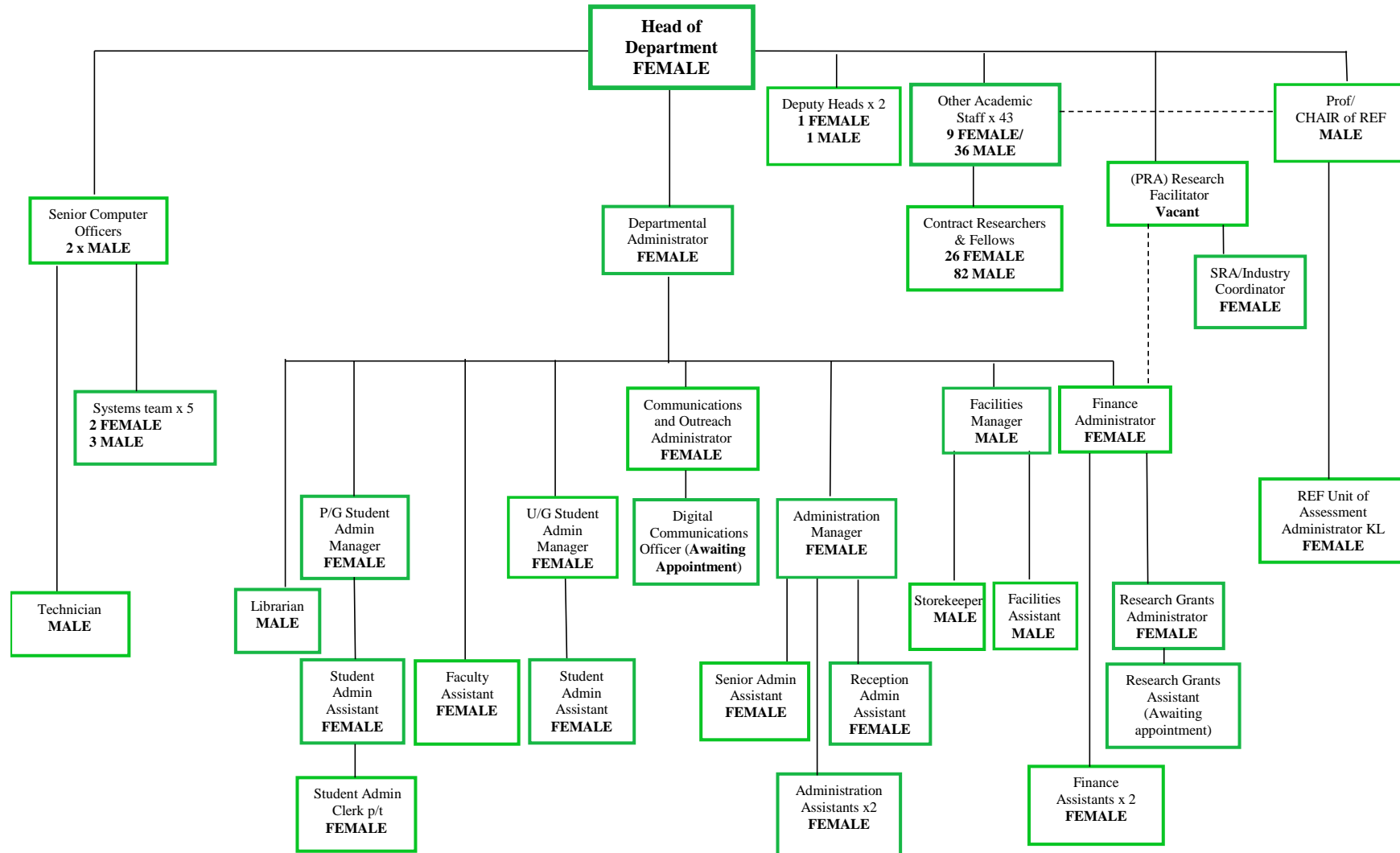
Since our Bronze Award we have restructured our courses and increased the number of female academics to ensure students are taught by women in all years of study. We seek to continue our success in improving gender balance of academic staff, to enable us to increase the visibility of role models for undergraduate students. We are proud of our excellence in teaching: one woman & three men have received the University's Pilkington Prize for teaching excellence. All present first and second year courses and have high visibility amongst our undergraduate students.

women@CL, established in 2003, is a major initiative in the Department to support all women (students and staff) throughout their careers and to inspire all women to leadership positions in both academia and industry. The Department and its industrial partners sponsor a number of free events throughout the year, including Talklets, Techtalks, Career Panels, CV Clinics, coffee and cake. Each typically has 35—40 attendees. The women@CL Committee is led by students and postdocs with an academic member of staff as Chair. The Department fully supports this role, officially recognising it in the workload model and providing dedicated administrative support.



Figure 2. Women@CL group photo

Figure 1.
Departmental Staff Organisation Chart



3. THE SELF-ASSESSMENT PROCESS

(912 / 1000 words)

(i) A Description of the Self-Assessment Team

The SAT consists of 8 women and three men, the imbalance partly arising due to the (HoD) and the Departmental Secretary (DS) currently being women and automatically members. The SAT includes students and academic, research, and support staff, and mixes those involved in the 2015 application with new members. Membership on the SAT is counted within the workload model for academic staff and within each job description for PSS, the latter sharing duties to avoid overload. In preparing our application, each member of the SAT was responsible for a section.

Dr Andrés Arcia-Moret (male)	Senior Research Associate. Twelve years as Associate Professor in Computer Systems Engineering, University of Los Andes, Venezuela.
Claire Chapman (female)	Administrator to the SAT. Extensive experience of organising Gender Equality events both in this Department and within the University broadly.
Professor Ann Copestake (female)	Professor of Computational Linguistics and HoD. Previously Deputy Head with responsibility for Teaching until December 2014. Led the previous Athena SWAN submission.
Dr Hatice Gunes (female)	University Senior Lecturer in Graphics and Interaction. Passionate about public engagement, participating in radio/TV and Science Festivals.
Dr Miriam Lynn (female)	Equality & Diversity Consultant at the University. Provides guidance on application and presentation of the data and advises on good practice.
Dr Anil Madhavapeddy (male)	University Lecturer. Active Chair and supporter of women@CL and a Fellow and DOS for Pembroke College.
Dr Richard Mortier (male)	Reader in Computing & Human-Data Interaction. Chair of the SAT and DOSs Forum. Fellow of Christ's College.
Dinah Pounds (female)	Undergraduate Teaching Administration Manager. Previously a Music Teacher and a Graduate Student at Cambridge. Holds a Master's in Education (Research).
Joy Rook (female)	Graduate Administrator. Previously worked at a local primary school for 9 years and had 3 children whilst working full-time.
Caroline Stewart (female)	Departmental Secretary. Responsible for the administration of the Department, including human resources and student provision.
Diana Vasile (female)	PhD Student in Digital Technology. Has had two children whilst a postgraduate student (MPhil and PhD).

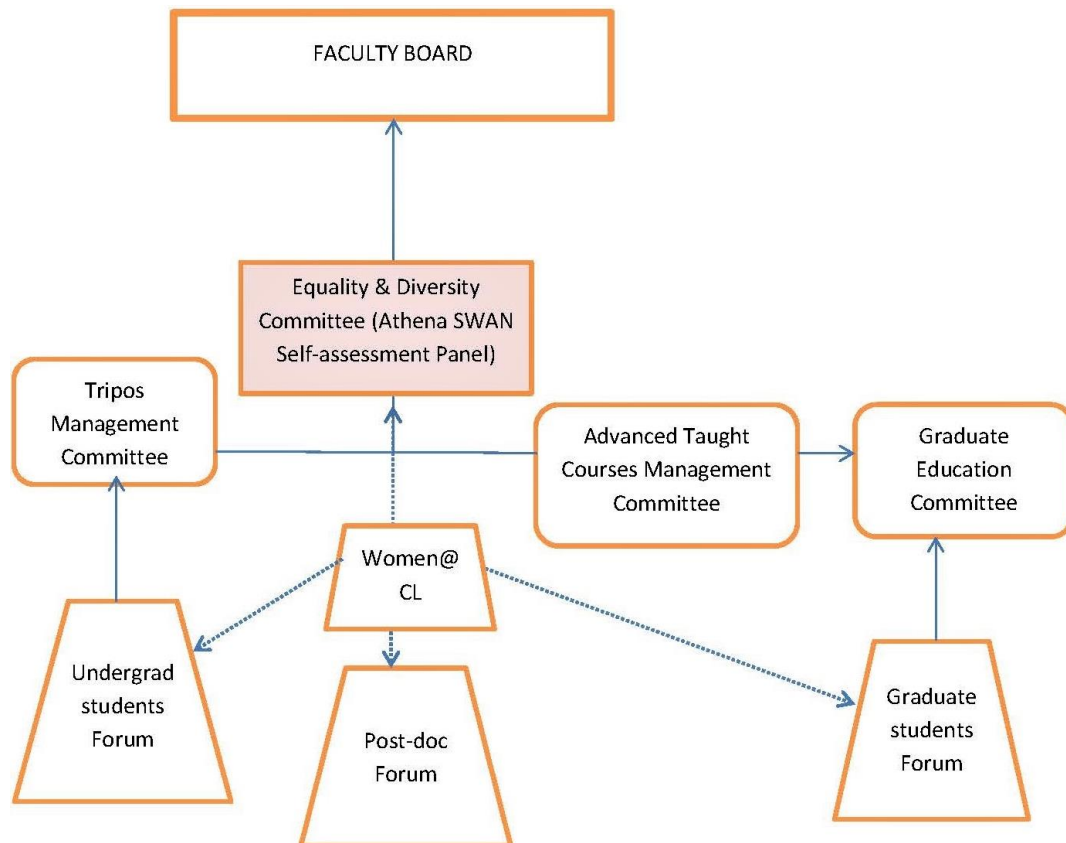


Figure 3. Relationship of SAT to other Department Committees

(ii) An Account of the Self-Assessment Process

Since receiving the Bronze Award in November 2015, we have held eight full SAT meetings supplemented by numerous ad hoc working groups formed to deal with specific issues. In 2017 the SAT evolved to become the Equality & Diversity Committee (EDC) to encompass all E&D matters, including gender equality, in the Department. As is typical in the Department, members have discussions, and disseminate minutes of meetings and other important updates by email. The EDC initially met termly, increasing to bimonthly during 2018.

The EDC reports directly to the Faculty Board (which has two external, industrial members) and a standing item on the agenda at each meeting is to update the Board on E&D matters within the Department. EDC members sit on key internal committees, with the current Chair also Chair of the Director of Studies (DOS) Forum. This enables a direct reporting mechanism to each committee and has simplified discussion of the gender balance of admitted students with Colleges and initiation of in-house admissions training to improve gender balance of interviewers.

Another outcome of this direct reporting mechanism has been to increase Departmental seminar speakers from under-represented groups, an action highlighted in our Student Survey 2017, with 85% female graduates and 65% of female undergraduates saying this would be helpful. As a result, women@CL now annually nominates women to speak for the Wednesday Seminar Series. We have increased the number of women speakers by 14% since 2014, and for our distinguished annual Wheeler Lecture, 33% of speakers have been female since its inauguration in 2012.

Gender equality is discussed in all the main departmental committees and consultation takes place with members of the Department including via the 2015 and 2017 E&D student surveys, and the 2015 staff survey. A detailed analysis of these results has been carried out by the EDC and actions taken as indicated. Figure 3 shows how the EDC reports to other Departmental Committees. A representative from the Department attends all Athena SWAN related events held at the University to ensure we receive all E&D updates.

(iii) Plans for the Future of the Self-Assessment Team

As part of the continual renewal of SAT membership, we will improve its gender balance by the HoD and DS including it as a factor when proposing members, alongside factors including other roles within the Department, the need to balance seniority and office diversity, and willingness of proposed members to serve. It is important that SAT members have a keen interest in issues of Equality and Diversity (E&D) as they are also asked to serve on the EDC, addressing other E&D matters in the Department.

Membership of the SAT and EDC will continue to be refreshed on a rolling basis to ensure representation from different genders, levels of seniority, and job roles, while spreading workload evenly. The Chair will remain in post for 2 years. E&D matters will remain a topic at staff meetings, and members will be encouraged to serve on the EDC. As key roles in the Department are refreshed, this will also allow for new Committee membership. Participation in the EDC will continue to be included in our workload model for academic staff and will be included in the job description duties allocated for each PSS member.

The SAT will continue to meet at least four times a year as part of the Department's EDC, and will continue to identify and create additional ad-hoc working groups to address specific issues, and to obtain and promote staff and student feedback. The EDC will also ensure consultation with staff and students is carried out annually through surveys and focus groups. Relevant findings will be published and statistical data will be posted on the Department's Athena SWAN webpage for all to see.



Figure 4. Departmental Athena SWAN website

The Athena SWAN webpage keeps staff and students updated by displaying members' details, meeting dates, agendas and minutes of meetings; advertising E&D events taking place in the Department, the University and nationally; providing links to all the relevant HR policies; and highlighting other items of interest. A designated section, *Spotlight on Women in Computer Science*, highlights a range of women currently working within the Department (staff and student) and is updated on a yearly basis. In our Student Survey 2017, 70% of female undergraduates said this would be a helpful or very helpful way to celebrate the achievements of women.

The EDC are also committed to addressing more general issues of diversity in the Department and are keen to engage with the University's mission to improve Race Equality within the Institution. We will start obtaining data on our current status with the aim of targeting appropriate underrepresented groups.

Progress on the Action Plan will be reported to the HoD and DHoDs, and will be communicated to staff through weekly staff meetings and via the website and communication from the DS. A detailed account will be presented annually at the academic staff strategy meeting. An annual report on Action Plan progress is made to the Faculty Board at the first meeting of the academic year.

IMPACT

- Integration of Athena SWAN into Departmental activities

ACTION 1.1 Integration of Athena SWAN into Departmental activities

ACTION 3.3 Improved student monitoring to obtain data on student ethnic equality to enable appropriate recruitment targeting

ACTION 3.5 Improved staff monitoring to obtain data on staff ethnic equality to enable appropriate recruitment targeting

ACTION 4.8 Redress SAT gender balance by actively recruiting more men to the SAT

4. A PICTURE OF THE DEPARTMENT

(2,120 / 2000 words)

4.1 STUDENT DATA

(i) *Numbers of men and women on access or foundation courses*

N/A

(ii) *Numbers of undergraduate students by gender*

Full- and part-time by programme. Provide data on course applications, offers, and acceptance rates, and degree attainment by gender.

The Department offers:

- three-year, full-time, undergraduate Computer Science degree (BA)
- optional research-oriented fourth year (MEng)

Admissions decisions are made by each of the 31 colleges. Each College appoints a DOS, responsible for advising students on their studies and for arranging supervisions. Admission decisions are made by the college's DOS, Admissions Tutor and Senior Tutor. Figure 5 shows the gender balance of the resulting first-year admissions.

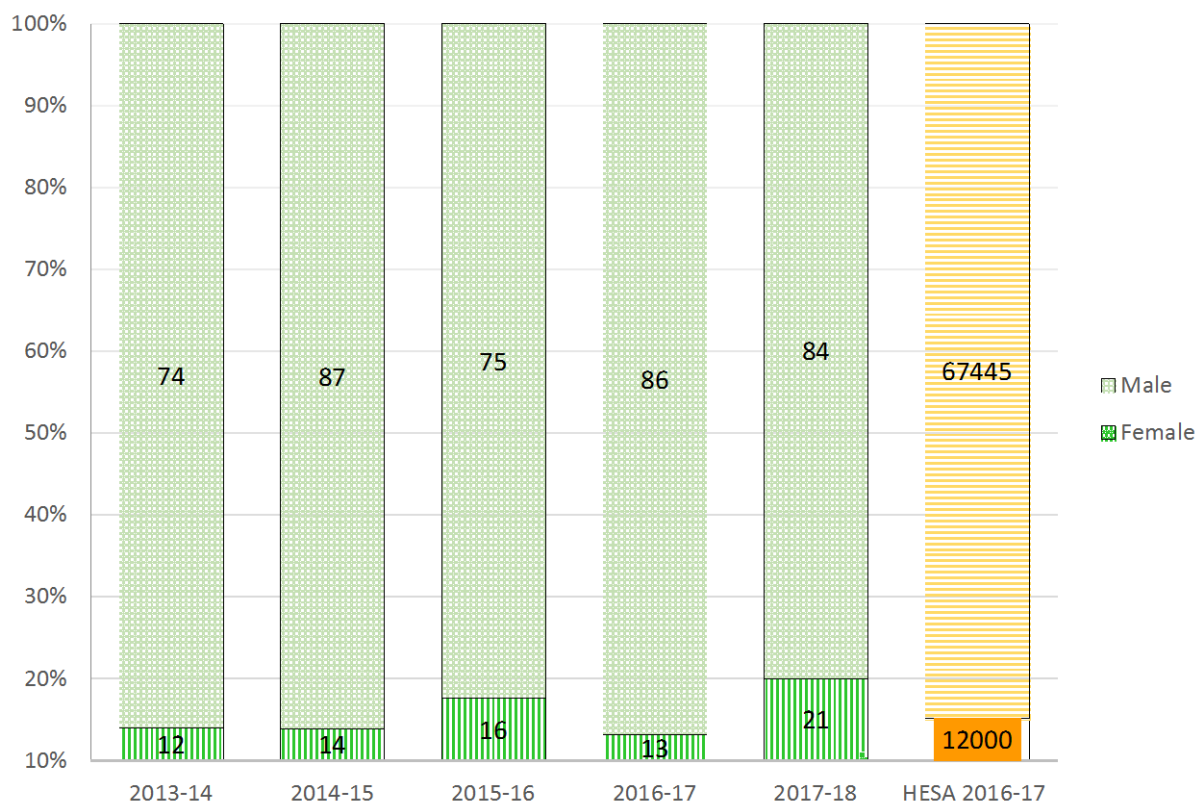


Figure 5. First year students admitted by gender

Reflection on our Bronze submission identified a need for greater consultation with students. The EDC thus setup several focus groups, obtaining student feedback identifying the need to restructure our undergraduate course to provide a broader curriculum with

more options for students in all years. After restructuring the course, third-year students are now able to take a wide range of options that are already attracting more women.

IMPACT

- Restructuring of the undergraduate course has resulted in an increase of the number of women admitted to 20%, increasing to 24% in 2018/19

‘The ice breaker is a great way to get to know the year group in a friendly and informal manner’.

Female undergraduate



Student Feedback is also received via our Staff Student Consultative Forum (SSCOF) which meets twice termly. The membership of SSCOF is:

- Departmental staff (student admin, DS, IT staff, a DOS, Librarian, 2 x academic)
- women@CL representative
- An undergraduate representative from all three years
- MPhil representative
- PhD representative

Via this forum, a social welcome event was initiated for first year students which includes a quiz and team building activity. Student feedback has been very positive. women@CL also organise a Welcome Event for all new female students and staff at the start of each new term. The *Big Sister Little Sister* mentoring scheme (p. 19) is introduced and pairings are distributed.

IMPACT

- 100% attendance at first year welcome event aimed at creating a positive culture for new students
- women@CL Mentoring Scheme and Welcome event (60 attendees in 2018/19)
- 20 undergraduate big sister/little sister pairs in 2018/19

ACTION 2.3 Increase external profile of the Department to include recognition of its initiatives to support women

ACTION 3.1 Increased student consultation to capture and address issues as each cohort progresses, and particularly to monitor the effects of ongoing undergraduate course restructuring

The Department has no direct control over undergraduate admissions as the Colleges control which students are admitted, giving us limited access to applications and admissions data. We continue to work with Colleges, having introduced an in-house Admissions Training course to improve the gender balance of admissions to the undergraduate degree.

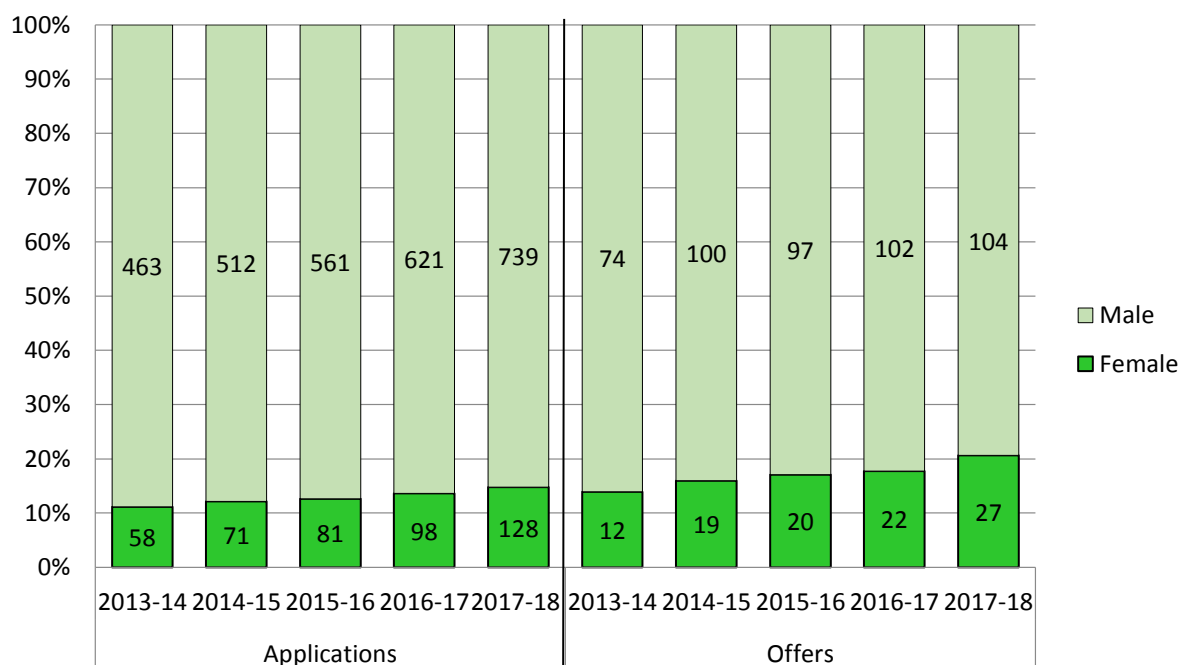


Figure 6. Undergraduate student applications and offers by gender

This is led by two experienced academics from the Department who are also DOSs and incorporates elements of unconscious bias training. We have also supported a new CS Admissions Testing (CSAT) practise platform initiative, details of which can be found in Section 7.

- ACTION 3.3** Improved monitoring of student admissions and performance to better engage with DOSs
- ACTION 5.1** Improve undergraduate support in conjunction with Colleges by supporting DOSs and interviewers with subject-specific training courses
- ACTION 6.1** Increasing the numbers of female students on undergraduate course through increased visibility of women in outreach, recruitment and at Open Days

women@CL continues to have excellent visibility among current students but its visibility among prospective applicants could be improved: based on pre-arrival feedback in 2018/19, only 22% of male and female students had knowledge of women@CL prior to their arrival. Visibility will be improved by the initiation of a women@CL social media blog channel and Facebook page. All women@CL members are invited to submit their stories for blog posts. A new PSS will be appointed to work on enhancing our external presence via the website and social media.

IMPACT

- In-house Admissions Training for to improve the balance of female interviewers
- New CS admissions film for prospective undergraduates in 2017 to showcase female lecturers and students
- Admissions Leaflet redesigned in 2018 highlighting the interdisciplinary nature of the course and to show case the new third-year options

ACTION 1.2 Further develop women@CL, increasing attendance and satisfaction at events, and ensuring awareness is raised throughout the University and Colleges

ACTION 2.4 Increased external visibility of women@CL through blogging and social media engagement

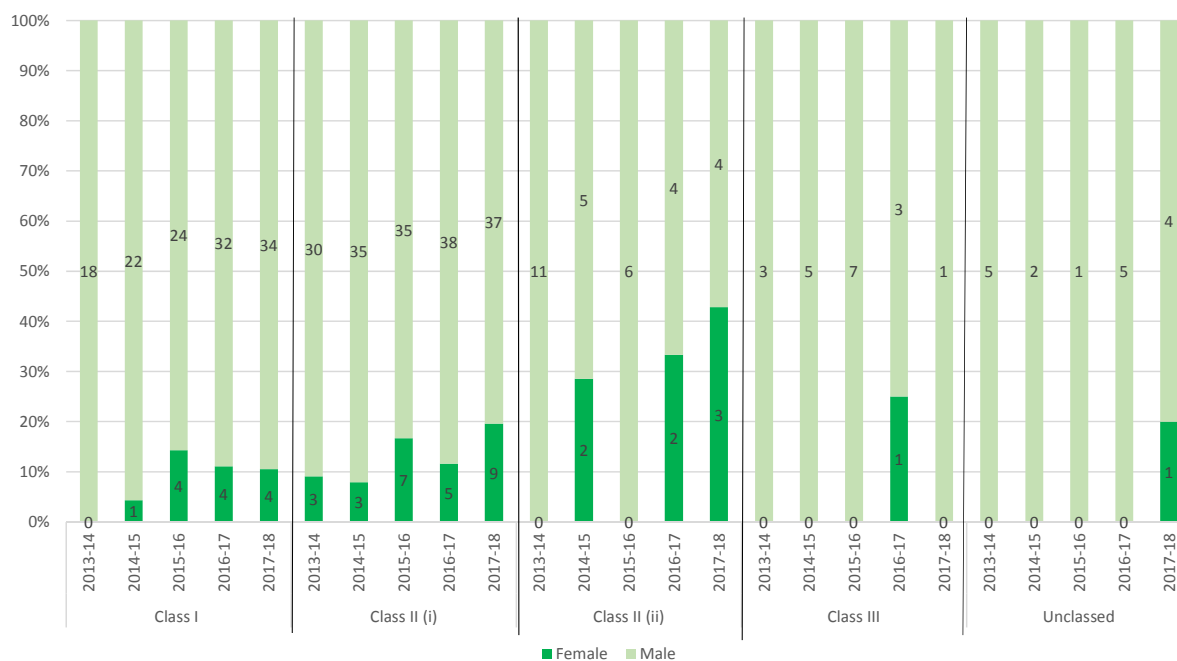


Figure 7. Undergraduate degree class by gender

Comparing undergraduate degree performance to our 2009—2014 data, the relative proportion of Class I degrees awarded to female students between 2013/14—2017/18 has increased. Noteworthy are female students obtaining Class I degrees who rank highly in the lists (the top final-year student in 2017, obtaining a distinction and awarded the Best Student prize, was a woman), including 6 of the 16 female students (37%) in 2017/18. However, women are disproportionately awarded Class II(1) and II(2) degrees, which is a concern.

ACTION 5.2 Monitor and improve performance of female undergraduates with the assistance of the Colleges

There are numerous possible causes which we are investigating, and we are committed to acting upon our findings per the Action Plan. We have begun investigation via consultation with the DOS Committee and with Senior Tutors. Based on behaviour at other institutions, we hope that the discrepancy might decrease as the numbers of female students increases, (diminishing stereotype threat) and as we ensure those involved in teaching and assessment are made fully aware of the impact of unconscious bias on the attainment of women. We also hope that the significant structural changes to include more practical coursework and written assessment will help as there is some evidence that women slightly outperform men in the MPhil, where coursework dominates.

ACTION 3.3 Improved monitoring of student admissions and performance, to now also include diversity factors as well as gender

ACTION 4.1 Increase E&D training completion rate across all staff groups to 100%

ACTION 4.3 Introduction of Unconscious Bias Training for supervisors, including refresher sessions for those who have previously received it

ACTION 6.3 Continue restructuring our undergraduate course, and highlight the changes made and their positive impact to industrial partners

(iii) Numbers of men and women on postgraduate taught degree

Full- and part-time. Provide data on course application, offers and acceptance rates and degree completion rates by gender.

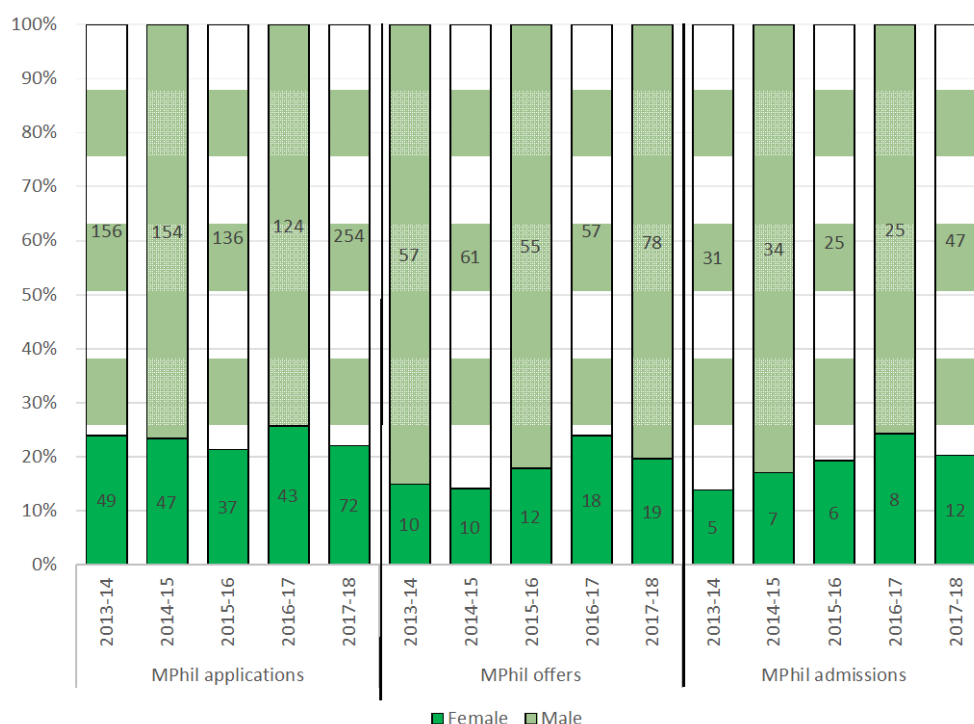


Figure 8. MPhil student applications and admissions by gender

Figure 8 shows a 59% increase in MPhil applications. The proportion of women applicants has decreased slightly, from 24% in 2013/14 to 22% in 2017/18, however **total admissions of women has generally increased from 14% in 2013/14 to 20% in 2017/18.**

One way of addressing application numbers has been to rewrite the online description of the Masters course, making it clearer that applicants need not have a first degree in CS. We also hope that increasing the profile of women@CL to potential applicants will help attract women to apply and increase women admitted. Similarly, the rise in the number of female academics in the Department should help to promote CS as an academic career to women. We have also started to highlight interdisciplinary options more strongly in our courses as this has been seen to increase female admissions to CS in other universities.



Figure 9. MPhil/PhD welcome event and Happy Hour, October 2018

At the start and end of each academic year, we hold a Welcome for all new MPhil and PhD students. This has helped students get know the Department in a friendly environment.

IMPACT

- Part III and MPhil Students Welcome Event and End of Year Party

- | | |
|-------------------|--|
| ACTION 2.2 | Improve visibility of women in the Department to provide examples of “People Like Me” at all career levels |
| ACTION 2.3 | Increase external profile of the Department to include recognition of its initiatives to support women |
| ACTION 2.4 | Increased external visibility of women@CL through blogging and social media engagement |

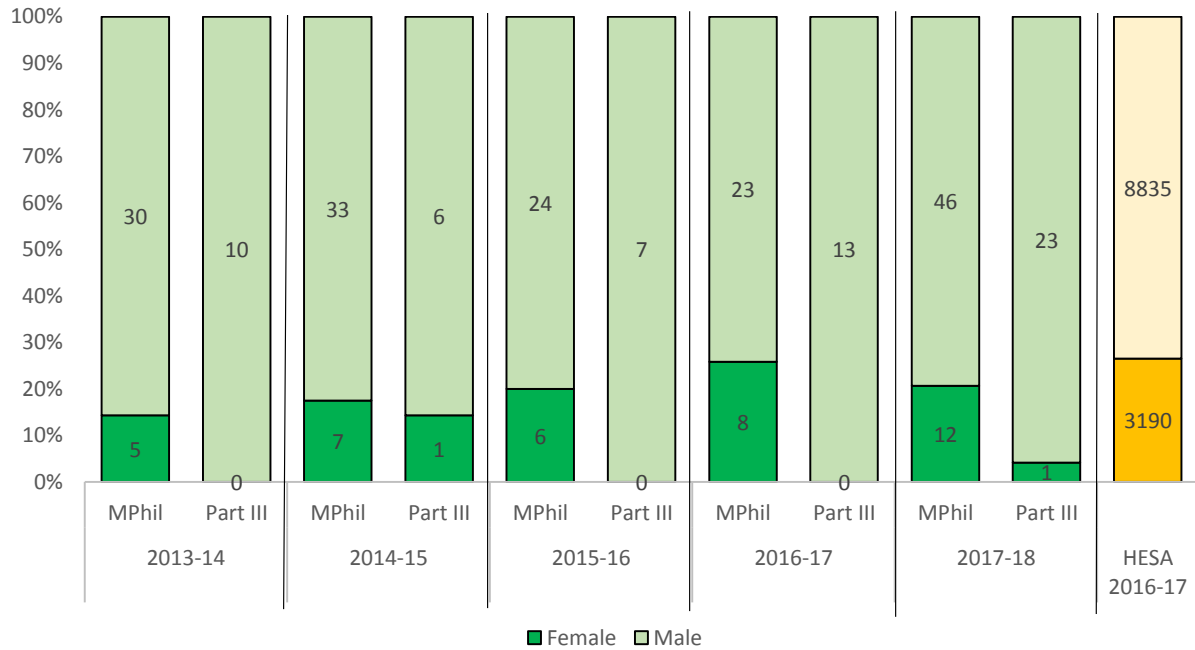


Figure 10. Postgraduate taught course completion rates by gender

Figure 10 shows the number of women completing a postgraduate taught course (MPhil and Part III) has increased from 11% to 16% in 2017/18. Comparing to the 2016-17 HESA benchmarking data, we had 18% women completing a postgraduate taught course (below UK national average of 27%).

IMPACT

Improved gender balance by restructuring the course:

- Increasing modular nature of the course to give flexibility for students wishing to take maternity leave
- Offering an increased number of interdisciplinary modules
- Highlighting the increased number of women during induction week (at least 50% of those presenting were women)
- Increasing the number of female students who help with the Postgraduate Open Day and promoting women@CL
- Highlighting to potential students that the number of female lecturers for the MPhil has increased from 15% in 2013/14 to 29% in 2017/18

On their arrival, all female MPhil students are invited to join women@CL and offered the opportunity to be assigned a research student mentor ('Big Sister'). There are currently 14 such pairs in 2017/18.

I was a 'little sister' in the early days of the mentoring scheme. I think it was a great way to not feel alone in the first few weeks, to have a friendly face in the lab. We would casually chat when we saw each other and she was there to answer any questions I had. We're still good friends now, 5 years down the road.

I've also since then been a "big sister" to other ladies new to the department, and the whole program has advanced, we even get reimbursed if we take our "little sisters" for a coffee and cake every now and then to catch up. I think it's a great initiative and we should carry on offering it and continuously improving it.

PhD student and former MPhil student (female), October 2018

IMPACT

- Increasing uptake of new female graduates to the women@CL mentoring scheme to 83%

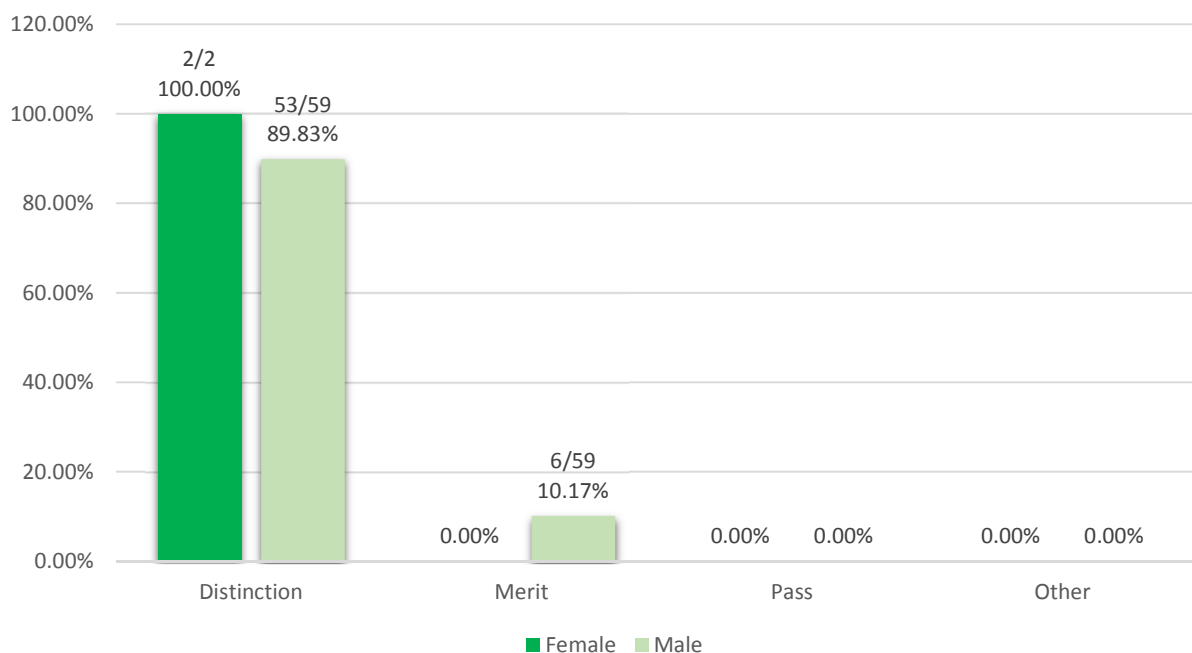


Figure 11. Exam results for fourth-year MEng CS degree by gender

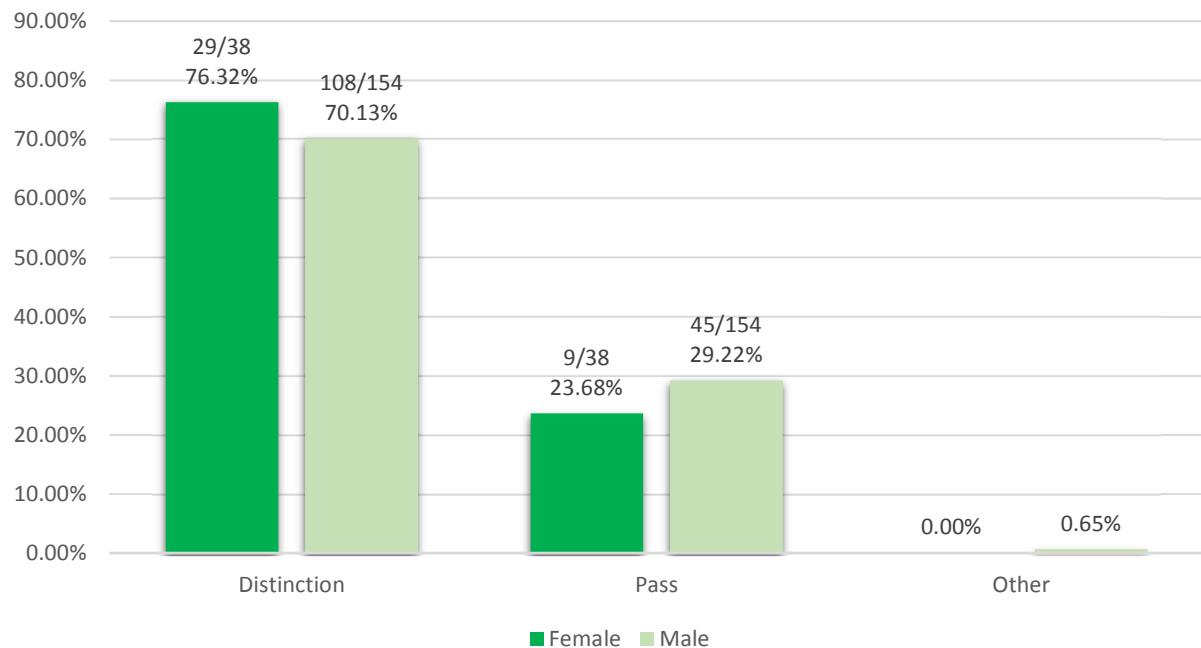


Figure 12. Exam results for the MPhil in ACS by gender

IMPACT

- All female students on Postgraduate Taught courses have passed between 2013/14 and 2017/18.
- 100% Distinction rate for women completing the MEng (fourth year) over the last 5 years.
- 76% Distinction rate for women completing the MPhil

- ACTION 1.2** Further develop women@CL, increasing attendance and satisfaction at events, and ensuring awareness is raised throughout the University and Colleges
- ACTION 2.2** Improve visibility of women in the Department to provide examples of “People Like Me” at all career levels
- ACTION 2.4** New women@CL Social Media and Blog to produce increased female admissions by 2022
- ACTION 3.3** Improved monitoring of student admissions and performance

(iv) Numbers of men and women on postgraduate research degrees

Full- and part-time. Provide data on course application, offers, acceptance and degree completion rates by gender.

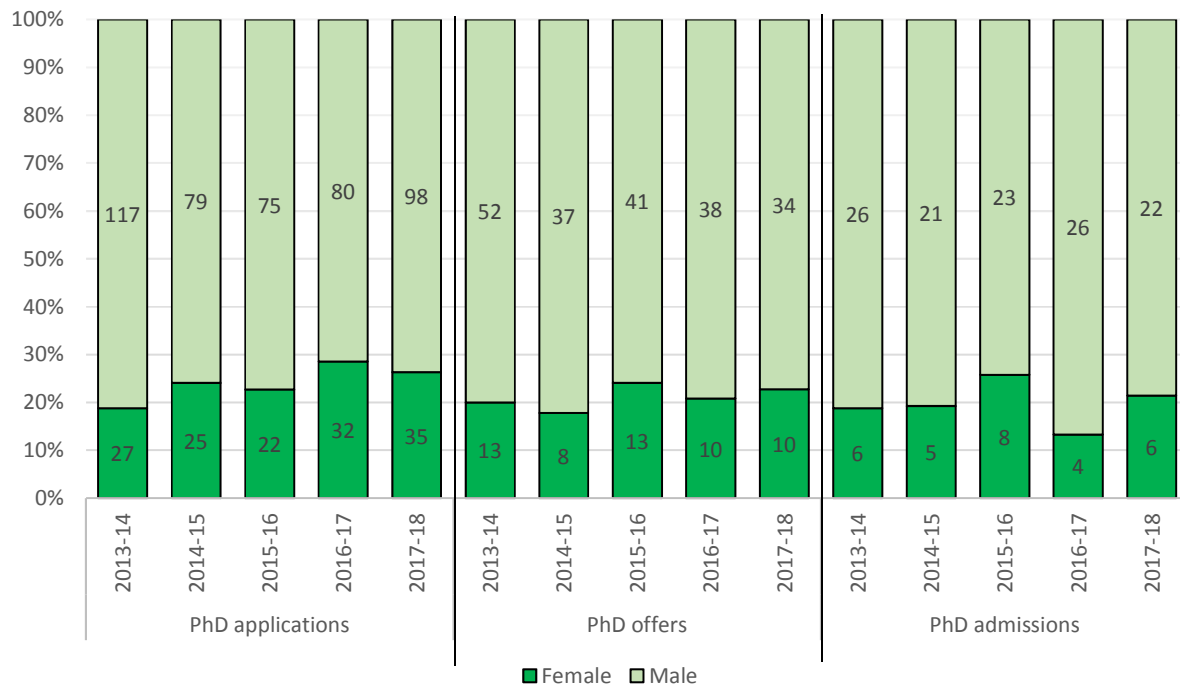


Figure 13. PhD applications and admissions by gender

Perhaps due to the increased number and proportion of female academics in the Department, Figure 13 shows that our number of female PhD applications has risen from 19% in 2013/14 to 26% in 2017/18, as has female PhD admissions from 19% in 2013/14 to 21% in 2017/18. women@CL has aided the transition from Masters to PhD for women. Increased visibility of Athena SWAN and women@CL is a priority for the Department. Admissions, performance, and completion rates are monitored by gender by the Graduate Education Committee.

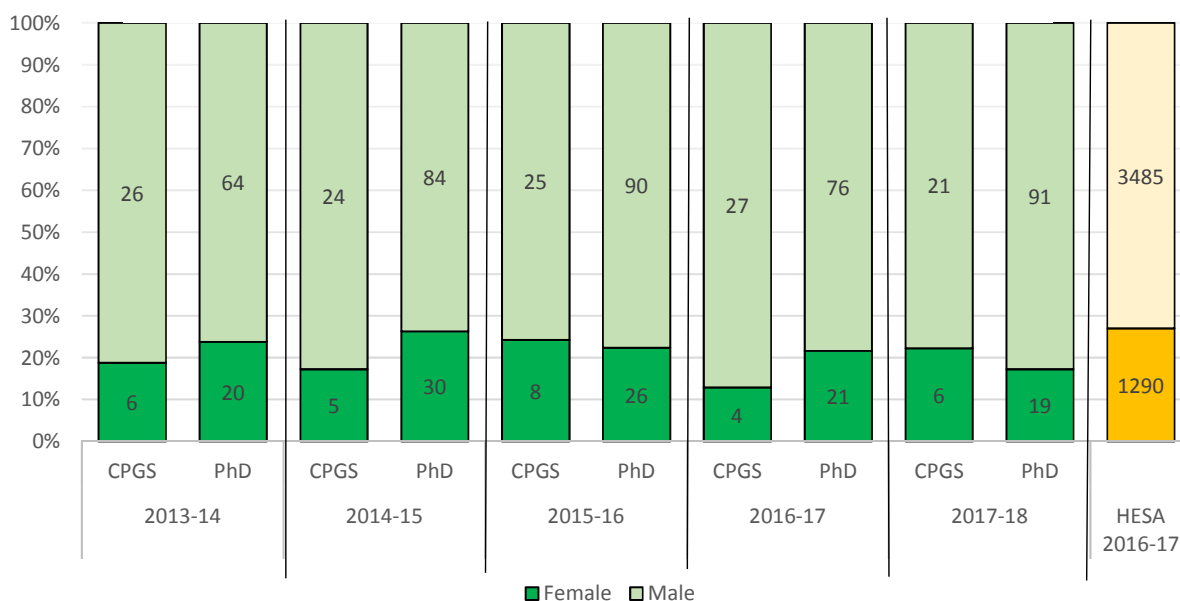


Figure 14. Postgraduates on research degrees by gender

Figure 14 shows numbers of female graduate students on our postgraduate research course has slightly reduced from 22% in 2013/14 to 18% in 2017/18. Funding is the main bottleneck for PhD student admissions, and so the relative success of different supervisors in obtaining PhD funding can significantly affect the gender ratio. Coupled with gender biases in applications to different subject areas this leads to gender imbalance in overall research degree admissions.

IMPACT

- 92% (F) and 86% (M) postgraduate students feel that ‘research activities are provided in a manner that is accessible and fair to all students’
- 92% (F) and 88% (M) postgraduate students ‘feel comfortable asking questions or sharing their opinions in lectures’
(Student Survey, 2017)
- Monthly women@CL talklets are given by female researchers in the Department. Typical attendance 40-50 people (F and M)

- | | |
|-------------------|--|
| ACTION 2.2 | Improve visibility of women in the Department to provide examples of “People Like Me” at all career levels |
| ACTION 5.9 | Increasing PhD funding to allow us to accept more excellent candidates, further increasing diversity among PhD students |
| ACTION 6.1 | Increase the numbers of female students on undergraduate course as part of the pipeline to our postgraduate taught courses |

(v) Progression pipeline between undergraduate and postgraduate student levels

Identify and comment on any issues in the pipeline between undergraduate and postgraduate degrees.

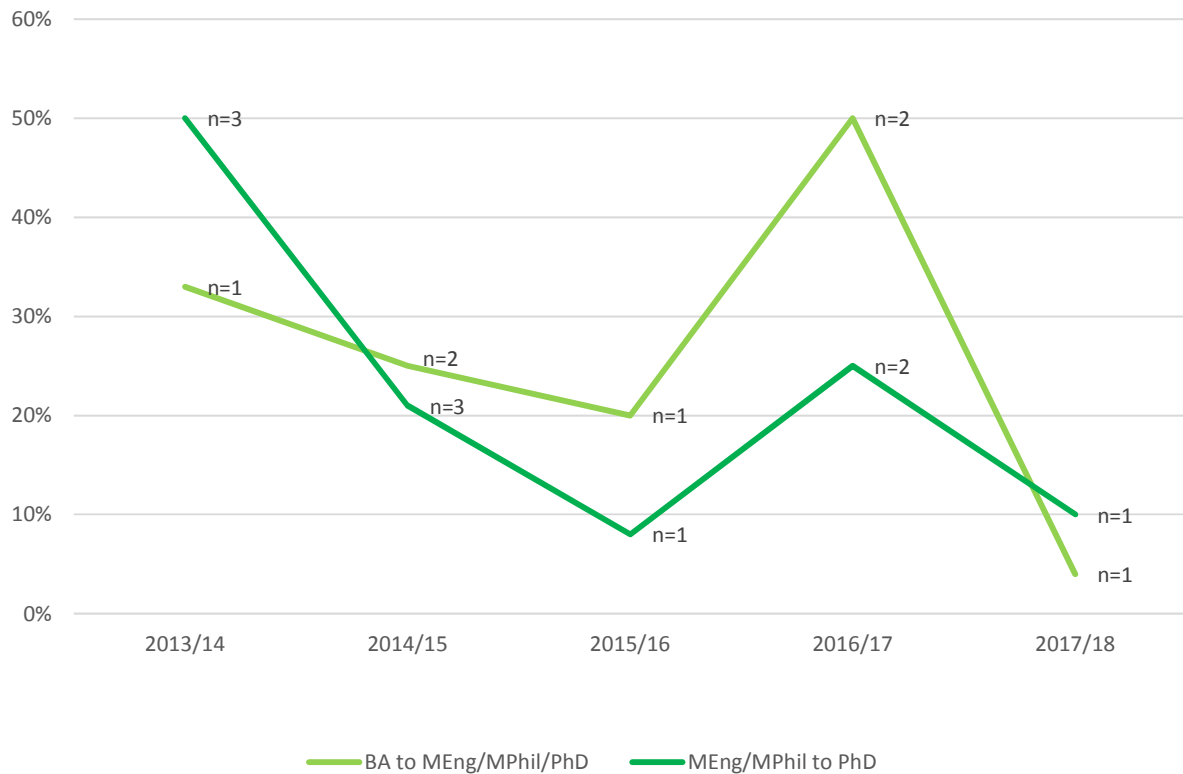


Figure 15. Progression pipeline between female undergraduates and postgraduates

Figure 16 shows the pathway through the fourth year of the Tripos (MEng) from the undergraduate degree to the PhD. The gender balance in the PhD is better than in the MEng and postgraduate taught course (MPhil). We are working to understand the discrepancy, and we expect the overall proportion to improve as we increase the number and proportion of female academic staff, as well as through our Action Plan.

ACTION 6.4 Improve gender balance in our postgraduate taught courses as these are an important part of our admissions pipeline to the PhD degree

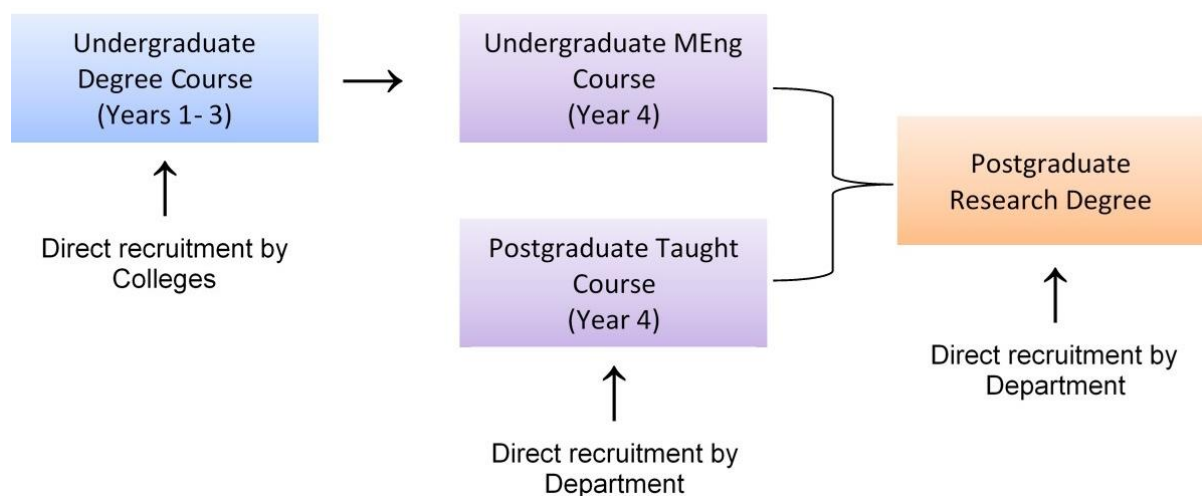


Figure 16. Student pathway

4.2 ACADEMIC AND RESEARCH STAFF DATA

(i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type. Silver - comment on the transition of technical staff to academic roles.

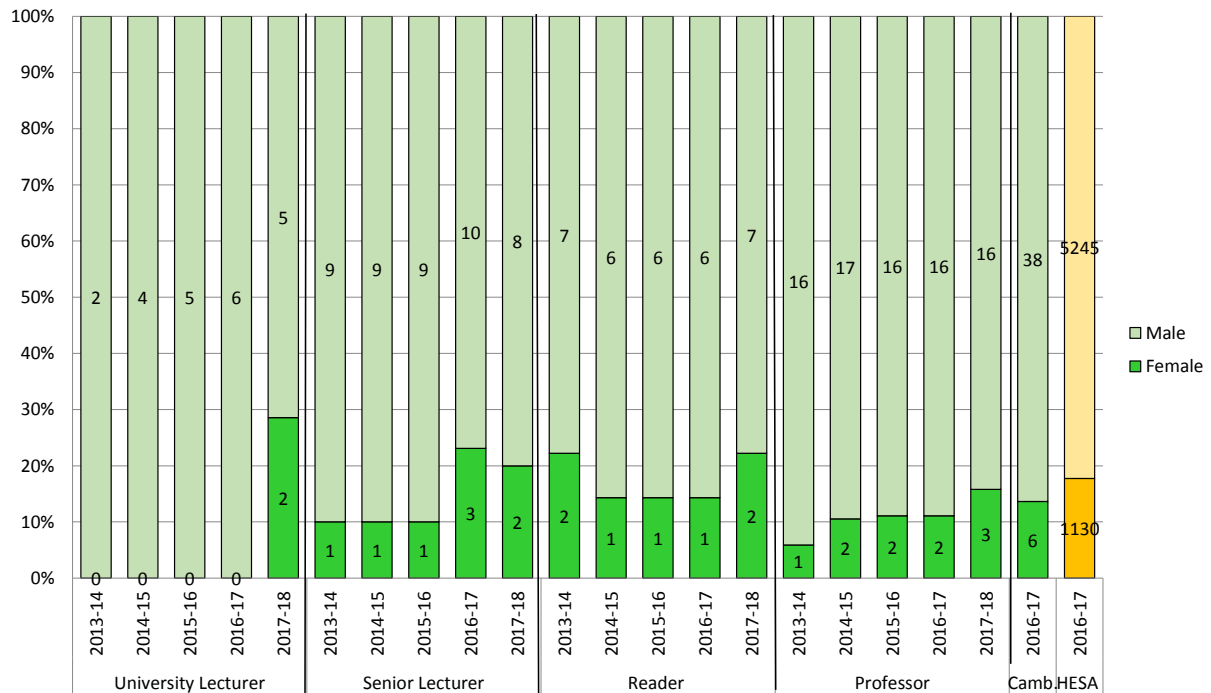


Figure 17. Proportion of Academic Staff by gender

Figure 17 shows that **since 2013/14 we have more than doubled the number of female academic staff, from 4/38 (11%) to 9/45 (20%)**. We believe this is due to our proactive steps to improve our recruitment processes. As with most UK CS departments, we continue to have a skewed gender profile, and so we are committed to continue this drive to further improve gender balance for academic staff.

IMPACT

- Tripled proportion of female Professors from 1/17 (5%) in 2013/14 to 3/19 (16%) in 2017/18
- Stable proportion of female Readers at 2/9 (22%)
- Doubled proportion of female Senior Lecturers from 1/10 (10%) in 2013/14 to 2/10 (20%) in 2017/18
- Increased proportion of female Lecturers to 2/7 (29%) in 2017/18 from 0/2 (0%) in 2013/14

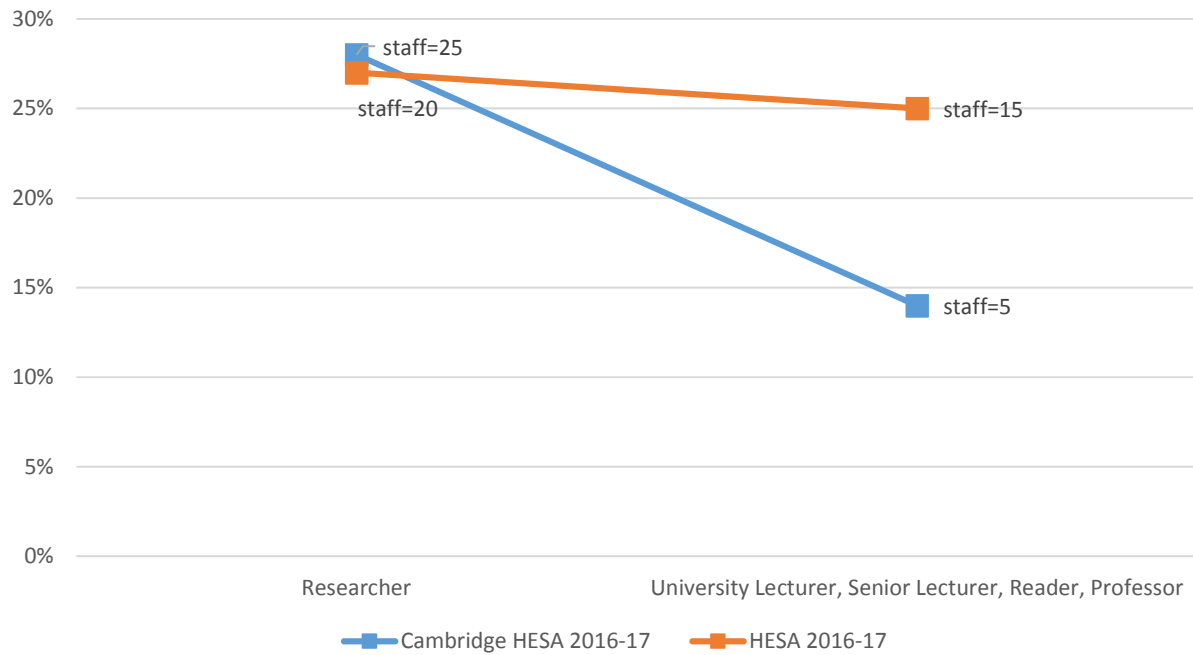


Figure 18. Benchmark comparison of female staff against HESA data

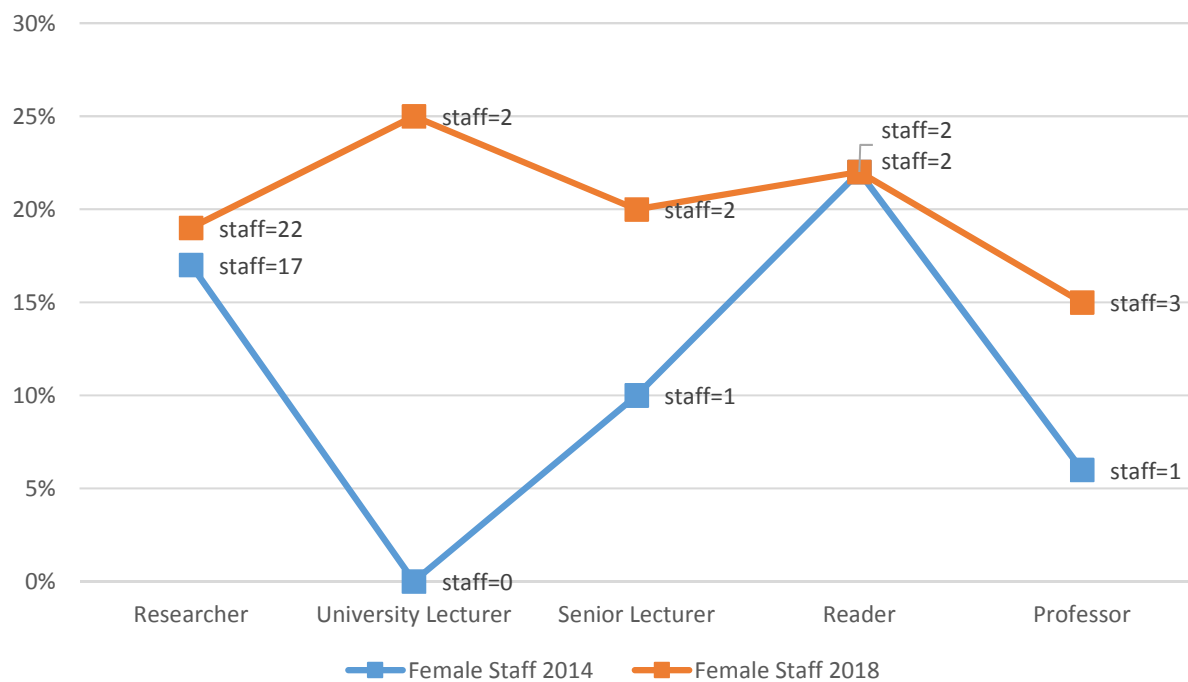


Figure 19. Career pipeline of female staff

Figure 18 compares proportion of female staff against the HESA data for 2016/17. At that point, our proportion was slightly higher for Researchers (28%) vs the HESA median (27%) while our proportion was lower for Academic Staff (14%) vs the HESA median (25%). However, as Figure 19 shows, we have had dramatic rises in all female staff categories except Reader (which has remained stable even as staff were promoted) since 2014.

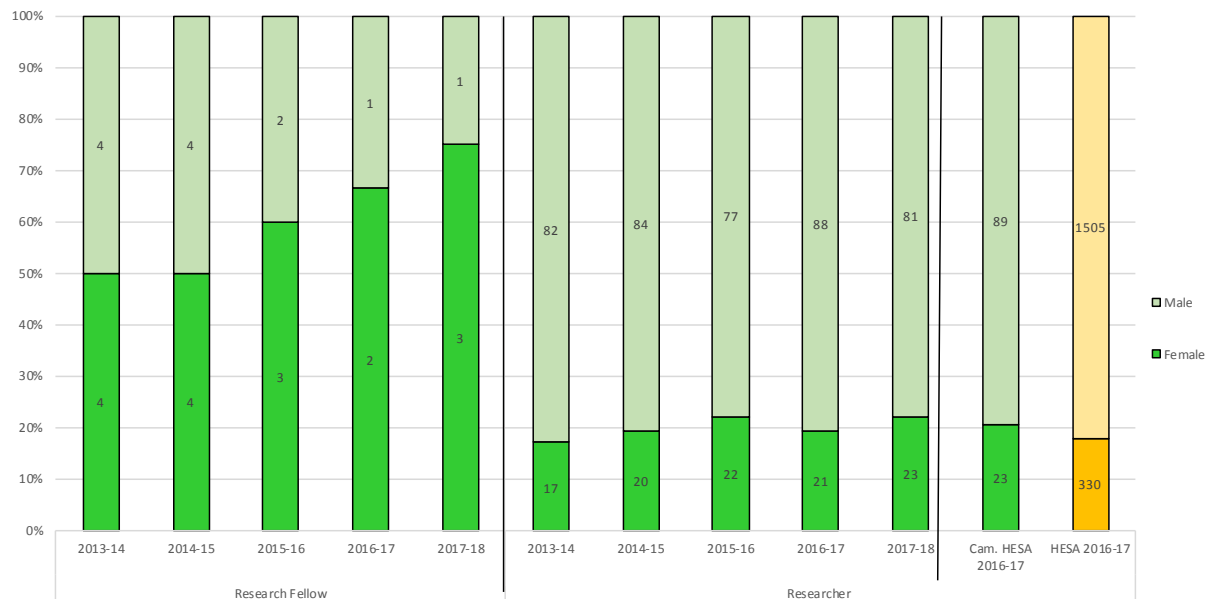


Figure 20. Proportion of Research Staff by gender

Figure 20 shows that despite fluctuation due to certain subareas, particularly the more interdisciplinary ones, attracting primarily female researchers, we have gradually increased the recruitment of female researchers and research fellows. The Department now maintains up-to-date and accurate data concerning recruitment and promotion by gender. Data is collected and analysed for all advertised posts and presented elsewhere in this application. It shows a marked increase in numbers of female applicants for research and faculty positions.

IMPACT

- Proportion of women researchers has increased from 17% in 2013/14 to 22% in 2017/18
- Proportion of women research fellows has increased from 50% in 2013/14 to 75% in 2017/18

- ACTION 3.4** Collect and monitor destination data for staff and students so we can assist in improving leaver outcomes as well as improve visibility of women in Computer Science outside the Department
- ACTION 3.5** Regular review of staff recruitment and promotion to ensure all staff are fully enabled to apply at the appropriate times
- ACTION 6.6** Proactive staff recruitment process to continue to improve diversity of applicant pool

(ii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender

Comment on the proportions of men and women on these contracts. Comment on what is being done to ensure continuity of employment and to address any other issues, including redeployment schemes.

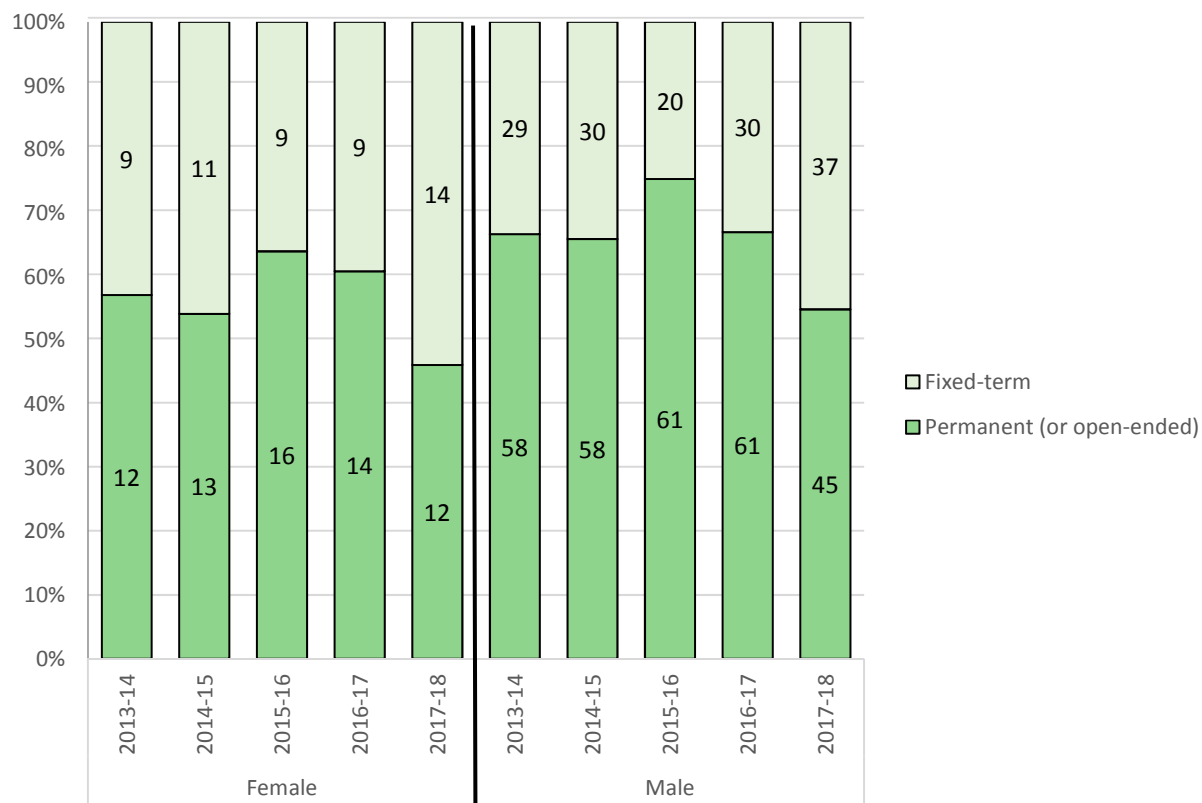


Figure 21. Proportion of Research Staff on fixed-term vs permanent contracts

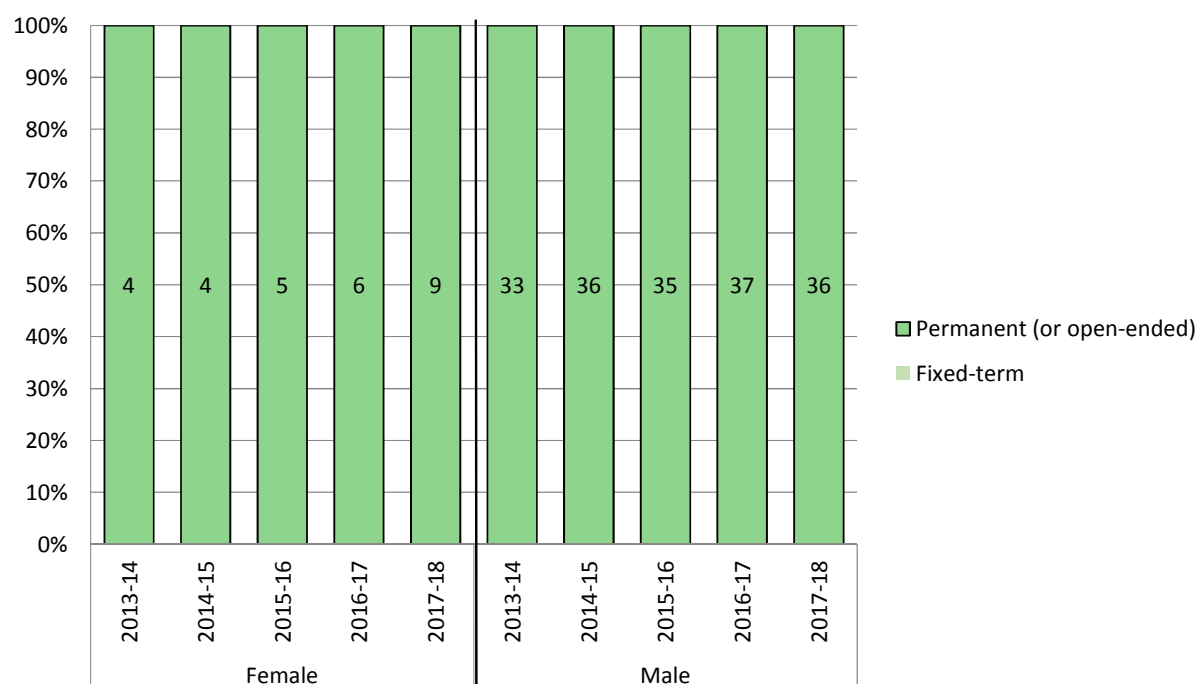


Figure 22. Proportion of Academic Staff on fixed-term vs permanent contracts

Figure 21 and Figure 22 demonstrates that all our academic staff are on permanent contracts. In comparison to the 2015 Departmental Athena Swan Bronze submission, the proportion of women has almost doubled, from 11% to 20%.

When research staff on a fixed term contract reaches two years they are routinely changed to a permanent contract, subject to available funding. Over the period of 2013/14 to 2017/18, 56% of the female researchers were on permanent contracts in comparison to 66% of male researchers. A number of women who had been employed for over two years left to take higher paid jobs in industry. Due to the small numbers of women, such effects can quickly skew the percentages. We continue to monitor this.

The Department actively encourages PIs to consider alternative funding sources for staff whose contracts are coming to an end. In 2017 we introduced an exit questionnaire and interview, to learn more about reasons for staff leaving and to identify if there are any issues we need to address. The DS receives letters of resignation and, although we do not currently collect leaver statistics, the majority of research staff resigning from their position leave to take up more senior positions elsewhere in academia or for higher paid jobs in industry.

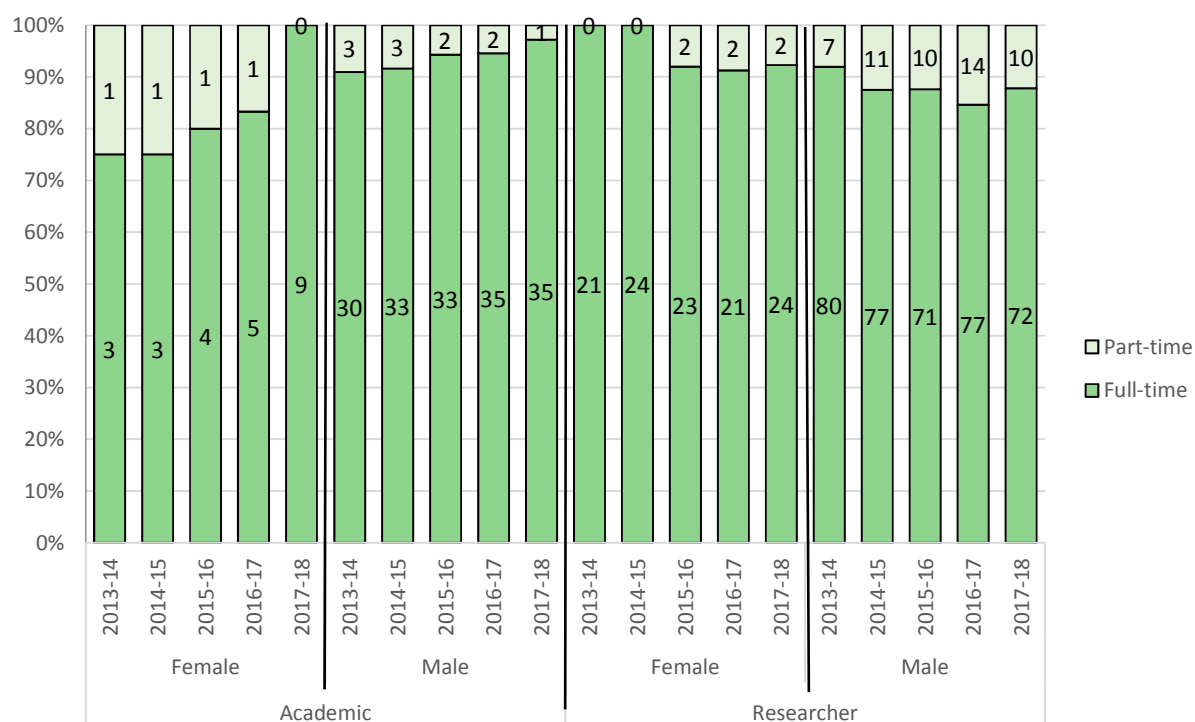


Figure 23. Proportion of part-time vs full-time contracts, for Research and Academic Staff by gender

Figure 23 shows that almost all academic staff are on full-time contracts with only one man classed as part-time in 2017/18, due to taking flexible retirement. Part-time working is more common for research staff, currently at 11%, two women and 10 men. Some staff are working whilst completing a PhD, while others opt to work on a part-time basis for family or other personal reasons. Requests for flexible working are encouraged and all submitted requests to work part-time have been approved.

(iii) Academic staff leavers by grade and gender and full/part-time status

Comment on the reasons academic staff leave the department, any differences by gender and the mechanisms for collecting this data

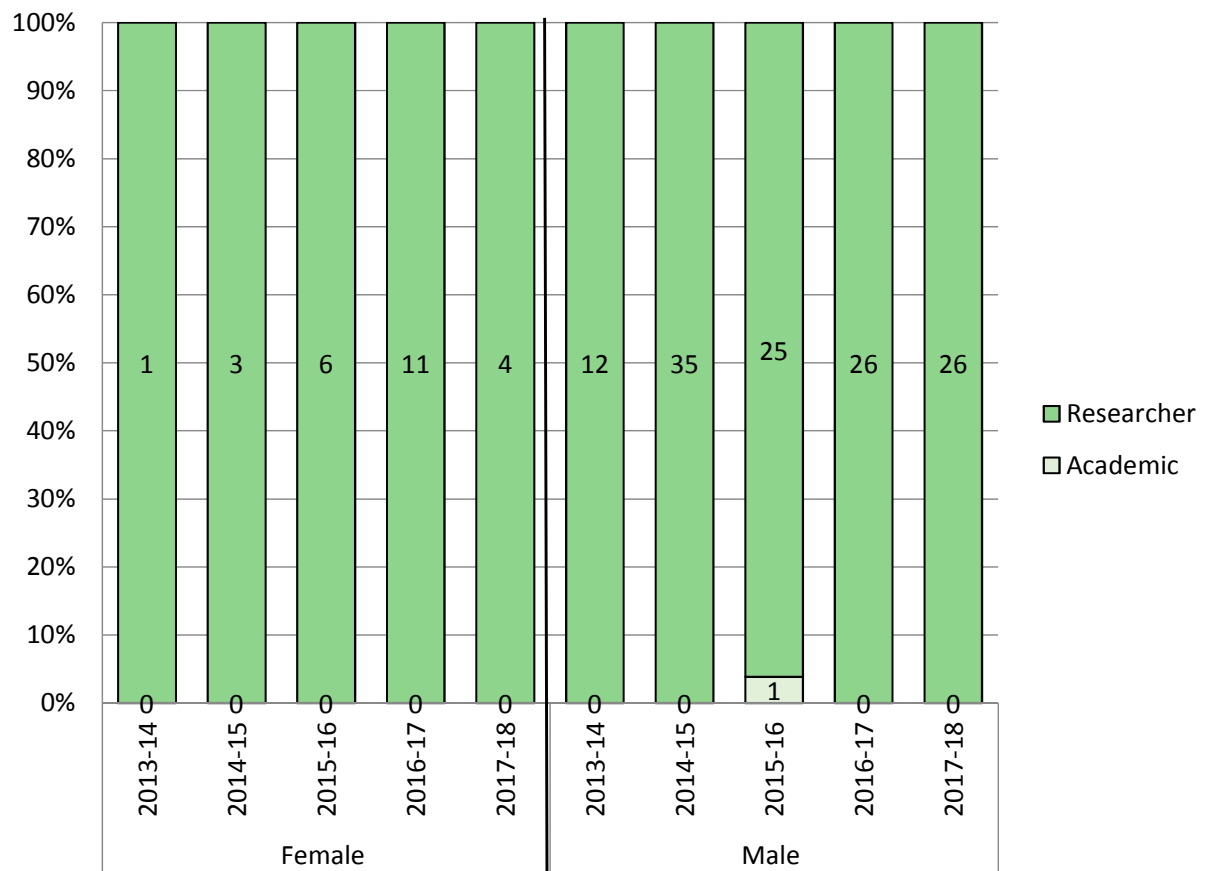


Figure 24. Academic Staff leavers

Figure 24 shows that turnover for academic staff is practically zero since 2013/14: just one academic (male) left to return to New Zealand.

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

(6,496 / 6500 words)

5.1 KEY CAREER TRANSITION POINTS: ACADEMIC STAFF

(i) Recruitment

Break down data by gender and grade for applications to academic posts including shortlisted candidates, offer and acceptance rates. Comment on how the department's recruitment processes ensure that women (and men where there is an underrepresentation in numbers) are encouraged to apply.

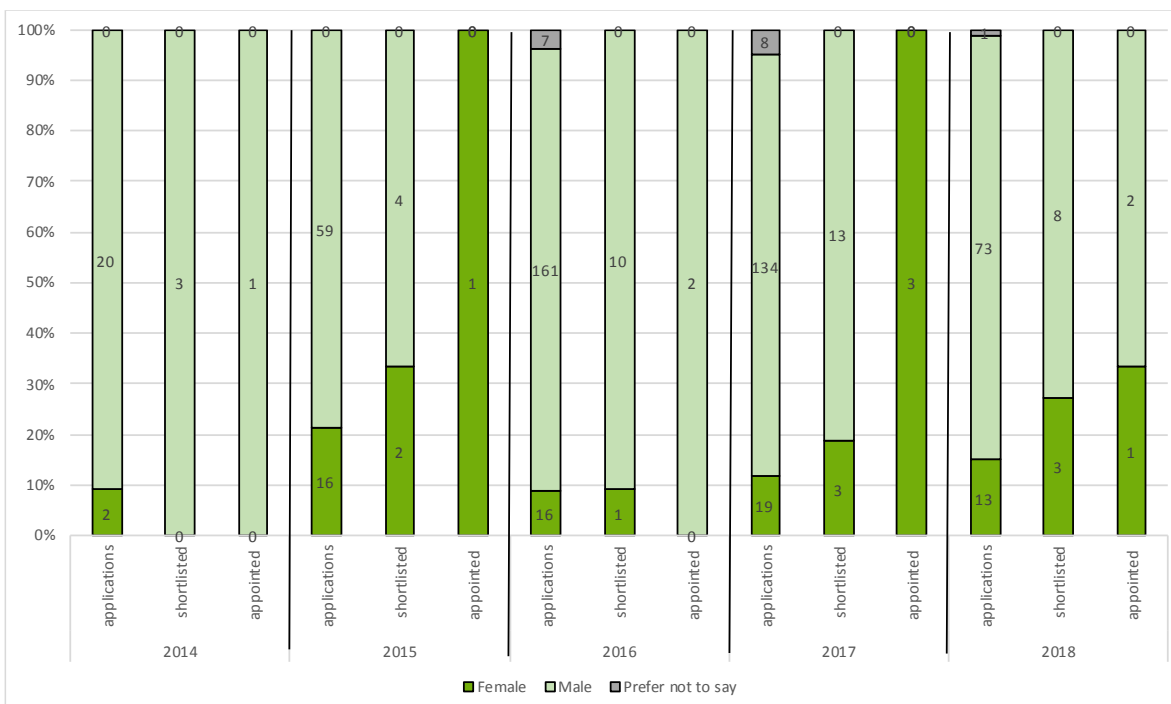


Figure 25. Academic recruitment by gender, 2014—2018

The Department's initiatives developed as part of the 2015 Bronze application to increase numbers of female academics are having an impact. In 2016 we brainstormed this issue further at a weekly staff meeting to include ideas from new staff members. We developed an active search procedure for academic posts led by the Chair of appointment panels. Appointment panels are now responsible for proactively seeking and encouraging female applicants. This has resulted in multiple communications and face-to-face meetings with interested applicants, and we continue to improve this process. The effectiveness of this approach to 2017/18 is highlighted in Figure 25.

IMPACT

Recruitment process improvements have:

- Increased women applying for academic posts from 66/513 (13%)
- Increased women shortlisted from 15% over the period 2013/14 to 2016/17 to 22% in 2017/18.
- This improvement carries through to appointments where there has been a 40% increase since 2013/14 to 2016/17 from 25% to 66% in 2017/18

Some areas of CS are particularly interdisciplinary in nature and Table 1 shows that research groups such as Natural Language Processing and Graphics and Interaction attract a higher proportion of female applications, >20% compared to <14% for some of the other research areas. This will continue to be addressed by the Chair of Appointments panels ensuring we actively encourage female applicants, aiming to reach at least 20% female applicants across all groups. We will also ensure we use gender-neutral language in advertisements and further particulars, as well as emphasising the family-friendly policies and flexible working arrangements available.

Table 2. Academic post applicants to research groups by gender

Research Group	Male	Female
Artificial Intelligence	84 (89%)	10 (11%)
Computer Architecture	n/a	n/a
Digital Technology	60 (91%)	6 (9%)
Graphics and Interaction	59 (79%)	16 (21%)
Natural Language Processing	28 (80%)	7 (20%)
Programming, Logic and Semantics	109 (91%)	11 (9%)
Security	45 (88%)	6 (12%)
Systems	62 (86%)	10 (14%)

ACTION 4.2	Achieve completion rates of 100% for staff on appointment panels having completed Recruitment Essentials, E&D, and Unconscious Bias training
ACTION 5.9	Increasing PhD funding to remove a key bottleneck in academic staff career development, particularly as the Department continues to recruit early career academics
ACTION 6.6	Proactive staff recruitment process to improve diversity of applicant polls, on other factors in addition to gender

(ii) *Induction*

Describe the induction and support provided to all new academic staff at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

We have reviewed and developed our induction process to follow/promote best practice. The University induction can be completed online with the Departmental Secretary providing local information, family friendly policies, E&D and other HR policies within the University.

The Departmental Secretary was
great with the induction'
Academic (female), February 2018

IMPACT

After review, induction now consists of:

- An Induction Meeting with the DS, including a tour of the Department and facilities (e.g., showers, kitchenettes, first-aid room). Our comprehensive Induction Checklist is followed, which provides internal information. The checklist is completed over a period of time to avoid overloading people with information on their first day, and instigates a weekly and monthly meeting with their Line Manager
- The University's HR Division sends each new starter a copy of the University Staff Handbook, Health and Safety Handbook and an invitation to the 'Welcome to Cambridge' Induction along with their contract of employment
- A Departmental welcome pack is issued, including key contacts, map of the building, IT information, Induction Checklist, useful web links, details of the Family Friendly policies in the Department, information on the Athena SWAN charter, as well as information about the City, including bus routes and a 'Welcome to Cambridge' cycling guide
- Staff are made aware of the HR Practices and Policies including; Dignity@work, Family Friendly Policies, Flexible Working, Athena SWAN charter, the mentoring scheme and the Occupational Health Service
- Staff are asked to complete the online E&D Courses (71% completion rate for female staff, October 2018) and Understanding Unconscious/Implicit Bias
- Staff are made aware of PPD and IT training courses available
- All new staff are welcomed at the termly Social Afternoon Tea
- Each new academic member of staff is also invited to give a Wednesday Seminar about their research in the term following their arrival

All new research staff are offered the opportunity to be assigned a mentor by the Research Staff Mentoring Scheme initiated by the Research Staff Forum. The scheme offers new researchers the opportunity to be assigned an experienced researcher to offer general, cultural and research advice. Since its introduction in 2016/17, 8 Researchers (five women, three men) have formally taken part in the scheme. We aim to increase the numbers by increasing follow-up invitations to take part in the scheme, as well as advertising this more widely through the Departmental noticeboards and via the Research Staff Forum.

I had a mentor assigned to me before I arrived to Cambridge. She was a huge help with logistics and pointing to resources that I was not aware of. When I moved to Cambridge, we met up frequently for lunch and coffee breaks for a month or two. As I settled down we met up in person less frequently, but I still contact her whenever I have a question and she has always been very helpful.

Researcher (female), October 2018

ACTION 4.1	Increase E&D training completion rate as now part of the induction process
ACTION 4.3	Increase Unconscious Bias training completion rate as now part of the induction process
ACTION 4.5	Ensure that the Department's commitment to and actions for Athena SWAN are communicated effectively to all staff as part of the induction process
ACTION 5.3	Continue to review and update induction process for effectiveness

(iii) Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

Academics apply for promotion via the University's Senior Academic Promotions (SAP) scheme. Figure 26 shows applications and successes for the period 2013/14 to 2017/18, female applicants (25%) have a 100% success rate, rather than male applicants (75%) with a 80% success rate. Table 3 gives a breakdown during that period, by gender, across all offices. All staff eligible to apply for promotion discuss the opportunity at their appraisal, as well as with the HoD. They are also encouraged to seek advice from other senior Professors in the Department and they get full support from the DS.

The University offers a SAP CV scheme that encourages applications for promotion and supports candidates with the process. Although open to all, it is aimed particularly at women. All eligible staff are made aware of the scheme at their Induction and appraisal, and receive reminders throughout the year.

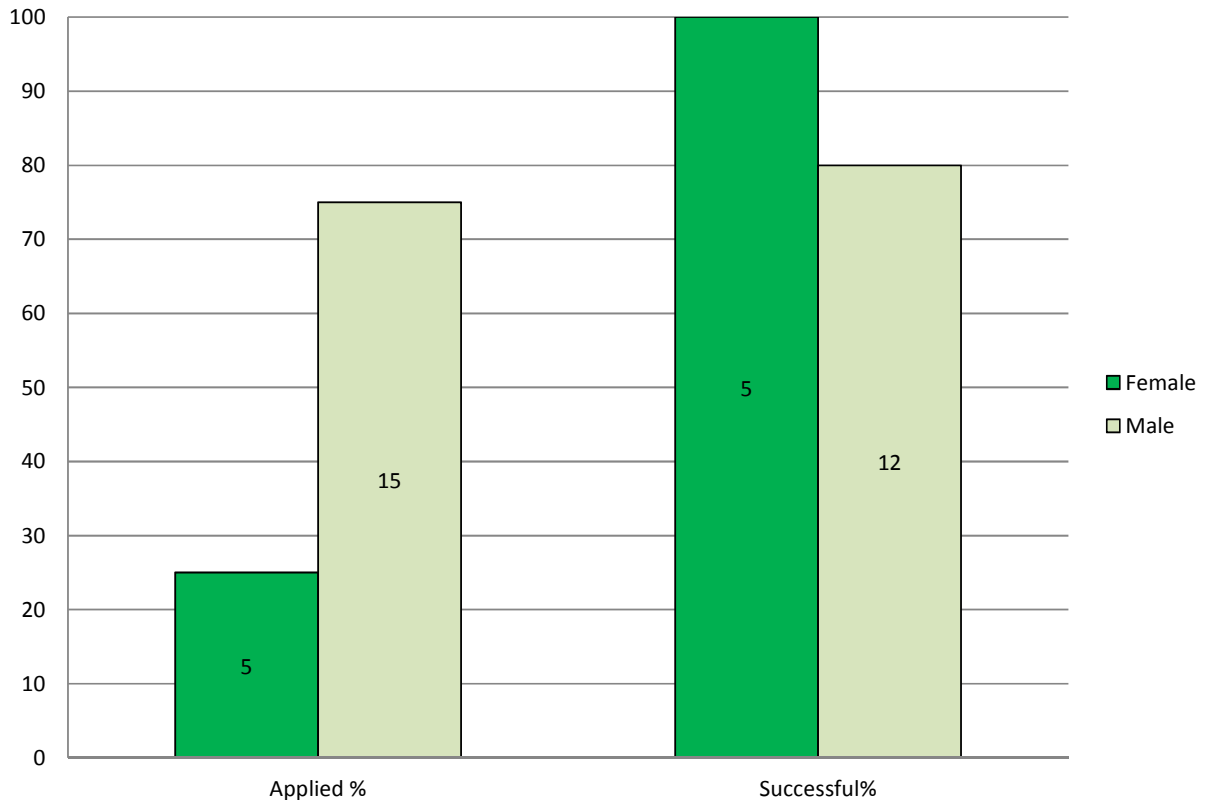


Figure 26. Senior Academic Promotions (SAP) by gender, 2013—2018

PDRAs can apply for promotion to SRA, which is typically after at least three years' experience, whether at Cambridge or elsewhere. Applications are made via their PI and are considered and approved by the Faculty Board. Since our Bronze award we now give clearer guidance of the procedure and display case studies of successful promotion cases on our webpages, with relevant links to the University's pages. PIs discuss promotion prospects with PDRAs and encouragement and support for promotion is given at the biennial appraisal meetings. Although the decision about whether to apply rests with the PI who is responsible for writing a case for support and is subject to the availability of funding.

Table 3. Full breakdown of SAP applications and successes by gender, 2013/14—2017/18

Year	Office	Female		Male	
		Applied	Succeeded	Applied	Succeeded
2013	Professor			2	1
	Reader				
	Senior Lecturer			4	4
2014	Professor	1	1	2	1
	Reader	1	1		
	Senior Lecturer				
2015	Professor			1	1
	Reader			1	1
	Senior Lecturer				
2016	Professor				
	Reader				
	Senior Lecturer			1	1
2017	Professor	1	1	2	1
	Reader	2	2	2	2
	Senior Lecturer				

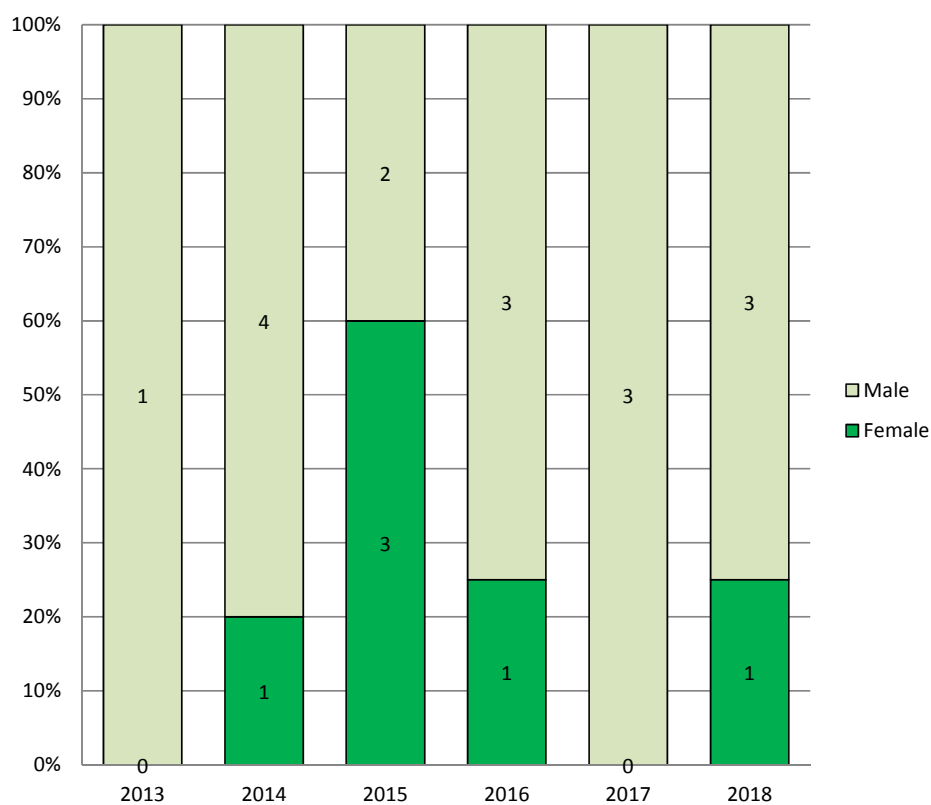


Figure 27. Research Staff promotions from PDRA to SRA

Figure 27 shows that over the six-year period we have promoted six women to SRA (Grade 9). The proportion of female SRAs is slightly higher than the proportion of female PDRAs overall. As almost all applicants, men and women, have been successful we do not provide the raw data on numbers of applicants and successes to respect the privacy of those few who were unsuccessful.

Research Staff are also given the opportunity to apply for up to three contribution points each year, under the Contribution Increment Scheme for Researchers. Each round of the termly scheme is advertised via email. We encourage PIs to talk to staff about the scheme and discuss possible funding. We have started to collect statistics from 2017/18 and out of the 14 applications (three female) made during the year, all were approved.

ACTION 3.5	Regular review of staff recruitment and promotion to address concerns over other aspects of diversity
ACTION 4.4	Monitor and analyse research staff promotion and recruitment process
ACTION 4.6	Improve awareness of the Senior Academic Promotion Exercise (SAP) to academic staff through the appraisal process
ACTION 5.4	Improve appraisal satisfaction indicating that all staff are properly supported in career development

(iv) Department submissions to the Research Excellence Framework (REF)

Provide data on the staff, by gender, submitted to REF versus those that were eligible. Compare this to the data for the Research Assessment Exercise 2008. Comment on any gender imbalances identified.

Our policy was to submit all eligible staff to the 2008 Research Assessment Exercise (RAE) and the 2014 Research Excellence Framework (REF). Figure 28 shows no evidence of gender bias: we submitted 100% of eligible women and all but three eligible men (two held primarily teaching roles while the third had been seconded to central University administration for several years).

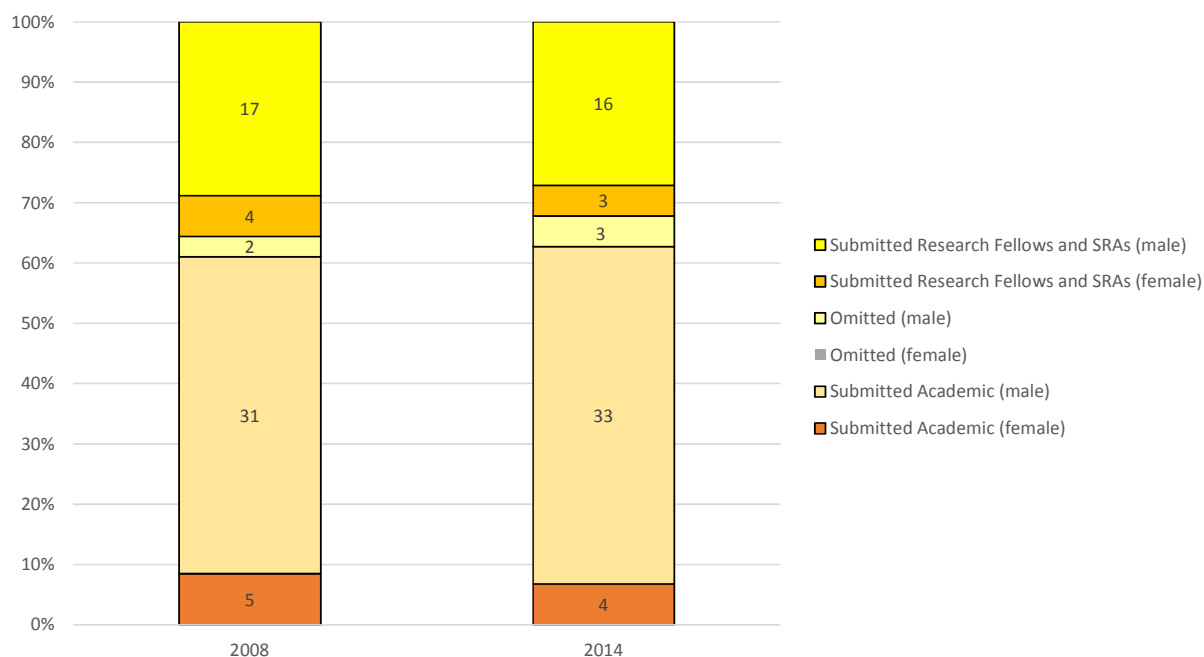


Figure 28. Department staff submitted to RAE 2008 and REF 2014

5.2 KEY CAREER TRANSITION POINTS: PROFESSIONAL AND SUPPORT STAFF

(i) Induction

Describe the induction and support provided to all new professional and support staff, at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

The Department offers an internal Induction Programme for all new starters along with the 'Welcome to Cambridge' induction which is provided by the University's Personal and Professional Development (PPD) Office. The PSS induction follows the same pattern as the Academic Staff induction. All staff are asked to complete the online E&D Essentials Training and the Unconscious and Implicit Bias modules at their induction. The effectiveness of the Induction Programme is reviewed and monitored at the 6-month Probation Meeting, Biennial Appraisal, and Staff Survey

IMPACT

- Completion rate of 90% for Professional and Support Staff, July 2018
- 89% of PSS said that their local induction gave them the information and knowledge they need to do their job effectively
- 61% said that the central University Induction gave them useful information about how the University operates (Staff Survey 2015).

ACTION 5.3 Continue to review and update induction process for PSS

(ii) Promotion

Provide data on staff applying for promotion, and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process

The University currently does not have a mechanism for PSS promotion. We are aware that this is an issue for the University to resolve and was therefore an action for implementation from the University of Cambridge Institutional submission. This lack of provision for promotion opportunities is further highlighted by only 56% of PSS feeling that the career development and promotion processes at the University are fair (Staff Survey 2015). The only relevant scheme run by the University is the Contribution Increment Scheme for PSS, Grades 1-11. Details of the criteria and process are circulated annually to staff by the DS, and staff contemplating applying for an increment are given full support and guidance by their Line Manager and the DS.

Table 4. Applicants for the Contribution Reward and Progression Scheme for Professional and Support Staff, grades 1–11, 2014–2018

Year	Female		Male	
	Applied	Succeeded	Applied	Succeeded
2013/14	10	7	3	0
2014/15	4	3	5	1
2015/16	3	3	2	2
2016/17	3	3	1	1
2017/18	5	5	3	3

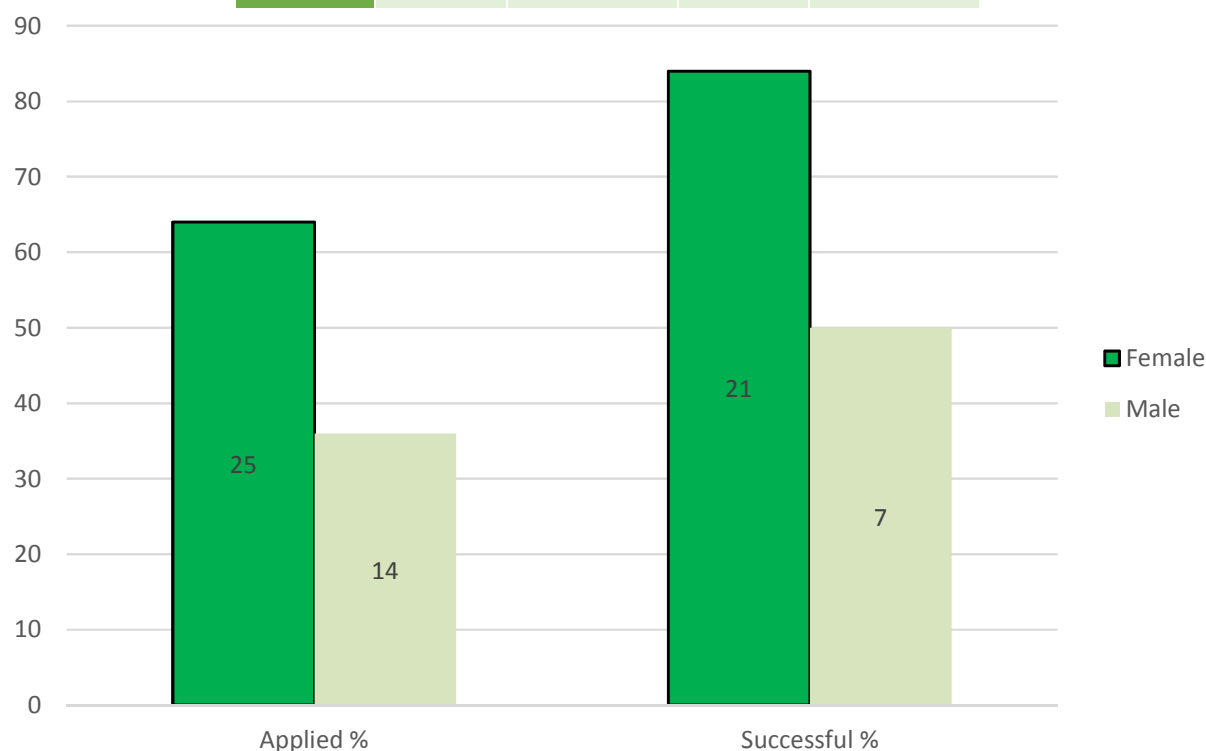


Figure 29. Contribution reward and progression scheme for PSS by gender

Table 4 shows the breakdown of awards from the scheme, either contribution increments (to recognise outstanding, sustained and ongoing contribution) or a single contribution payment (an exceptional one-off or time limited contribution). As Figure 29 shows, women have greater success (84%) in being awarded an increment over the 5-year period compared to men (50%). This may be due to the higher number of women employed as PSS, which meant a higher number of applications were received from women (64%). Lack of success is largely due to the very limited central University budget for the allocation of awards each year. The Department is required to rank applicants for submission to the School of Technology HR Committee for further consideration and final decision. The Department pushes hard for as many cases as possible to be approved, and where allowed by the University, commits Departmental funds to the process. The Department is pleased to learn that the University will be addressing the opportunities for PSS promotion as part of their Institutional submission.

ACTION 3.2 Improve staff consultation through focus groups and other means, and by receiving and analysing data from the upcoming University-wide staff survey

5.3 CAREER DEVELOPMENT: ACADEMIC STAFF

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

Training and development is encouraged for staff at all levels. Training is considered within the SRD process and built into each individual staff member's goals. The Department also considers whether wider Departmental training/larger group training sessions are needed as part of the Department's annual strategic objectives.

Department Training

- We have held two Unconscious and Implicit Bias lectures. The first, in 2016, was given by an external speaker and the second, in 2017, was given by the University's E&D Office. Attendance at both events was over 70% for academic staff and very positive feedback on both sessions was received.
- In-house Recruitment Training (including an integral component of Unconscious Bias training) took place in May 2017 and 100% staff involved in recruitment attended. This will be repeated in 2019.
- As an action from our Bronze Submission, we have now made it compulsory for all new undergraduate supervisors to complete the online Unconscious Bias Training before they can begin supervising. This is monitored by the in-house Supervisors workshop which the Undergraduate Teaching Office organise.

University Training

- Details of PPD Courses provided by the University are circulated termly, put on display on the screens in the Atrium, and displayed on our Staff Development Noticeboard. All staff are actively encouraged to attend courses run by PPD and the

University Information Services (UIS) as well as being offered financial support to attend other relevant courses.

- Effectiveness of training is monitored through the feedback received from the biennial appraisal scheme and through the results of our Staff Survey consultation.
- A *Breaking the Silence* lecture was given by the University's E&D Office in May 2018, and advertised widely as an all staff event, followed by a Social Tea. We were delighted to see 80% staff turnout for this important session.

IMPACT

- All new supervisors (PhD and Research Staff) for undergraduate students now must complete the online Unconscious Bias Training before they can commence supervising

Current training opportunities include:

Academic Staff

- PPD courses e.g. Induction, Leadership Training, Effective Staff Review and Development, Project Management, Recruitment and Selection Skills
- University Computing Courses
- Research Grant Training

Research Staff

- PPD courses e.g. Induction: Online, Supervising Undergraduates, Admissions Selection Workshops, Develop your Career: Interview Techniques, Job Search, CV writing and Job Applications
- University Computing Courses
- Transferable Skills courses offered by the Researcher Development Programme Courses e.g., Effective Researcher, Emerging Research Leaders' Development Programme, How to Peer-review Research Papers

IMPACT

From the Staff Survey 2015:

- 82% of female staff know where to find information about training and development opportunities
- 67% of female staff are satisfied with the training and development they receive for their present job
- 64% of female staff have the opportunity to discuss their development needs regularly

ACTION 4.1 Increase E&D training completion rate as now part of the induction process

ACTION 4.2 Completion rate of Recruitment Essentials, E&D, and Unconscious Bias training should approach 100% for staff on appointment panels as now compulsory

ACTION 4.3 Increase Unconscious Bias training completion rate as now part of the induction process

(ii) Appraisal/development review

Describe current appraisal/development review schemes for staff at all levels, including postdoctoral researchers and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

The Department runs a biennial appraisal scheme for both Research and Academic Staff where the appraisal is carried out by an academic outside appraisees research groups. Individual Training needs are identified at these Meetings. The take up of the appraisal scheme, by gender, is shown in Figure 30. The scheme has received positive feedback:

I very much appreciated that my appraiser made the up-front distinction that this appraisal was career mentoring (female)

Very valuable to have the appraisal with someone outside the research group, for a fresh perspective (female)

As someone who has recently changed working patterns to help with childcare arrangements, I found the attention that my appraiser placed on my personal situation extremely supportive
Appraisal Feedback (male), February 2017

IMPACT

Following the Staff Survey 2015:

- 75% of female researchers and 95% of male researchers found their appraisal very helpful/helpful
- 75% of female researchers and 80% of male researchers felt their appraisal helped them with their career development
- 75% of women and 85% of men found having an appraisal with a PI outside of their research group very helpful/helpful

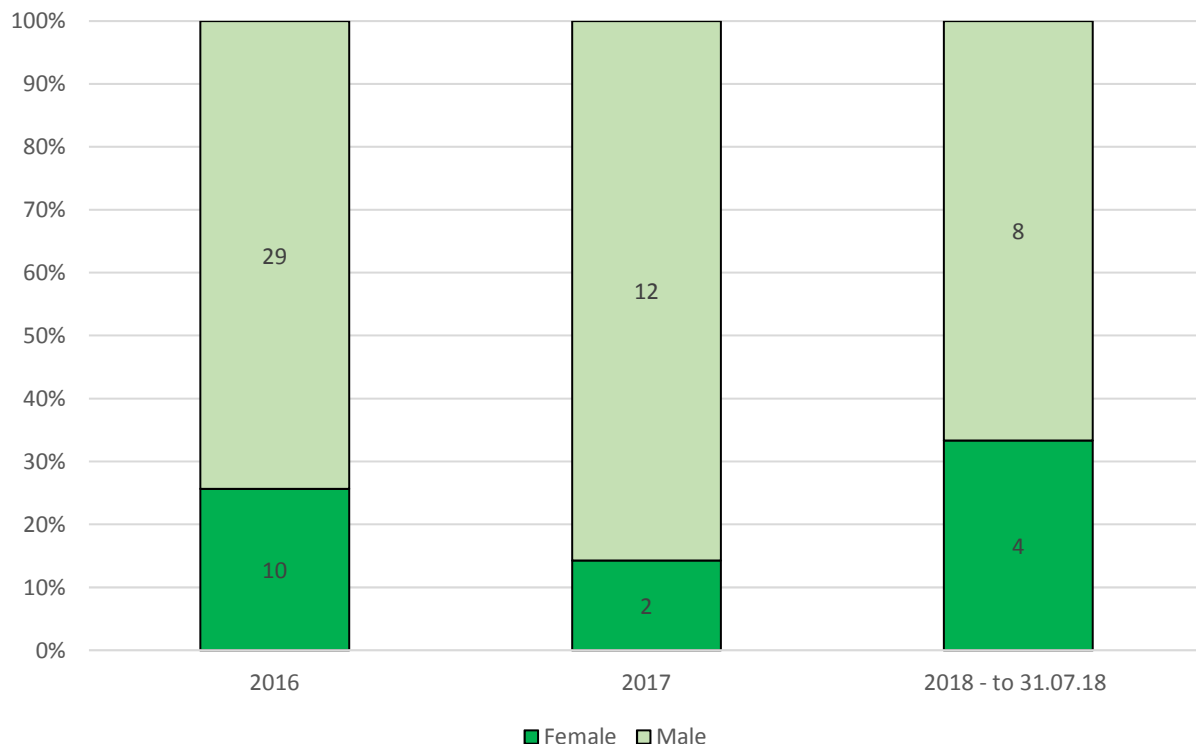


Figure 30. Researcher appraisals held by gender

The University's PPD Office holds a termly course for Staff Review and Development for Reviewees which all members of staff are encouraged to attend. The Research Staff appraisal scheme was put into operation in January 2016 following an action on our Bronze Award Application. Due to the biennial appraisal scheme beginning in 2016 this resulted in a higher number of staff being appraised initially in 2016. Following a drop-in appraisal in 2017, we have now put a more effective recording and follow-up mechanism in place and are hoping to see the numbers increase again in 2018.

ACTION 5.4 Improved appraisal take-up and satisfaction

ACTION 4.6 Improved awareness of promotions process for researchers

(iii) Support given to academic staff for career progression

Comment and reflect on support given to academic staff, especially postdoctoral researchers, to assist in their career progression.

University-level Support

- PPD Training courses
- Careers Service for Post Docs
- Post-Docs of Cambridge Society (PdOC) for help with career development and information on finding a college affiliation
- Office of Postdoctoral Affairs (OPdA) for Teaching and Funding Opportunities
- Post-Doc Induction Event 'Getting Connected' which is a mandatory induction programme organised by the OPdA
- Entrepreneurial Postdocs of Cambridge (EPOC) for help with business and entrepreneurial ventures

Departmental Support

- The Ring (Graduate Association of the Department) provides information, contacts, help-line services and a social and business events programme to members
- The Research Staff Mentoring Scheme for newcomers (section 5.ii) is widely advertised in the Department
- women@CL, a female networking group that hold weekly industry talks, networking opportunities, social events and takes part in an annual Oxbridge Conference in conjunction with Oxford University's Department of CS
- Tailored talks e.g. successful scholarship applications and career panels
- Post Doc social tea event held termly



Figure 31. Research Staff mentoring scheme poster

Future Plans

- An 'Introduction to Lecturing for Post Docs' course is currently under discussion to include as part of the Research Skills Programme. 61% of both male and female research staff indicated an interest in lecturing opportunities (Research Staff Career Progression Survey, May 2018)
- A shadowing scheme for research staff to shadow academic staff is to be trialled in 2018/19 for possible implementation in 2019/20
- Creation of a wiki page, including resources related to research staff. 78% indicated an interest (Research Staff Career Progression Survey, May 2018)
- A mailing list for academic jobs, 65% of PDRAs indicated an interest (Research Staff Career Progression Survey, May 2018)



Figure 32. women@CL Oxbridge Conference held in the Department, March 2018

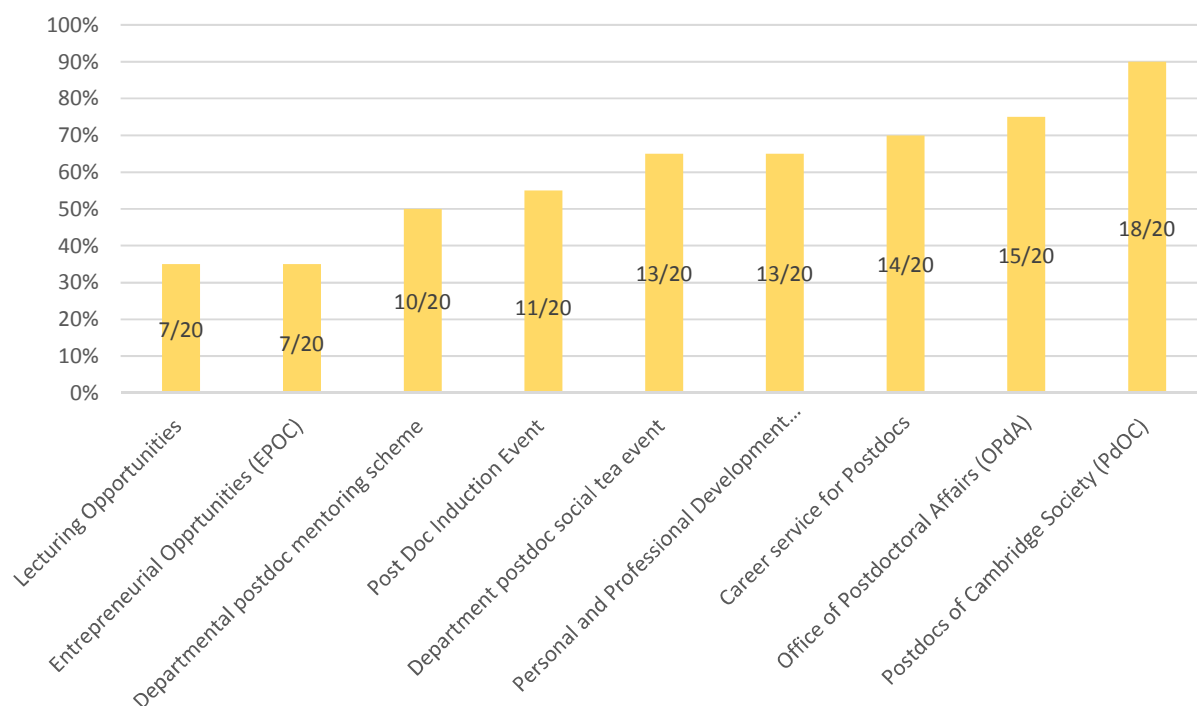
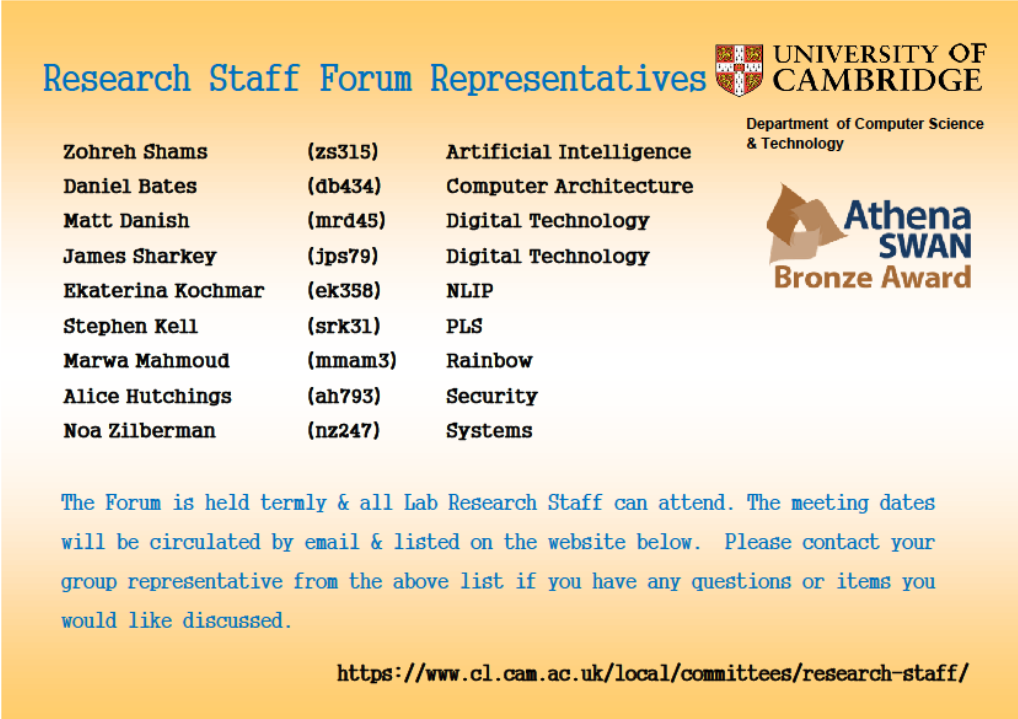


Figure 33. Research Staff familiarity with services and events, May 2018

Figure 33 shows that 90% of Researchers are familiar with the Post Docs of Cambridge Society (PdOC), 75% with the Office of Postdoctoral Affairs (OPdA), 70% with the Career Service for Post Docs. As only 50% of respondents are familiar with the Departmental

Mentoring Scheme, this will be addressed by continuous publicising of the scheme at Induction, in the Welcome pack and by email invitation. Details of all the career support available is published on the Research Staff Forum website and a poster showing the representatives from each research group is displayed on the screens in the atrium.



The poster is titled "Research Staff Forum Representatives" and features the University of Cambridge logo and the Department of Computer Science & Technology. It lists nine representatives with their names, email addresses, and research areas. To the right of the list is the Athena SWAN Bronze Award logo. At the bottom, there is a paragraph of text and a URL.

Name	Email	Research Area
Zohreh Shams	(zs315)	Artificial Intelligence
Daniel Bates	(db434)	Computer Architecture
Matt Danish	(mrd45)	Digital Technology
James Sharkey	(jps79)	Digital Technology
Ekaterina Kochmar	(ek358)	NLIP
Stephen Kell	(srk31)	PLS
Marwa Mahmoud	(mmam3)	Rainbow
Alice Hutchings	(ah793)	Security
Noa Zilberman	(nz247)	Systems

The Forum is held termly & all Lab Research Staff can attend. The meeting dates will be circulated by email & listed on the website below. Please contact your group representative from the above list if you have any questions or items you would like discussed.

<https://www.cl.cam.ac.uk/local/committees/research-staff/>

Figure 34. Research Staff Forum representatives' poster, on display in the Atrium

Academic Staff receive support from the University's E&D Office in the form of the SAP CV Scheme that encourages and supports more female and male academics to apply for promotion within the University. On their arrival, all new research staff are offered a mentor from an experienced researcher in the Department.

- ACTION 3.2** Improve staff consultation by increasing participation
- ACTION 5.4** Improved appraisal satisfaction and take-up
- ACTION 5.10** Increase opportunities for research staff career development through better dissemination of opportunities, and ability to shadow academic staff

(iv) Support given to students (at any level) for academic career progression

Comment and reflect on support given to students at any level to enable them to make informed decisions about their career (including the transition to a sustainable academic career).

Aided by our Supporters' Club, the Department hosts a range of events aimed at assisting students to make informed decisions about their future careers:

- Annual Graduate Open Day held in the Department
- Annual Careers Talk for second year students by University Careers Service
- Annual Careers Panel organised by women@CL and open to all students

- Access to University Careers Service
- Careers section in Department Library
- One-to-one meetings for PhD students with the Department's Graduate Education Manager
- Weekly TechTalks by Industry Speakers
- Annual 2-day Industrial Supporters Fair in the Department (see below) with representatives from over 80 companies, all relevant to a career in science and technology



Figure 35. Industrial Supporters Club recruitment fair

Our 2017 Student Survey results indicated:

- 38% of all students felt 'that they had sufficient opportunities to engage with role models from Industry outside of my Department'. We will endeavour to improve this score by the continuous publicising and promoting of the weekly tech talks which take place in the Department
- 31% of female undergraduates said it would be helpful to have 'gender specific career development' and to have 'more careers training'. As a result, we have introduced an annual careers event to offer students a 1-to-1 meeting with a University Careers Advisor

The Annual CV Clinic organised by women@CL is very successful in raising the confidence of women

(female postgraduate)

- ACTION 1.2** Further women@CL development, ensuring greater awareness among applicants and undergraduates
- ACTION 2.2** Improve visibility of women to increase awareness of the many successful women in the Department and in computer science more broadly
- ACTION 3.3** Improved monitoring of student admissions and performance to address issues of underrepresentation of women in the Class I degrees
- ACTION 5.1** Improve undergraduate admission support in conjunction with Colleges

(v) Support offered to those applying for research grant applications

Comment and reflect on support given to staff who apply for funding and what support is offered to those who are unsuccessful.

Our Research Grants Manager and Research Facilitator have produced an internal training guide for research staff on Finance Training and Guidelines on Research Grants. This will be further enhanced by incorporating a session on applying for research grants in our Research Skills Programme. This session is primarily aimed at MPhil and PhD students but it will be also made available to research staff. The University's Research Operations Office also hold monthly training on how to set up a research grant costing. It will be mandatory for PDRA/SRAs to undertake the Departmental training before they can apply for funding. The Department is creating an optional research proposal review process enabling particularly new and early career Academic Staff to obtain feedback from relevant senior members of the Department on research proposals pre-submission.

- ACTION 4.7** Improve awareness of career development and job opportunities
- ACTION 5.11** Instigate optional internal research proposal review process to increase success outcomes

5.4 CAREER DEVELOPMENT: PROFESSIONAL AND SUPPORT STAFF

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

All staff are actively encouraged to attend courses run by PPD and the University Information Services (UIS) as well as being offered financial support to other external relevant courses. Details of courses are circulated termly. Role specific courses for PSS are also attended on an ad-hoc basis.

Individual Training needs are identified at the Induction, Probation and Biennial Appraisals, as well as through regular discussions with line managers. The DS follows up completion gaps with individuals. Bespoke training sessions are also arranged if required, e.g. web editing for PSS.



Figure 36. Staff development notice board (ground floor, main corridor)

Effectiveness of Training Opportunities is monitored through ongoing supervision, appraisal and was also addressed in the 2015 Staff Survey:

- 89% of Professional and Support staff said that they know where to find information about training and development opportunities
- 78% said that they are satisfied with the training and development opportunities they receive for their present job. (NB gender breakdown was unobtainable)

‘Training was put into place immediately to enable me to learn the skills necessary to do the job’ (*female*)

‘My line manager always encourages me to take any courses we feel might be appropriate’ (*female*)

Staff will continue to be consulted through an annual internal survey capturing specific staff group and gender. The questions will be tightly focused to ensure that a high response rate is achieved.

ACTION 3.2 Full engagement with the University’s staff survey and commitment to address any issues raised

(ii) Appraisal/development review

Describe current appraisal/development review schemes for professional and support staff at all levels and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

There is a biennial appraisal scheme for PSS which is normally carried out by line managers, however, staff are given the option of requesting an alternative appraiser without question. Due to the HR electronic recording system only recently becoming operational, we can only provide statistics for 2018.

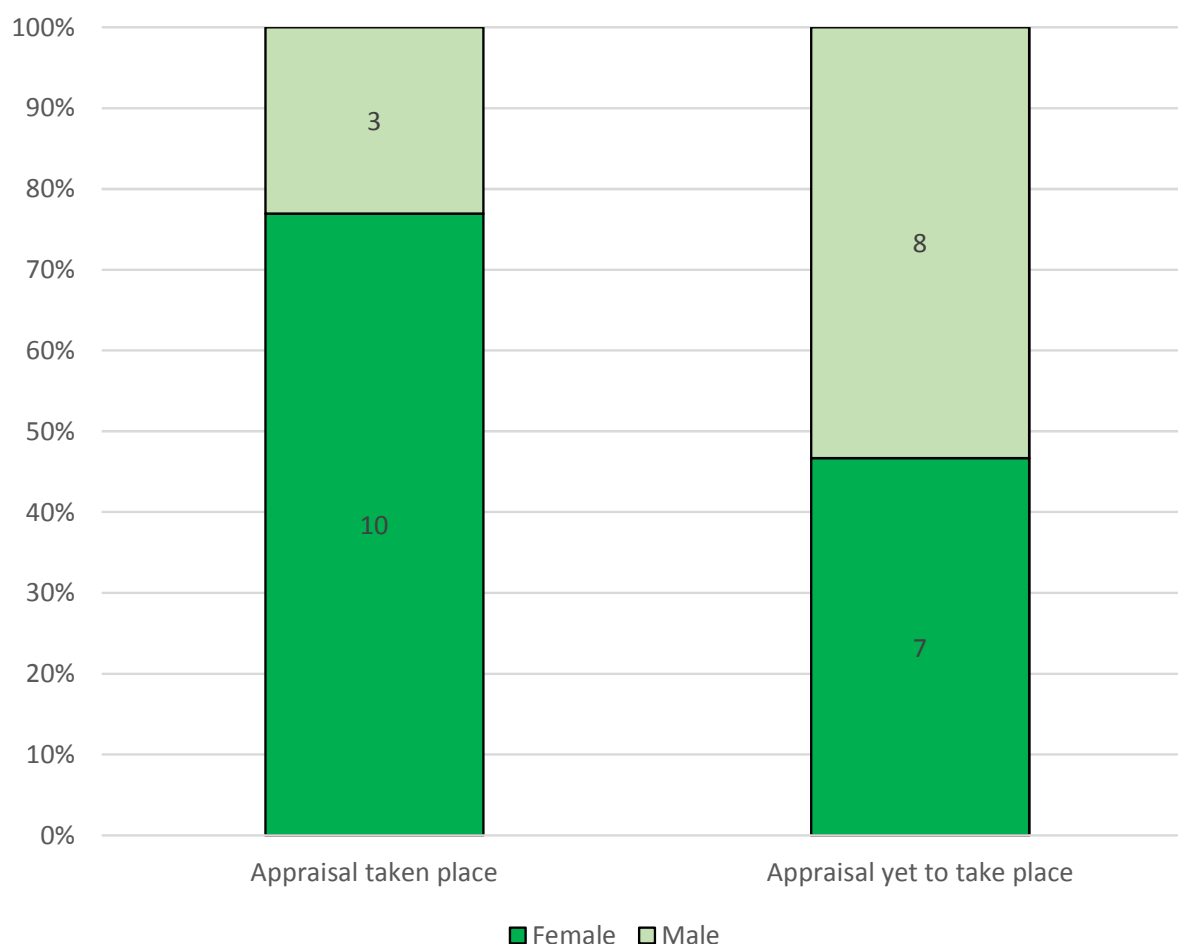


Figure 37. Professional and Support Staff appraisals, 2018

Figure 37 shows 59% of female PSS appraisals have taken place in 2018 compared to 27% of men. Among factors causing the relatively low take up from men, we believe the length of service (there is very little turnover) and the lack of salary progression and promotion opportunities for PSS are significant. Appraisal training is offered by PPD and includes Effective Staff Review and Development: Online and Staff Review and Development for Reviewees. 35% of female PSS have undertaken this training.

- 90% of PSS found their last appraisal useful.
- 56% of PSS said they think there are sufficient opportunities for career progression at the University.

(Staff Survey 2015)

My appraisal was very useful and helped me address future career prospects (*female PSS*)

We will continue to ensure that all appraisers and mentors receive Unconscious Bias Training and that it is refreshed every 3 years. This will be actioned by monitoring of the online course completion rate. We will also ensure that staff requests to have an appraisal will be met within 3 months.

- | | |
|-------------------|--|
| ACTION 3.2 | Full engagement with the University's staff survey and commitment to address any issues raised |
| ACTION 3.5 | Review staff promotion schemes and take-up, addressing imbalance in women seeking promotion by pro-active encouragement via appraisals and mentoring |
| ACTION 5.4 | Improve appraisal satisfaction through take-up of appropriate training by appraisers and availability of appraisers for all staff |

(iii) Support given to professional and support staff for career progression

Comment and reflect on support given to professional and support staff to assist in their career progression

We actively promote PPD's introduction in January 2018 of Mentors for PSS (Induction, Peer and Developmental). Staff are notified that they can request a mentor at either their Induction or Probation Meeting. The scheme is also displayed on the screen in Reception. As this scheme is still in its early stages, accurate uptake statistics are not yet available. Women are also made aware of the University's Women's Staff Network through personal recommendations and advertisements on the Staff Development Noticeboard. This network runs a series of termly events profiling the career and career progression of women at Cambridge.

UNIVERSITY OF CAMBRIDGE
Department of Computer Science and Technology

Mentoring support available for Professional and Support Staff

Induction
A mentor can be assigned to you as a new member of staff to help you orientate yourself to the Department

Peer
Colleagues can 'peer mentor' each other in particular areas

Developmental
An experienced mentor helps you to develop your strengths and potential and identify your changing needs, values, aspirations and what's most important to you. The mentor works with you to help plan your professional development and your next career steps

To nominate your own mentor, you should discuss this with your line manager in the first instance. If further support is needed, please contact the PPD office or your HR Business Manager or HR Adviser

Athena SWAN Bronze Award
<https://www.cl.cam.ac.uk/local/personnel/>

Figure 38. Mentoring support for Professional and Support Staff, displayed in Atrium and on plasma screens

- | | |
|-------------------|---|
| ACTION 3.2 | Full engagement with the University's staff survey and commitment to address any issues raised |
| ACTION 5.4 | Improve appraisal satisfaction through take-up of appropriate training by appraisers and availability of appraisers for all staff |

5.5 FLEXIBLE WORKING AND MANAGING CAREER BREAKS

Note: Present professional and support staff and academic staff data separately

(i) Cover and support for maternity and adoption leave: before leave

Explain what support the department offers to staff before they go on maternity and adoption leave.

Each member of staff has a meeting with their line manager or DS outlining the University's maternity policy and support available. This is further highlighted by our webpage which brings together all of the family friendly policies the University and Department has to offer. The short description of each policy links to further information provided by the university website. The Department offers a room located on the ground floor as a rest and nursing room for pregnant and nursing mothers. We have a designated PSS from the Health and Safety Committee who undertakes a maternity risk assessment for each pregnant member of staff and explains the facilities available, and issues a key to the dedicated room. If needed, equipment is provided to aid a more comfortable workspace e.g. stability ball, stool for lecturing. Car parking is always allocated to those who have family responsibilities but we also have parking spaces that are kept locked but made available to pregnant mothers if they need it.

The University supports employees to take paid time off to attend all antenatal appointments; employees whose partner is pregnant may take time off to attend two appointments and the Department is flexible if partners wish to attend more, and time off in lieu of hours worked can be taken if needed. As well as the Maternity, Flexible Working and Working from Home Policies, there is also a Supporting Parents and Carers at Cambridge (SPACE) staff network which was launched in 2016. The SPACE website brings together information and guidance for all employees with caring responsibilities. It includes:

- Maternity, adoption and other family friendly policies and financial information
- Information on Keeping in Touch (KIT) days and Shared Parental leave working days
- Guidelines for line managers
- Details of the SPACE buddy scheme, a network of employers with caring responsibilities
- Information on SPACE network events



The University of Cambridge Computer Laboratory Family friendly policies that make a difference.....

<p>Maternity Leave Policy The Policy exceeds the legal minimum: 18 weeks full pay + 21 weeks statutory maternity pay if you tell us you're coming back to work for at least 3 months at the end of your leave period.</p>	<p>Shared Paternity Leave Policy In addition to 2 weeks paid paternity leave; you can decide how to share the care of your child during the first 52 weeks following birth or adoption.</p>	<p>Parental Leave Policy To provide further support to help manage the demands of family life, staff may apply to take 18 weeks unpaid leave in total for each child up until the child's 18th birthday.</p>
<p>Adoption Leave Policy Up to 52 weeks leave if you adopt a child under 5. Pay is in line with the University's maternity pay policies: 18 weeks full pay, 21 weeks statutory adoption pay + 13 weeks unpaid.</p>	<p>Graduated Return Policy Following maternity or adoption leave this allows you to return to work for a minimum of 20% of full-time hours. Keeping in Touch Days mean you can do up to 10 days paid work during maternity absence</p>	<p>Flexible Working Options A range of options to help you balance your commitments and interests outside work: part-time or term-time working, job share, compressed or annual hours, flexitime or staggered hours.</p>
<p>Childcare Provision Nurseries, inc. the West Cambridge Nursery for children from 3 months to school age (open Bank Holidays during term) & holiday play scheme for staff and students. Salary exchange schemes help you save money on childcare costs. Childcare Info Service provides advice, events & free newsletter.</p>	<p>Accommodation Service The University runs its own Accommodation Service to assist staff; both current and those arriving to take up new posts find suitable accommodation. It can also provide info on schools, banking, medical practices & local facilities.</p>	<p>Pregnant and New Mothers at Work The First Aid Room (GE09) can be used for rest and nursing purposes.</p>

Figure 39. Family friendly policies poster displayed on staff noticeboard and plasma screens

IMPACT

From the Staff Survey 2015:

- 100% of female staff said they are happy with the University's childcare provision

(ii) Cover and support for maternity and adoption leave: during leave

Explain what support the department offers to staff during maternity and adoption leave.

We ensure that there is comprehensive support in place for all staff who are on maternity and adoption leave and the Department actively promotes the University's Policies. The maternity leave policy extends the legal minimum by providing 18 weeks' full pay plus 21 weeks' statutory maternity pay (if entitled) and up to 13 weeks unpaid leave. There is also a Shared Parental Leave (SPL) Policy which enables eligible parents to choose how to share the care of their child during the first 52 weeks following birth or adoption. Otherwise, fathers and non-biological parents are entitled to 2 weeks paid paternity leave. Furthermore, parents may take up to 18 weeks' unpaid leave until their child turns 18 years old. Staff can work or attend training for up to 20 days during SPL without bringing their leave to an end, known as SPLIT days. KIT days used widely by staff, mean staff can work up to 10 days in order to keep in touch with work while on maternity leave. Both SPLIT and KIT days constitute a day's work and are therefore staff are paid for a whole day, regardless of the hours.

(iii) Cover and support for maternity and adoption leave: returning to work

Explain what support the department offers to staff on return from maternity or adoption leave. Comment on any funding provided to support returning staff.

The graduated return policy offers the opportunity to return to work for a minimum of 20% of full-time hours and to support this the Department also provides breastfeeding and refrigeration facilities. We fully support graduated return and offer a variety of flexible working options, such as part-time or term-time working, job share, compressed or annual hours, flexitime or staggered hours. A follow up meeting following the initial pregnancy risk assessment is carried out on return to work to discuss any issues arising. Since its launch in 2013, there have been three successful applicants for flexible working (one academic and two researchers (female)). The Department underwrites funding for contracts of research staff whose contracts would otherwise finish during the period of parental leave.

The Returning Carers Scheme provides funds to academic and research staff to support academic activity and to build up the research profiles of those going on, or returning from, a period away from work following leave for caring responsibilities. It supports a variety of costs e.g. for carers to travel to conferences, inviting collaborators, teaching support etc. Applications can be made prospectively or up to five years after returning to work. One academic and two research staff have been successful under the scheme since it was set up in 2013, resulting in a funding total of £10,500.

- | | |
|-------------------|---|
| ACTION 5.6 | Underwrite contract extensions for staff whose contracts would otherwise end during maternity leave |
| ACTION 5.7 | Promote Department's family friendly policies to ensure staff awareness and increase take-up |
| ACTION 5.8 | More effectively manage workload distribution among staff to reduce overload |

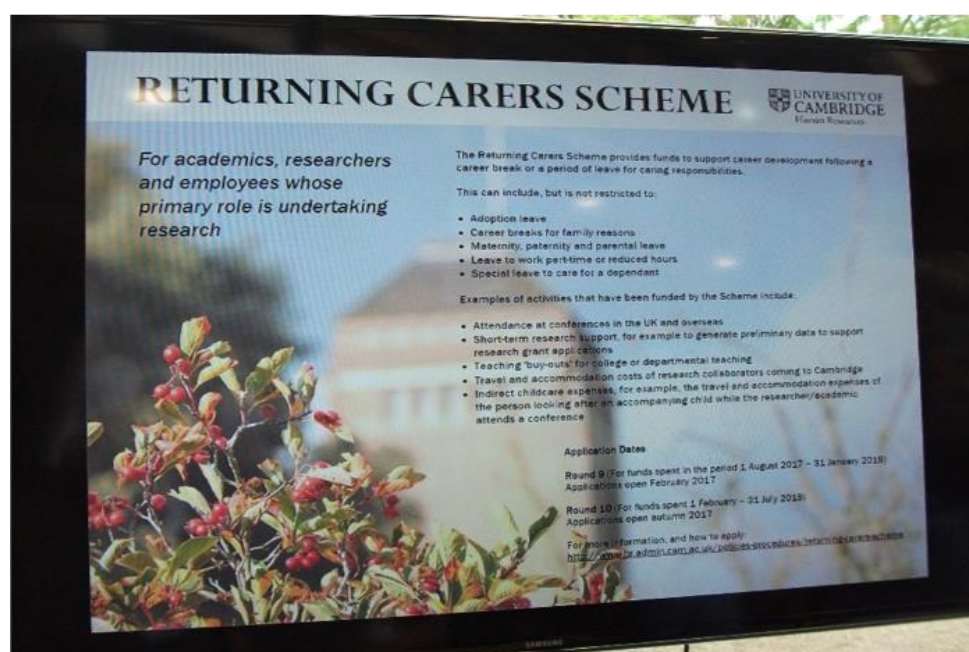


Figure 40. Returning carers scheme poster displayed in the Atrium on plasma screens

(iv) *Maternity return rate*

Provide data and comment on the maternity return rate in the department. Data of staff whose contracts are not renewed while on maternity leave should be included in the section along with commentary. Provide data and comment on the proportion of staff remaining in post six, 12 and 18 months after return from maternity leave.

Table 5. Maternity return rates

Staff Group	Return rate	Proportion of staff remaining in post on return
Academic (Reader)	(100%) 1/1	(100%) 1/1
Academic Related	n/a	n/a
Assistant (Grade 7)	(100%) 2/2	(100%) 2/2
Researcher (Grade 7—9)	(100%) 4/4	1/4 (25%) remained in post for 9 months 3/4 (75%) remained in post for 18 months

Table 5 shows 100% maternity return rate over this period.

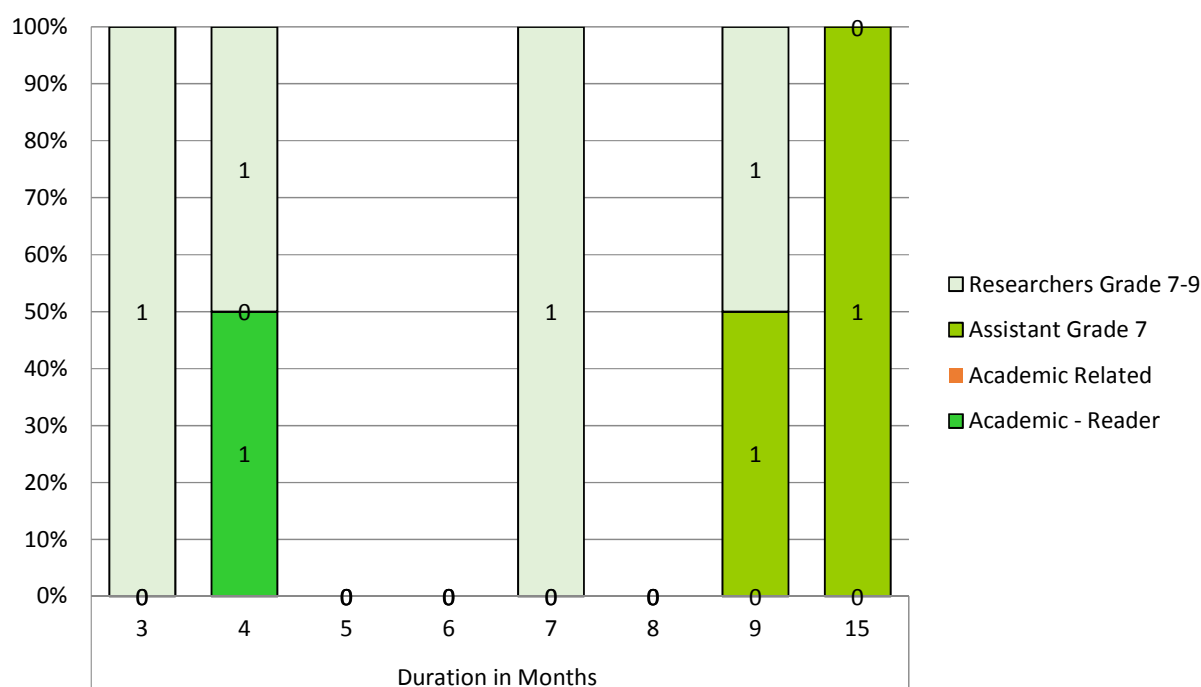


Figure 41. Duration of maternity leave taken by office

Figure 41 shows 3/7 of returners returned within 4 months of maternity leave starting, the other 4/7 returned between 7 – 15 months.

IMPACT

- Department funding for staff whose funding expires during maternity leave resulted in the Department funding 100% female researchers returning to work

(v) *Paternity, shared parental, adoption, and parental leave uptake*

Provide data and comment on the uptake of these types of leave by gender and grade. Comment on what the department does to promote and encourage take-up of paternity leave and shared parental leave.

As explained above, the Department fully supports the University's SPL Policy. As this is such an inclusive Department, we find that staff tend to discuss with the DS or their line manager

whenever there are queries regarding HR policies, including maternity leave. Currently, one member of research staff has made use of SPL.

However, we recognise that there may be occasions where staff may not feel comfortable with such an informal approach and so we ensure that parental leave policies are outlined during the induction and are highlighted on our family friendly notices and through display in our Atrium. Table 4 shows that between 2013/14 and 2017/18, 9 members of staff have taken paternity leave, with one academic also choosing to take additional unpaid parental leave.

Table 6. Staff taking Paternity leave

Paternity Leave	Number of staff
Academic	1
Assistant	0
Researcher	8
Additional Unpaid Parental Leave	
Academic	1

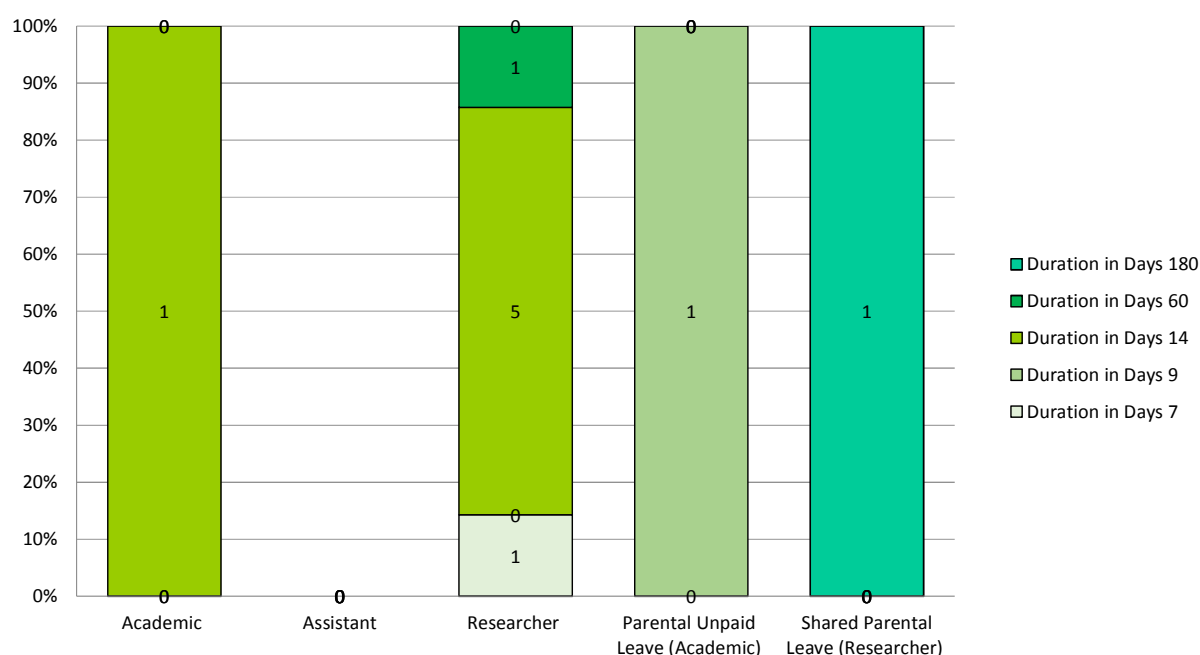


Figure 42. Duration of paternity and parental unpaid leave, 2013/14—2017/18

- ACTION 5.6** Underwrite contract extensions for staff whose contracts would otherwise end during maternity leave
- ACTION 5.7** Active promotion of family friendly policies, with particular reference to Shared Parental Leave
- ACTION 5.8** More effectively manage workload distribution among staff to reduce overload

(vi) Flexible working

Provide information on the flexible working arrangements available.

Formal staff working patterns vary from 10% to 80% time, though the actual hours/days of work are dealt with informally. We believe the lack of formal requests for flexible working is due to the fact that the Departmental culture is such that working hours for research staff are highly flexible. Many computer scientists do not need specialist equipment and so their research can easily be done at home and this allows us to be very flexible. PSS are generally more restricted due to the nature of support roles in the Department, however, we are flexible for staff in those roles for occasional work from home if needed. Staff have fed back that they greatly appreciate the opportunities to organize their work time flexibly.

Most academic and research staff have chosen to work on a full-time basis in the past 4 years, though there is also a slow increase in the numbers of research staff choosing to work part-time, notably among male researchers, from 3% in 2014 to 18% in 2018.

(vii) Transition from part-time back to full-time work after career breaks

Outline what policy and practice exists to support and enable staff who work part-time after a career break to transition back to full-time roles.

The Department fully supports the University's policies for PSS returning from career breaks. Staff are encouraged to opt for a return which allows for a smooth transition to a full-time role and are made aware of the Flexible Working Policies available to them. This includes information to those going on parental leave about the graduated return scheme. Returning staff can apply for flexible working, or for the Graduated Return Scheme, which allows them to return to work for a minimum 20% of full-time, gradually increasing to full-time over a 12-month period.

The option to take graduated return from maternity leave was invaluable and helped with those early days of balancing work and family life. *Female PDRA*

My lecture course was able to be changed from 09.00 to 10.00 so that I could drop my son off to nursery. *Female academic*

5.6 ORGANISATION AND CULTURE

(i) Culture

Demonstrate how the department actively considers gender equality and inclusivity. Provide details of how the Athena SWAN Charter principles have been, and will continue to be, embedded into the culture and workings of the department.

- The Department is committed to retain its strong sense of community and supportive working environment for all staff. We implemented initiatives to address

the 2015 staff survey findings indicating that nearly 20% female staff were not satisfied with their working environment:

- We have continued with the 'big social tea' event, introduced during our Bronze application, which is held at 15:30 once per term, for all staff, students and visitors and attendees are encouraged to talk to those they don't usually collaborate or work with. These events start promptly at 15:30 and finish by 16:00.
- We provide other opportunities for formal and informal interactions between staff groups and students e.g. weekly Happy Hour, Summer BBQ, Christmas Quiz, small ad hoc exercise groups, a formal Pilates class run by a member of staff, and weekly research group lunches. These activities bring together students, researchers and staff.
- women@CL invites new female undergraduate and postgraduate students ('Little Sisters') to attend the welcoming/ice-breaker event where they are paired with existing students or researchers (big sisters) in order to provide peer-to-peer informal mentoring opportunities and a friendly introduction to the Department.



Figure 43. Staff in the Mathematical Laboratory, 1949

IMPACT

- Weekly Happy Hour, Termly Social Teas, Summer BBQ and Christmas Quiz



Figure 44. women@CL social occasions

One of our action points from the last submission was to investigate how women@CL should develop. We recognised a need to ensure that the activities of the EDC, women@CL, the research staff forum, graduate student forum and SSCOF work together to address gender equality and indeed that this is seen as an integral part of the Department. Since then, a representative from women@CL has been included on the Research & Graduate Students' Forum and SSCOF. Representatives of the groups also serve on Faculty Board

We recognise that there is still a tendency for the interdisciplinary areas of research to have a better gender balance than others. The EDC will continue to monitor this and ensure that we emphasise our commitment to an equal gender balance in all our staff communications to all research groups, as well as advertising our engagement with Athena SWAN and endeavours to increase the diversity of the Department when we talk to people about working in the Department and on our recruitment material. Our gender balance of female and male speakers has improved to 28% (21% in 2014/15)

A research staff survey has recently taken place and this will be investigated further when the results are made available. The EDC will continue to monitor this issue.

IMPACT

- Developed women@CL through representation on the Research & Graduate Students' Forum, the SSCOF, and the Faculty Board
- Gender balance of female seminar speakers increased to 28%



Figure 45. Athena SWAN Bronze Award and Departmental commitment displayed in Atrium on plasma screens

- ACTION 1.1** Integration of Athena SWAN into Departmental activities
- ACTION 1.2** Further develop women@CL, increasing attendance and satisfaction at events, and ensuring awareness is raised throughout the University and Colleges
- ACTION 2.3** Increase external profile of the Department to include recognition of its initiatives to support women
- ACTION 3.2** Improve staff consultation through focus groups and other means, and by receiving and analysing data from the upcoming University-wide staff survey
- ACTION 4.5** Ensure that the Department's commitment to and actions for Athena SWAN are communicated effectively to all staff as part of the induction process

(ii) HR policies

Describe how the department monitors the consistency in application of HR policies for equality, dignity at work, bullying, harassment, grievance and disciplinary processes. Describe actions taken to address any identified differences between policy and practice. Comment on how the department ensures staff with management responsibilities are kept informed and updated on HR policies.

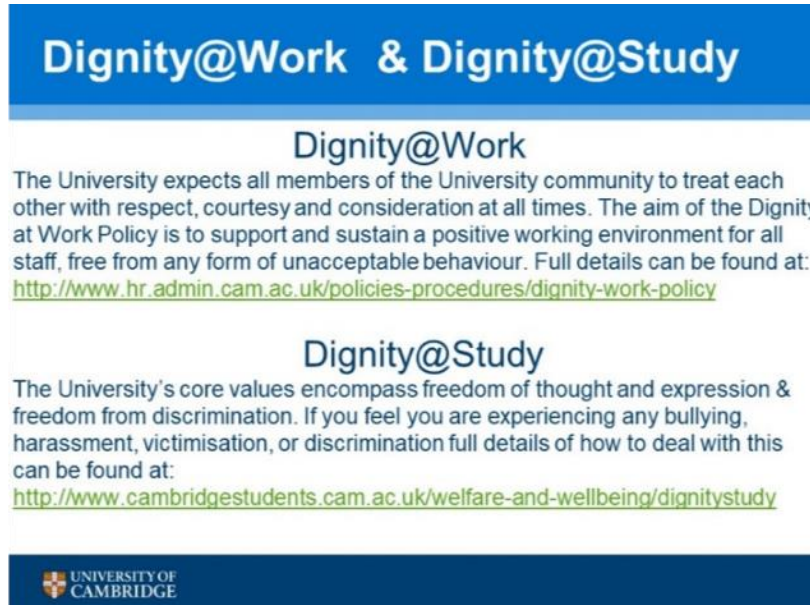


Figure 46. Dignity at Work and Dignity at Study poster displayed in Atrium on plasma screens

The Department fully supports University initiatives addressing harassment and bullying:

- The HoD and DS monitor issues of equality and dignity at work, ensuring awareness of wider HR policies and good practice among senior colleagues. The need to report all forms of bullying and harassment is covered in all induction meetings and is openly discussed at staff meetings.
- The DS attends HR briefings to update awareness of these and other University Policies. The SoT also organises HR Forums to which relevant PSS attend and the DS shares best practice at a Senior Administrators meeting.
- As part of a University-wide network, the Department has assigned two Wellbeing Advocates who provide guidance and a general signposting service about wellbeing issues, including mental or physical health and dignity at work concerns to all members of staff. They also promote local and University-wide wellbeing initiatives.
- We held an in-house talk on Breaking the Silence, a University initiative to prevent sexual misconduct and harassment in academia in May 2018 with reference to Departmental HR Dignity@Work Policy with over 80% of staff attending, the gender balance matched the departmental ratio. The talk was followed by a social tea in the atrium.

IMPACT

- Breaking the Silence Talk was held in May 2018 with 80% of staff attending

The Breaking the Silence session was very interesting. It makes me very happy to work in such an enlightened place.
Female academic.

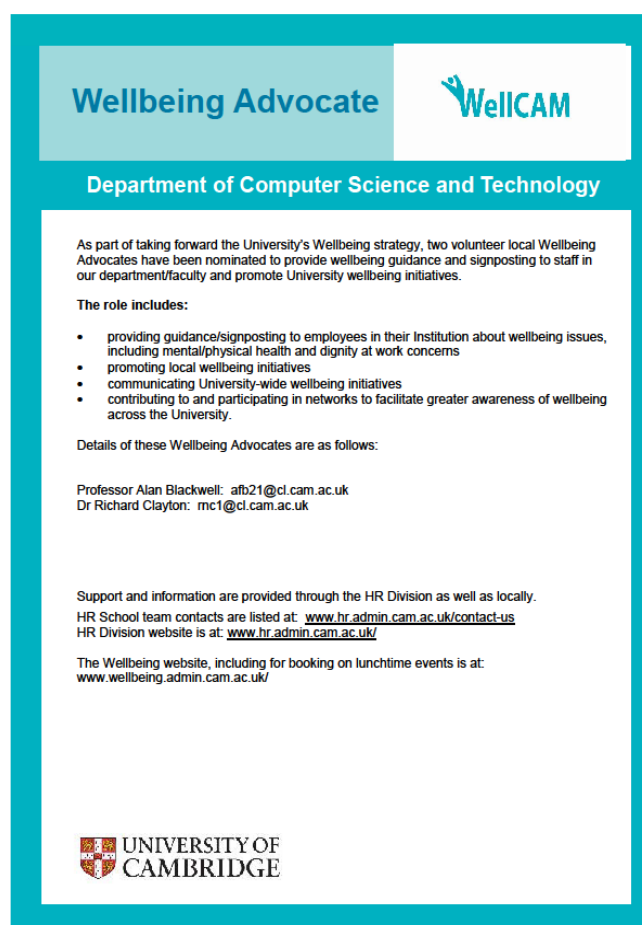


Figure 47. Poster indicating Wellbeing Advocates displayed in Atrium on plasma screens

- ACTION 1.1** Integration of Athena SWAN into Departmental activities
- ACTION 4.5** Ensure that the Department's commitment to and actions for Athena SWAN are communicated effectively to all staff as part of the induction process

(iii) *Representation of men and women on committees*

Provide data for all department committees broken down by gender and staff type. Identify the most influential committees. Explain how potential committee members are identified and comment on any consideration given to gender equality in the selection of representatives and what the department is doing to address any gender imbalances. Comment on how the issue of 'committee overload' is addressed where there are small numbers of women or men.

Gender breakdown of committee membership is shown in Table 7. Membership of some committees is mandated for specific administrative roles, e.g. DHoDT results in membership of six of the committees. Other members are selected with a view to ensuring committees have the right range of expertise and an appropriate balance between different non-voting grades of staff. The HoD oversees committee membership in consultation with the DS in order to maintain a diverse and inclusive membership.

Female academic staff are encouraged to spread their time in order to ensure an appropriate gender representation relative to the proportion of staff but the Department is aware that this can cause overload. Following staff consultation, it was agreed that attempting to include female academics on all committees is not in the best interest of promoting gender equality. The Department tries to address the gender balance by involving senior PSS female staff in all decision-making committees. As gender balance in the Department improves, we hope to further remedy this situation.

Table 7. Representation of women on Department committees

DEPARTMENTAL COMMITTEE	Women	Men
Faculty Board	7 (22%)	15
Degree Committee	6 (30%)	14
Teaching Management Committee (UG)	3 (38%)	5
Joint Teaching Strategy Committee	4 (50%)	4
Health and Safety Committee	4 (50%)	4
Appointments Committee*	4 (50%)	4
Faculty Promotions Committee*	4 (67%)	2
Ethics Committee	2 (40%)	3
Outreach Committee	3 (50%)	3
Graduate Education Committee	4 (44%)	5
Advanced Taught Courses Committee	<i>Merged with Graduate Education Committee</i>	
Staff Student Consultative Forum	5 (38%)	9
Graduate Students Forum	4 (44%)	5
Research Staff Forum	7 (54%)	6

ACTION 5.8 More effectively manage workload distribution among staff to reduce overload

(iv) Participation on influential external committees

How are staff encouraged to participate in other influential external committees and what procedures are in place to encourage women (or men if they are underrepresented) to participate in these committees?

Participation in external committees is encouraged, particularly for women, and we highlight this as part of the promotion process for both Academic and Research Staff. Senior staff able to influence the membership of such committees are urged to provide these opportunities to more junior staff, and to be cognisant of gender balance of the committees in question when doing so. The appraisal process for Academic and Research Staff provides further opportunity to reinforce the utility of such committee membership from a career development perspective.

(v) Workload model

Describe any workload allocation model in place and what it includes. Comment on ways in which the model is monitored for gender bias and whether it is taken into account at appraisal/development review and in promotion criteria. Comment on the rotation of responsibilities and if staff consider the model to be transparent and fair.

As the Department has grown in size, the HoD Team are reviewing how best to assess, record and allocate workload, while continuing to enable staff to engage in the work they enjoy and excel in. We feel this is an important aspect in order to promote staff satisfaction and to recognise the diverse range of commitments of staff. Review of staff workload is a standard part of the academic appraisal process, and concerns are fed back to the HoD Team. Career development needs are also taken into consideration when assigning the more significant roles. The Department is actively monitoring membership of Departmental Committees to improve gender balance while not overloading female staff. General contribution to departmental committees is part of the SAP Exercise.

ACTION 5.7 Active promotion of family friendly policies, and the ways the Department supports these through workload management

ACTION 5.8 More effectively manage workload distribution among staff to reduce overload

(vi) Timing of departmental meetings and social gatherings

Describe the consideration given to those with caring responsibilities and part-time staff around the timing of departmental meetings and social gatherings.

Following staff consultation, we have committed all departmental meetings and social gatherings to end by 16:00. The weekly staff meeting now takes place at 14:15 – 15:00

My research group have their seminar series at lunch time so I'm able to attend. *Female academic*

The earlier time of the Staff Meeting is more convenient with respect to child care. *Female academic*

(moved from 15:40) and most other committee meetings are set up via Doodle Poll. School holiday dates are taken into account so staff with childcare responsibilities are not excluded, and we are mindful of flexibility needed by those with other caring responsibilities. **The overall aim is to ensure that no members of staff are regularly excluded from staff meetings due to their personal commitments.** In particular, **staff (female and male) have reported that the move of the weekly staff meeting has enabled them pick up their children from school.**

An action which the Department plans to take forward is the recording of seminars to help improve the support for remote attendance at meetings.

ACTION 5.5 Address the timing of more meetings so to offer staff flexibility with undertaking caring responsibilities by consistently making recordings available for offline and remote consumption, where appropriate

(vii) Visibility of role models

Describe how the institution builds gender equality into organisation of events. Comment on the gender balance of speakers and chairpersons in seminars, workshops and other relevant activities. Comment on publicity materials, including the department's website and images used.

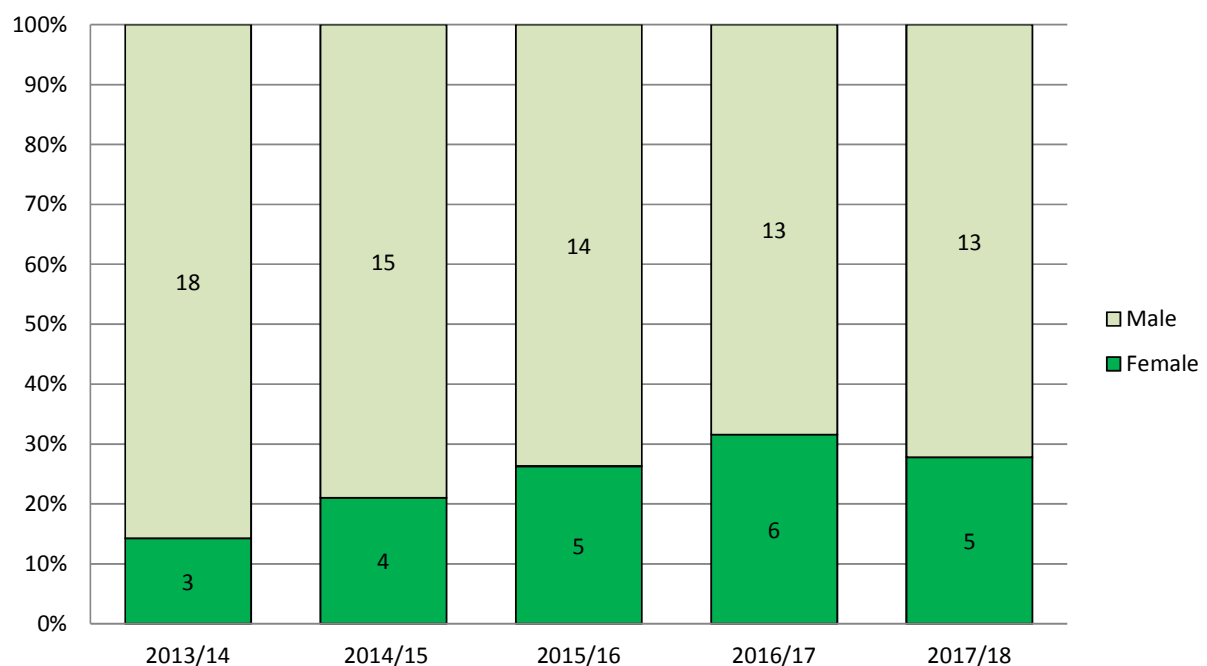


Figure 48. Gender balance of Department Seminar speakers

Our new Undergraduate Admissions video now includes commentaries from a female academic and a female student to demonstrate a more equal gender balance of applicants. Our marketing materials for potential students now includes information on the Athena SWAN Charter

IMPACT

Increased examples of leading technical female role models:

- women@CL now submit potential female speakers to the Department Seminar organiser
- Increased female speakers for Wednesday Seminar Speakers from 21% (2014/15) to 28% (2017/18; Figure 48)
- 33% of all speakers for our annual distinguished Wheeler Lecture have been women



Figure 49. Department Open Days admissions desk and Athena SWAN information card



Figure 50. Prof. Angela Sasse, FREng giving the Wheeler Lecture
'Can we make people value IT security?', May 2017

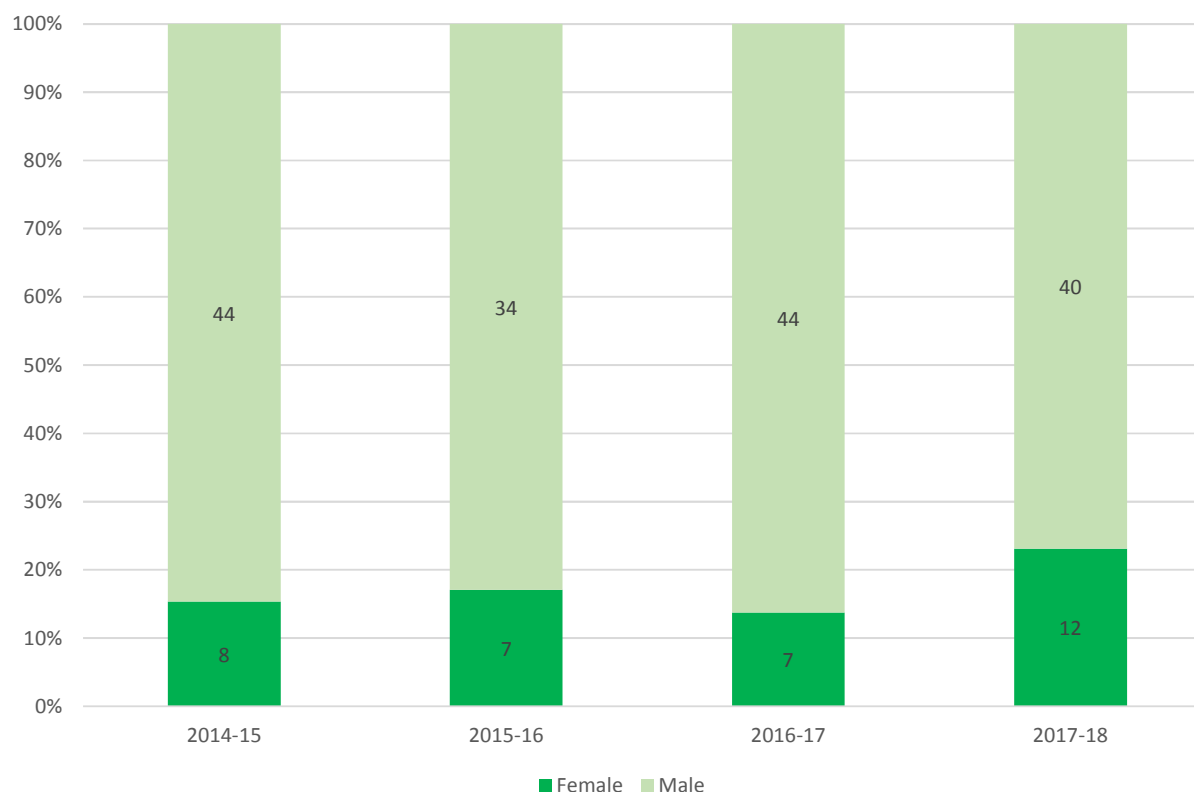


Figure 51. Gender balance of demonstrators for practical classes

Figure 51 shows the percentage of female PhD students and Researchers providing teaching support in practical classes has increased from 15% in 2014/15 to 23% in 2017/18.

- ACTION 2.2** Improve visibility of women in the Department to provide examples of successful “People Like Me” to students
- ACTION 4.4** Monitor and analyse research staff promotion and recruitment process
- ACTION 4.5** Ensure that the Department’s commitment to and actions for Athena SWAN are communicated effectively to all students on arrival

(viii) Outreach activities

Provide data on the staff and students from the department involved in outreach and engagement activities by gender and grade. How is staff and student contribution to outreach and engagement activities formally recognised? Comment on the participant uptake of these activities by gender.

The Department is involved in a number of successful and high-profile outreach events. Outreach activities and participation at Open Days help towards qualification for a ‘Wiseman Award’. This is a scheme for students and researchers to be recognised by the HoD for making a commendable contribution to the work of the Department. Recipients receive a personal letter from the HoD. Contributions to outreach are also considered an important aspect in the criteria for promotion to SRA and in the SAP process.

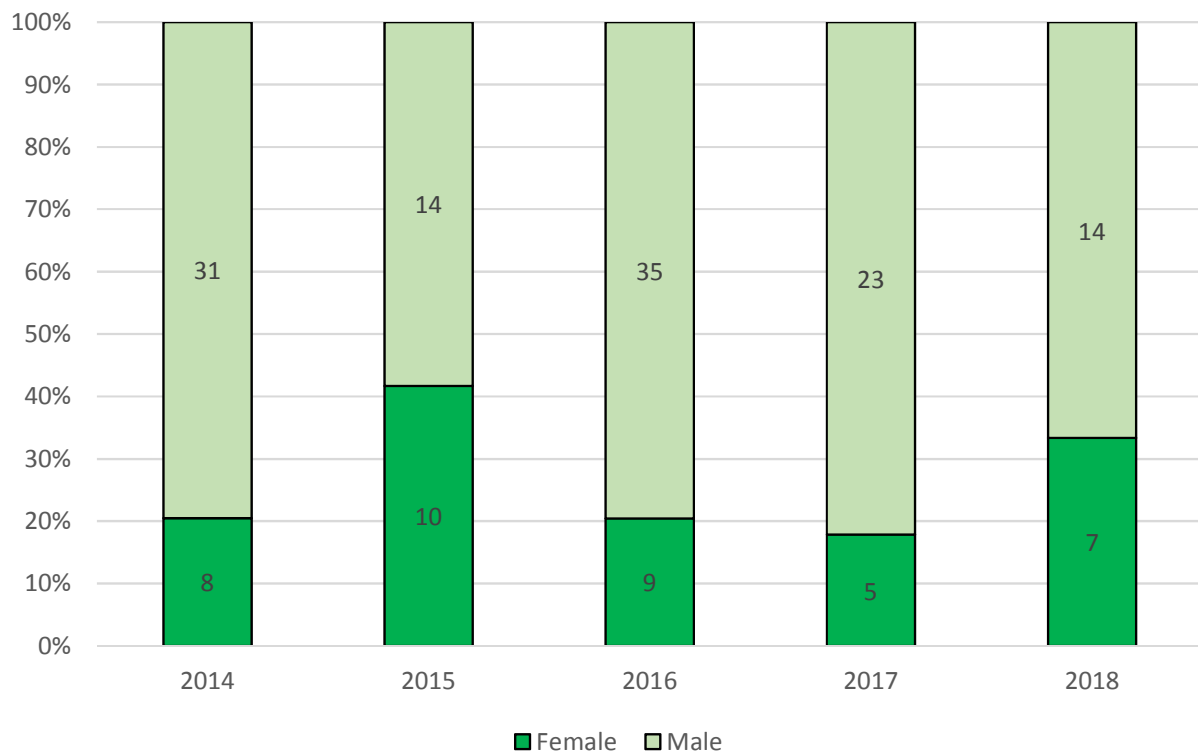


Figure 52. Gender balance of Open Day helpers

Our outreach activities include:

- Undergraduate Open Days for sixth form and secondary school students. Figure 52 shows a breakdown of participation by gender. Our female participation has increased from 21% in 2014 to 33% in 2018.
- Graduate Open Day for undergraduate students wishing to study at Masters or PhD level.
- College Open Days throughout the year in which DOSs participate.
- Sutton Trust Summer School, a week-long summer school for sixth form students who have always attended a state school/college in the UK. Places are allocated by the Sutton Trust. The Chair of our Outreach Committee dedicated a week to provide teaching for this important initiative and is working to achieve a better gender balance year-on-year.
- Oxbridge Student Conferences aimed at Year 12 students who have completed their GCSE examinations (or equivalent) and are now undertaking further study. As a result of our Bronze Action Plan, we ensured that our female student representation increased from 0% in 2014 to 25% in 2017.
- Cambridge Coding Academy run coding courses in the Department for pre-university students, incorporating hands-on activities and challenges.
- Annual Science Festival organised by the University's Public Engagement Office. Academic Staff participate annually in the annual Cambridge Science Festival. From 2013-2017. Six academics (four female, two male) and two researchers (male) have taken part.
- British Informatics Olympiad, an annual competition in computer programming for secondary schools and sixth form colleges organised in the Department.

- Raspberry Pi event held each year for primary school children. Four academics (male) participate.
- Cambridge Inter-Ace Cyber Security Challenge. The biggest security competition for university students in the UK, supported by a year-round programme of training and events. One academic (male), one PDRA (male) and one PSS (female) were responsible for organising the event.
- women@CL organise an Oxbridge Conference for Women in CS in conjunction with Oxford University each year. Attendance includes all students and academic staff.



Figure 53. Department Open Day, 2018

ACTION 2.1	Collecting and making visible information about outreach activities and resources to improve consistency and availability
ACTION 6.1	Increase the numbers of female students on undergraduate course through better targeted outreach
ACTION 6.2	Introduce Summer School for girls working with partners such as the Sutton Trust

8. ACTION PLAN

As a world-leading Computer Science department, we seek to increase the number of women in the field while ensuring our current staff and students continue to thrive. Our long-term goal is to be an international model for encouragement and support of women in Computer Science, both in the Department and, via our engagement with industrial collaborators, more widely. In our Action Plan below, we note progress made as a result of implementing our Bronze Award Actions, and we indicate both existing Activities we are taking forwards and new Actions we are adding. Our Action Plan follows similar organisation to our Bronze Award Action Plan, grouping actions under six headings: Departmental organisation; Information sharing and visibility; Information gathering and monitoring; Internal best-practice sharing; Support for existing staff and students; and Staff and student numbers. Throughout, *students* refers to both undergraduate and postgraduate students, and *staff* refers to all research, support and academic staff. Dates provided as a single year refer to the academic year beginning with the given year (i.e., 2019 refers to academic year 2019/2020).

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
1. Departmental Organisation		These actions are motivated by the need to ensure that the Athena SWAN process is fully integrated into the Department's consultation and decision-making processes, and that women@CL is seen as a core part of the Department's activities.				
1.1	To integrate Athena SWAN self-assessment into Departmental activities	Only by ensuring that Athena SWAN activities are seen as integral to the Department will they be given the appropriate weighting by other members of the Department as they represent the Department both to the wider University and externally.	Ensure that diversity matters are considered in all aspects of the Department's operations. Annual Student and Staff consultations, feeding results into relevant Department committees.	Chair of EDC DS	Documented consideration of equality in Departmental weekly meetings and committees, general staff meeting, Faculty Board, and University Athena SWAN Governance Panel, reviewed annually.	High
1.2	To further develop women@CL	Event attendance data now collected shows that women@CL is an externally visible and highly successful means for the Department to promote and encourage women in Computer Science.	Disseminate details of women@CL activities and events to all College Directors of Studies, PhD supervisors and PIs.	women@CL Academic Chair women@CL Committee	Increase awareness of women@CL to 100% of female students and postdocs with at least 80% events considered valuable, and at least 80% of female students	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		We should leverage this to further improve gender balance, both within this Department and across the subject nationally and internationally.	<p>Promote women@CL in Department induction, publicity and outreach material, particularly targeting potential applicants and schools through Open Days and admissions literature.</p> <p>Investigate opportunities for further collaboration with other organisations for women in the University (Departments and in Colleges), and with other national and international organisations for women in computer science.</p> <p>Provide communications training via women@CL, following feedback from focus groups and committee discussions.</p>		<p>and postdocs attending at least two events per year.</p> <p>Increase awareness of women@CL to external parties outside of Cambridge to 50% by continuing to document and publicise activities of women@CL, ongoing.</p> <p>Document engagement with national and international sister organisations, ongoing.</p>	
2. Information sharing and visibility		These actions are motivated by the need to ensure that the Athena SWAN panel is aware of activities that members of the Department are already undertaking, that members of the Department are aware of existing activities in relation to women in Computer Science, that the visibility of women within the Department is improved, and that the Department's determination to improve the position of women in Computer Science is recognised externally.				
2.1	Collecting and making visible information about outreach activities and resources.	Members of the Department enthusiastically engage in outreach, but this is not always effectively communicated to the wider	Record outreach and public engagement activities, for both monitoring and website updates.	OC women@CL Academic Chair	Website updates with women-directed outreach activities, at least monthly.	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		world. Given the improvements in gender balance of academic staff in particular, this is a missed opportunity to increase visibility of women in Computer Science externally. Doing so will also contribute to addressing the challenges of improving numbers of women applying for UG, PGT and PGR courses.	<p>New Communications Officer is being hired to refresh the Department's website and other aspects of communication. Will give women-directed outreach activities and resources further prominence.</p> <p>Discuss new Departmental Outreach Remit to increase staff involvement to Faculty Board and encourage participation in programmes such as STEMM Ambassadors and AWISE.</p>	<p>Website Manager</p> <p>HoD</p>	<p>Delivery of new website with increased prominence for women-directed activities, by 2019</p> <p>Outreach Remit discussed at Faculty Board in 2018.</p>	
2.2	Improve visibility of women within the Department.	We need to better support those women who do join the Department at all levels but particularly at UG level. Increasing visibility of women in the Department helps to do so by helping to provide examples of successful "People Like Me" at all career levels.	<p>Visibly celebrate women and their achievement, including former members of Department (cf Action 3.4)</p> <p>Monitor impact of greater exposure (from 5% to 17% for undergraduates, and 15% to 29% for postgraduates) to female lecturers following undergraduate course restructuring.</p> <p>Consult with academic staff to widen the search for female</p>	<p>Website Manager</p> <p>Communications Officer</p> <p>TMC</p> <p>Seminar Organiser</p>	<p>Webpages are kept up-to-date and actively used, ongoing.</p> <p>At least 20% female lectures for the undergraduate course, annually by 2019.</p> <p>At least 50% female speakers for Departmental seminars, by 2021.</p>	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
			speakers at Departmental seminars.			
2.3	External profile of the Department includes recognition of its initiatives to support women.	As well as appealing directly to women currently outside Computer Science, the Department is world-leading, with particularly strong ties to industry, and should be seen as an exemplar for others to follow, both in academia and industry. We must therefore ensure that the many initiatives we undertake are publicised as part of normalising such activities in the UK's tech sector and beyond.	Encourage participants in the Industrial Supporters Club and the Cambridge Ring to consider the position of women within their organisations and hiring pipelines, via formal and informal channels. Liaise with those organisations to provide publicity material supporting women and minorities in computer science.	Supporters Club Organiser Communications Officer Cambridge Ring Organiser Chair of EDC	50% female industrial speakers at technical events (e.g., UG tech talks, women@CL), by 2020. 15% female attendees from the Department and the Industrial Supporters Club at the annual dinner and awards ceremony, by 2021.	High
2.4	Increase external visibility of women@CL via social media, blogging, and other channels.	women@CL is a successful initiative that we should use more effectively to raise awareness of gender imbalance in computer science, and of the actions we are taking to redress it. Doing so will also serve to assist recruitment of students in its own right.	Appointment of Department communications officer to support further development of external web and social media (Facebook, Twitter) presence.	DS	Active women@CL Facebook and Twitter accounts, by 2019. Increase of visibility in the pre-arrival feedback, 2020 intake.	Medium
3. Information gathering & monitoring		These actions are motivated by the need for further information to identify ongoing issues and unmet needs in order to refine and augment the Action Plan.				
3.1	Increased Student Consultation.	Student consultations are proving an effective means to	Continue to monitor the effects of course changes.	TMC	Focus groups to be repeated in 2019/20 and 2020/21, and	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		provide information required to discover and address issues and needs. In light of recent substantial changes to our undergraduate course structure, we feel that it would be beneficial to increase the frequency and scope of student consultation as these changes “bed in”. In tandem with increased consultation, we must also ensure that issues raised in consultation are promptly addressed to avoid disillusionment among those consulted.	<p>Raise issues about patronising behaviour from some College Supervisors at the next Directors of Studies’ Committee meeting in January 2018.</p> <p>Request Colleges ensure all supervisors have received Unconscious Bias training.</p>	<p>EDC</p> <p>College DOSs</p> <p>Chair of DOS Committee</p>	<p>feedback given to TMC and EDC.</p> <p>Although outside the Department’s direct control for first and second years, DOSs will be asked to ensure 100% College supervisors have completed the University’s online Unconscious Bias training as well as the Department’s Supervisor Training, by 2020.</p> <p>Require 100% supervisors for third years have undertaken Unconscious Bias and Dignity at Study training as part of the Department’s Supervisor Training, by 2019.</p>	
3.2	Improve Staff Consultation.	The EDC found that the 2015 Staff Survey was not effective in identifying issues: general satisfaction in the Department appears high and comments were limited from those who were less content. Given the relatively small numbers of women in certain roles, there were also concerns about the ease with which anonymity of survey	<p>Continue annual focus groups involving Academics in the first two years of their employment. This will provide both fresh, first impressions as well as more reflective considerations about what is and is not working well.</p> <p>Run an internal survey across the Department annually,</p>	HoD and Staff Survey Working Group.	<p>100% academics in first two years of employment have participated in focus groups, by 2020 and ongoing.</p> <p>85% response rate from new annual survey.</p> <p>Review outcomes of survey and feed into actions of EDC, annually.</p>	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		responses could be violated. These factors motivate the need to seek alternative means to consult with staff in future. We have begun to use focus groups instead and they are proving effective so far.	capturing staff group and gender, plus a small, tightly focused set of questions (e.g., one good and one bad thing the Department is doing in relation to supporting you in your role). Keeping it focused and short increases return rates and reduces privacy risks. Receive and analyse data from the planned University-wide Staff Survey.		Review outcomes of focus groups and feed into actions of EDC, annually.	
3.3	Improved monitoring of student admissions and performance.	Our gender balance at UG level has been steadily improving, but there is still a long way to go, in terms of both absolute numbers of admissions and relative performance of women who are admitted. Critical to this is to improve the data available to TMC and to DOSs so that, as gender balance improves, we understand how to better support women who are admitted. We also need to improve the data we have concerning representation of other minorities.	Continue monitoring admissions and performance data. Ensure DOSs are made aware of improvements as well as problems arising, individually and collectively. Obtain data concerning other diversity factors than gender, e.g., ethnicity.	Chair of DOS Committee Chair of EDC and all Staff involved in admissions training.	Relevant data reported to DOSs, at least termly and ongoing.	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
3.4	Collect and monitor destination data for Staff and Students.	As part of providing data to overcome problems of “People Like Me” by ensuring successful women in Computer Science are highlighted in the Department’s presence and outreach, we need better data, both quantitative and qualitative, about the destinations for Department leavers, staff and students. This will enable richer and more detailed presentation of possible outcomes via channels such as the Department website.	<p>Develop the Department’s existing alumni programme to allow more detailed data about career destinations of students to be reported.</p> <p>Use data now collected on leaver destinations to improve contact with former members of the Department Staff.</p> <p>Ensure female role models shown in these data are celebrated as they arise.</p>	<p>DS/HR for staff.</p> <p>Director of Student Alumni Programme</p>	<p>At least 70% response rate for Student destination survey, by 2019.</p> <p>Female role models highlighted on website, subject to permission of individuals involved, by 2019.</p>	Medium
3.5	Regular review of staff recruitment and promotion.	To inform the Department’s ongoing evolution of its appraisal, mentoring and recruitment processes, we require up-to-date data about take-up and success rate. This is particularly important as the EDC’s focus broadens to include other diversity elements.	<p>Continue to monitor recruitment and promotion by gender.</p> <p>Ensure more pro-active encouragement is given to female members of the Department to address imbalance in success rates for promotion by female researchers in the Department.</p>	DS/HR	<p>Provide up-to-date and accurate data for annual reports and to support other actions, ongoing.</p> <p>Ratio of promotion applications at all levels should track the underlying staff gender ratios, by 2019.</p>	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
			Monitor recruitment and promotion for impact of other factors, e.g., ethnicity.			
4. Internal sharing of best-practice		This section covers training and other activities addressing the need to ensure members of the Department are aware of the possibility of unconscious bias and indirect discrimination and are prepared to actively counter this if it does occur.				
4.1	Increase E&D training completion rate across all staff groups.	While the majority of staff involved in appointments now undertake E&D training (94% of academic staff, 67% of all staff), take-up must be continually reviewed and increased.	<p>Continue to record and monitor completion of E&D training.</p> <p>HoD to take an active role in encouraging completion of the E&D training, to increase beyond 94% academic staff and 67% all staff.</p> <p>Develop and deploy mechanisms for continuity training every 3 years such as reminders to refresh training by retaking the online course.</p>	DS HR	<p>100% of Academic Staff have completed E&D training, by 2020.</p> <p>80% of all Staff have completed E&D training, by 2020.</p>	High
4.2	Increase admissions and recruitment training impact.	Alongside increased take-up of E&D training to improve the environment generally, the Department needs to ensure such training has positive impact particularly on admissions and recruitment as these are identified as crucial factors in improving gender balance and diversity in Computer Science.	<p>Remind all DOSs of the problems in computer science with gender balance.</p> <p>Increase numbers of women attending Department's Admissions Training course to increase pool of available female Admissions Interviewers past current 35%.</p>	DS HR	<p>100% DOSs are aware of gender balance and the importance of taking it into account during admissions, annually.</p> <p>50% of those involved in admissions interviewing have received Department training, by 2019.</p>	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
			<p>Require all MPhil and PhD Admissions Interviewers to attend the Admissions Training course.</p> <p>Introduce an in-house recruitment workshop for all staff involved in recruitment. Staff will receive targeted reminders to refresh their training by completing the online training module every three years.</p>		<p>40% female attendees to the Admissions Training course, by 2019.</p> <p>All staff involved in recruitment to have attended workshop and relevant training, by 2020.</p> <p>Review uptake, annually.</p>	
4.3	Extension and maintenance of Unconscious Bias training.	As the Department continues to expand, and in order to maintain awareness of these issues, it is necessary to continually refresh Unconscious Bias training. As gender balance improves, it is also necessary to call attention to other facets of diversity.	<p>Offer Unconscious Bias training, for new starters and as a refresher for existing staff (notified after 3 years), annually.</p> <p>Include Unconscious Bias training in the Department's Admissions Interview training.</p>	DS	<p>At least 90% of those involved in selecting students have received Unconscious Bias training, 2019.</p> <p>100% Staff have received Unconscious Bias training, by 2020.</p> <p>80% of Staff will have completed the Recruitment and Unconscious Bias online training, by 2020.</p>	Medium
4.4	Monitor and analyse RA promotion and	Ongoing monitoring uncovered the potential for indirect discrimination in promotion practices through	Discuss recruitment practices among research groups in general PI meeting and revise	DS	Monitoring of promotion processes (Action 3.5) shows consistent procedures applied	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
	recruitment process.	differences in informal standards applied by different research groups. Initial discussions between all PIs led to greater standardisation of promotion practices, and this needs to be monitored and maintained to further increase convergence.	<p>procedures if necessary, as already done for promotion.</p> <p>Ensure promotion practices within research groups continue to be comparable.</p> <p>Continue to analyse recruitment and promotion success rates by gender.</p> <p>Update case-studies annually and ensure they show a gender balance.</p>		<p>in promotion and recruitment, annually.</p> <p>Promotion success rates by gender are in line with Staff gender ratios, annually.</p> <p>Recruitment practices continue to improve to meet population statistics, ongoing.</p>	
4.5	Effective communication about Athena SWAN.	Ensuring that gender balance, and other diversity matters, in Computer Science are recognised as a problem and thus the reasons behind the actions described in this Action Plan are motivated, requires constant communication of the work of the EDC and Athena Swan. Ensuring that this communication is effective requires monitoring and capture of feedback.	Continue to communicate and engage with all Staff and Students about Athena SWAN; include commitment to Athena SWAN in recruitment material; publicise and update website; collect and review feedback annually. Provide this information at Staff/Student gatherings.	Chair EDC HR	<p>Continue to develop presence on website, ongoing.</p> <p>Measure awareness of Athena SWAN in staff and student surveys, ongoing.</p>	Medium
4.6	Improved awareness of internal	Extremely high success rates, particularly in the SAP, suggest that more staff	Clearer guidance given to mentors and appraisers about	HoD DS	Increased numbers of staff submitting promotion cases, by 2020.	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
	promotions processes, particularly the SAP.	should be encouraged to apply for promotion.	SRA promotions, and about the SAP and its requirements.			
4.7	Improve awareness of career development and job opportunities.	A key need for research staff is the need to ensure continuity of employment to allow career development. The prevalence of funding via research projects tends to encourage short-termism in outlook. Providing more effective means for research staff to obtain pertinent job details will both make it more likely that they can build a career within the Department and reduce the time taken searching for the next contract.	Introduction of email lists through which new researcher posts will be consistently disseminated. An 'Introduction to Lecturing for Post Docs' course. A wiki page including all University level and Department resources related to PDRAs	DS	At least 30% research staff engaged with these new mechanisms, by 2019.	High
4.8	Improve gender balance of committees.	While our committees are somewhat balanced, this could be improved, particularly where role-based membership happens to skew gender balance.	Evaluate gender balance of all committees, and seek to improve gender balance as part of the workload distribution. Recruit more men to the SAT.	HoD DS Chair SAT	Balanced membership of all Departmental committees, by 2020.	High
5. Support for students & staff		These actions are motivated by specific issues uncovered during the Athena SWAN process, and the ongoing application of a number of Actions since the previous award.				
5.1	Improve undergraduate	As noted above, undergraduate admissions	Use of Departmental Admissions Training for	Chair of EDC	Uptake of Admissions Training to reach 30% by 2019/20.	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
	admissions support in conjunction with Colleges.	remain outside the direct control of the Department, but is nonetheless a key challenge to achieving gender balance, and satisfying other diversity metrics. We must therefore work to improve the support for better balance and diversity in the admissions process, in conjunction with the Colleges.	Computer Science course and liaison with DOSs to identify how to improve support for female applicants. Support sitting of the Computer Science Admissions Test in the Department for those candidates and Colleges who desire it, mitigating “small number” effects of female applicants to individual Colleges.	JTSC Chair of DOS Committee	Review as part of TMC/Faculty Board analysis of performance by gender, annually.	
5.2	Improve performance of female undergraduates	As we have steadily increased the proportion of women undergraduates, it has become clear that there are factors that seem to prevent them achieving their full potential, and these must be overcome.	Detailed investigation of factors with support of Colleges in provision of data. Targeted support for any colleges that show signs of particular problems, such as residential pre-arrival courses.	CHAIR of EDC JTSC Chair of DOS Committee	Percentage of Firsts shows less than 5% divergence, by 2021.	High
5.3	Review and update induction process.	Evaluating the impact of changes to the Department’s induction process requires capture of feedback from new staff.	Continue to review induction process.	DS HR	Seek feedback from new Staff, ongoing.	Low
5.4	Improved appraisal satisfaction.	Properly supporting promotion processes and career development for all staff requires effective appraisal and mentoring	Continue to ensure all appraisers and mentors receive Unconscious Bias training.	DS HoD	Continue to monitor appraisal rate and gather feedback annually.	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		processes with which staff are happy to engage.			Ensure staff requests for an appraisal are met within 3 months. 95% appraisal satisfaction rate from feedback by 2020.	
5.5	Timing of meetings.	Based on feedback from Staff Survey, ensuring the Department is family friendly requires we ensure that core Department business happens during “core hours” and that remote participation is supported where feasible.	Seek feedback on meeting and teaching scheduling, and ensure that PIs and Heads of Group understand these needs.	HoD DS	Improve support by recording Departmental seminars for remote attendance at meetings where appropriate, by 2019.	Low
5.6	Underwriting maternity leave for contract research staff.	Staff feedback indicates that contract end occurring during parental leave is a significant concern for contract research staff. The Department should therefore commit to alleviate this concern and mitigate the effects of end of contract occurring during parental leave.	Maintain and publicise this assurance. Assist PIs in planning for maternity/paternity leave among their staff, support them in managing the financial costs to their grants, and ensure that funding agency funds are obtained where available.	HoD DS (Finance)	100% Staff aware that their maternity/paternity leave will be in line with the University policy.	High
5.7	Active promotion of family leave policies.	Wider uptake of family leave, both directly in the Department and more broadly within the technology sector, is an important factor in better balancing the impact	Ensure related policies are publicised during recruitment and induction, and that PIs are aware of them when recruiting.	DS	100% Staff aware of family leave policies, by 2018. 100% recruiting adverts direct applicants towards family friendly policies, by 2019.	Medium

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		of family among partners. As an internationally leading Computer Science department, the Department is in a position to lead the way in this regard.	Highlight issues related to paternity leave and the Department scheme to local industry via formal and informal channels.		100% members of the Industrial Supporters Club aware of the Department's policies regarding family leave, with the aim of open discussion on the matter, by 2019.	
5.8	Effective workload distribution for established academic staff.	Staff feedback indicates that workload distribution is a significant concern, and that existing informal mechanisms may no longer be appropriate as the Department has grown. Improving balance of workload distribution is thus a high priority.	<p>Collate and surface administrative and teaching assignments to encourage discussion and agreement to assigned workload.</p> <p>Celebrate success in teaching and research (e.g., grant getting).</p> <p>Extend planning horizon of Department Committee memberships to improve gender balance on Committees without overloading female faculty.</p>	HoD DH	<p>100% Staff workload collated and surfaced, by 2019.</p> <p>100% Staff appraisals include review of workload, ongoing.</p>	High
5.9	Remove barriers to success of academic staff, senior and junior, by increasing availability of PhD funding.	PhD applications exceed available funding by a considerable margin. As the Department is recruiting currently, support for PhD students has become a limiting factor for academic	Engage with industry to develop new PhD funding streams.	HoD DHoR	Funding for 10 extra PhD places, by 2020.	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		development particularly for early career academics.				
5.10	Increase opportunities for Research Staff development.	For research staff to develop their careers requires deeper understanding of the academic role, greater opportunity to demonstrate the skills required in an academic role, and better information about opportunities, internally and externally.	<p>Instigate a new scheme whereby research staff are able to shadow academic staff during their workday.</p> <p>Ensure existing teaching and research leadership opportunities are consistently provided.</p>	<p>HoD</p> <p>DS</p>	<p>Three research staff have successfully shadowed an academic colleague by 2020.</p> <p>Three research staff leavers have taken up academic posts, by 2021.</p>	Medium
5.11	Support early career academics, and eligible research staff, in producing funding proposals.	Demand management processes introduced by EPSRC (our primary UK funder) unintentionally penalise early career applicants who lack the track record to absorb failed proposals. Experienced members of the Department already provide feedback on proposals informally, but availability of a more formal process would assist new entrants to the Department to make effective use of that experience.	Instantiate an optional proposal pre-submission review process involving experienced academics in each research group.	DHoR	100% proposals are internally reviewed where the PI wishes feedback.	High
6. Increasing number and proportion of women students and staff		These actions are motivated by the underlying, sector-wide need to increase representation of women (and other underrepresented groups) in Computer Science, traditionally a white male dominated field. These actions are among the most difficult to achieve as they depend heavily on external factors as well as taking considerable time (several years at least) to have				

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		effect. Nonetheless, there is clear support in the Department for ambitious goals, and the targets we have set here are deliberately at the upper end of what we believe is achievable.				
6.1	Increase numbers of female undergraduates.	While our proportion of women undergraduates has been steadily increasing, considerable work remains to be done. As growing the undergraduate pipeline is a significant factor in achieving better balance in other areas, the Department should engage in targeted outreach to that end, in addition to general outreach from the Department addressing issues of "People Like Me".	<p>Continue to monitor and revise outreach activities in light of data collected about what is effective.</p> <p>Continue to take advantage of opportunities presented to the OC, without overburdening female members of the Department.</p> <p>Support the Oxbridge Conferences with staff time.</p> <p>Recruit more women to help at Open Days.</p>	OC	<p>Continuing year-on-year increase in numbers of girls expressing interest in Computer Science at Cambridge, including attending Open Days and number of applications.</p> <p>50% women helpers at events and outreach events, by 2019.</p> <p>To be in the top quartile of comparable UK courses for percentage of female students admitted in the 2018/19 academic year (see 6.3).</p>	High
6.2	Introduce Summer School for girls.	The University and Department collaborates with organisations such as the Sutton Trust, which are effective at recruiting from diverse background. Hands-on coding clubs are known as a good way to engage and recruit people. We should thus ensure we make use of these capabilities to improve gender balance in our	<p>Continue to support the University's Sutton Trust programme and Cambridge Admissions Office to widen participation in Outreach.</p> <p>By arrangement with Cambridge Coding Academy, who offer a course based on one run in the Department in 2015 and 2016, guarantee 10</p>	OC	100% participants in the Sutton Trust Summer School accepted to the undergraduate course should have found the Summer School useful, using data gathered during the "pre-arrival course" (a preliminary short course, compulsory for all who undertake computer science in Cambridge),	High

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
		undergraduate recruitment pipeline.	places on that coding summer school.			
6.3	Restructuring of undergraduate course.	Restructuring of our undergraduate course to apply international best practice and attract more women through a broader curriculum is on-going, and must be continued. It has also allowed us to improve the gender balance of lecturers teaching first year undergraduates. We should now seek to further improve diversity in the teaching of our core (first and second year) curriculum.	<p>Reflect changes in course participation in the University Prospectus.</p> <p>Highlight changes, and rationale for changes, on Departmental webpage, at outreach events, and to industry via Industrial Supporters Club and the Cambridge Ring.</p>	TMC	Continue to monitor impact of course restructuring and increased presence of female lecturers, particularly to first years, ongoing.	Medium
6.4	Increasing numbers of female students on taught postgraduate courses.	The proportion of women in all areas of Computer Science must be increased, and postgraduate taught students are no exception.	<p>Advertise Masters courses more actively inside and outside Cambridge, highlighting interdisciplinary options.</p> <p>Promote co- supervision of MPhil student projects with staff in other Departments.</p> <p>Ensure that all job adverts explicitly state that we welcome applicants from diverse backgrounds.</p>	ATCMC	To be in the top quartile of comparable UK courses for percentage of female students admitted in the 2018/19 academic year.	

Action	Objective	Rationale	Activities Planned	Responsibility	Success Criteria	Priority
6.5	Increasing numbers of female PhD students.	As above; we must also increase representation of women among postgraduate research students.	Continue to monitor admissions, performance and completion rates. Ensure advertising for PhD students emphasises that applicants from underrepresented groups are particularly encouraged.	GEC	30% increase in numbers of female applicants by 2018.	Medium
6.6	Proactive staff recruitment process to improve diversity of applicants.	While we have seen substantial success in our efforts to improve representation of women among academic staff, and we hope that this will begin to have positive effects in other constituencies, we still have some way to go to achieve representative gender balance among academic staff and must continue to work towards this.	Continue to identify and encourage suitable applicants to apply for vacant academic and research positions, via national and international contacts. Continue to systematically consider identification of applicants as part of recruitment, and ensure those responsible for recruitment are actively applicants from under-represented groups including women.	HoD/DH for Academic Staff DS/PIs/HR for Research Staff	At least 35% female shortlisted candidates for both Academic and Research posts, by 2020.	High
6.7	Improve outreach for postgraduate taught students to increase gender diversity in the pipeline.	The proportion of women in our postgraduate taught course pipeline has not grown at the same rate as our undergraduate pipeline. This can be improved with more targeted outreach.	Target outreach to postgraduate courses, via women@CL and the website.	Communications Officer Chair of women@CL	PGT gender balance at least matches undergraduate gender balance, by 2021.	Medium