Department Application
Bronze and Silver Award

ATHENA SWAN BRONZE DEPARTMENT AWARDS

Recognise that in addition to institution-wide policies, the department is working to promote gender equality and to identify and address challenges particular to the department and discipline.

ATHENA SWAN SILVER DEPARTMENT AWARDS

In addition to the future planning required for Bronze department recognition, Silver department awards recognise that the department has taken action in response to previously identified challenges and can demonstrate the impact of the actions implemented.

Note: Not all institutions use the term 'department'. There are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' can be found in the Athena SWAN awards handbook.

COMPLETING THE FORM

DO NOT ATTEMPT TO COMPLETE THIS APPLICATION FORM WITHOUT READING THE ATHENA SWAN AWARDS HANDBOOK.

This form should be used for applications for Bronze and Silver department awards.

You should complete each section of the application applicable to the award level you are applying for.

> Additional areas for Silver applications are highlighted throughout the form: 5.2, 5.4, 5.5(iv)

If you need to insert a landscape page in your application, please copy and paste the template page at the end of the document, as per the instructions on that page. Please do not insert any section breaks as to do so will disrupt the page numbers.

WORD COUNT

The overall word limit for applications are shown in the following table.

There are no specific word limits for the individual sections and you may distribute words over each of the sections as appropriate. At the end of every section, please state how many words you have used in that section.

We have provided the following recommendations as a guide.

Department application	Bronze	Silver
Word limit	**10,500**	**12,000**
Recommended word count		
1.Letter of endorsement	500	500
2.Description of the department	500	500
3. Self-assessment process	1,000	1,000
4. Picture of the department	2,000	2,000
5. Supporting and advancing women's careers	6,000	6,500
6. Case studies	n/a	1,000
7. Further information	500	500

Name of institution	Cardiff University	
Department	Computer Science & Informatics	
Focus of department	**STEMM**	
Date of application	November 2018	
Award Level		**Silver**
Institution Athena SWAN award	**Date:** April 2014	**Level:** Bronze
Contact for application Must be based in the department	Prof. Christopher Jones	
Email	Jonescb2@cardiff.ac.uk	
Telephone	029 2087 4796	
Departmental website	http://www.cardiff.ac.uk/computer-science	

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT
Recommended word count: Bronze: 500 words | Silver: 500 words

An accompanying letter of endorsement from the head of department should be included. If the head of department is soon to be succeeded, or has recently taken up the post, applicants should include an additional short statement from the incoming head.

Note: Please insert the endorsement letter **immediately after** this cover page.

After a period as acting head in 2015/16, I was appointed Head of School in May 2016, shortly after we received our Bronze award. My predecessor laid the foundations for implementing our Bronze Action Plan, particularly with measures for supporting staff in career progression. A notable success among female promotions was an appointment to a Personal Chair. I am resolute in making further progress in improving gender equality in the School. One of my first actions as Head was to refresh our senior management structures, including a clear and transparent process for appointment to senior roles. This has resulted in improved, proportionate female representation (with the School's two most senior committees having female to male ratios of 2:9 and 3:11 respectively).

Over the past two years the School has experienced significant expansion which has given us the opportunity to implement many of our planned actions around recruitment. We take great care to avoid biased language and promote flexible working in our job adverts; we ensure our recruitment panels have undertaken unconscious bias training and strive to maintain their gender balance. We have refocussed the structure of applicant presentations for academic posts so they cover all aspects of the role and emphasise the quality of research over quantity. It is very pleasing to see the immediate effect that has resulted, with equal numbers of male and female academic staff appointed in the last two years. Much of the growth has come through our National Software Academy, where our BSc Applied Software Engineering is the first to have a staff cohort with equal gender balance (6 Male, 7 Female), a significant milestone for the School.

We recognise that significant challenges remain. In particular gender balance is still an issue among undergraduate students / postdoctoral research staff and between staff on different contract pathways. However, prospects for the future are positive. The success of our student mentoring and STEM ambassador schemes, especially in outreach, promises continued improvement in the gender balance of undergraduate student recruitment. We recently secured £600k of HEFCW funding to support and scale-up our ambassador-led outreach activities through the Institute of Coding. I also expect the increased presence of female staff at all levels to provide positive role models and mentors for both students and staff.

Supported by the University, the School has ambitious plans for future growth, which include moving to a new building, designed to foster a culture of collaboration and collegiality. We are continuing to develop non-traditional degree programmes that encourage and recognise innovative delivery and external engagement, that will allow a wider range of staff and students to flourish. Our action plan is designed to continue the good progress and cultural change made to-date and to ensure that the School is a welcoming and supportive environment that will attract a diverse group of students and staff.

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

494/500 words

2. DESCRIPTION OF THE DEPARTMENT
Recommended word count: Bronze: 500 words | Silver: 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 School of Computer Science & Informatics is one of seven schools in the College of Physical Sciences and Engineering which is itself one of three colleges in Cardiff University. The School is research led and offers undergraduate, masters and postgraduate research student programmes. We have seen a period of considerable growth in academic staff in recent years, associated both with increased student numbers on core programmes and with the opening of our National Software Academy (NSA). We currently have 55 academic staff (29% female), 17 mostly postdoctoral researchers (12% female) and 22 professional and support (P&S) staff (45% female, compared with 35 academics (20% female), 18 researchers (11% female) and 15 P&S staff (60% female) at the time of the 2015 Bronze submission. We believe the increase in proportion of female academics can be attributed to improvements in the recruitment procedures arising from our Athena Swan actions. Since the Bronze award a female senior lecturer has been promoted to professor, but there is more to do in redressing the gender imbalance among the senior academics and we need to focus additional effort on improving recruitment of female researchers (Actions A1, B1, B2).

The July 2018 student population of the School consists of 613 undergraduates (19% female), 297 taught postgraduates (31% female) and 81 postgraduate researchers (43% female). Among undergraduates 149 identify as BAME (of which 35% are female), up from 91 (28% female) in 2014/5. There are two main undergraduate taught programmes in the School, a BSc in Computer Science, with options for an industrial training year and specialist pathways, and the NSA-based BSc in Applied Software Engineering, which started recruiting in 2015/16. Teaching at the NSA is radically different from the Computer Science degree with no formal lectures and delivery of course material in a hands-on lab environment. There is also a very close link with local industry with much of the assessment based on client-based projects. We expect to attract a more diverse student population with this project-based learning environment, though initially female student numbers have not been much higher than on the computer science degree. Recruitment of female academic staff at the NSA has been well above the sector average, with more than 50% (6 of 11) of the staff being female, almost all of whom are new appointments.

Following the 2015 Action Plan, our proportion of female students on all taught programmes is now above the sector average, having been below the average at the time of the Bronze award. Our Action Plan aims to continue this progress in future years (Actions A2, A3, B2, B3, B4, B5)

The School has regular meetings with our External Advisory Board (EAB), which has representatives from industry, government and academia. Issues of diversity, gender equality and outreach are sometimes raised at these meetings, but we will increase our efforts to exploit EAB experience in improving diversity and gender balance in the

School and work to improve the balance within the Board (currently 6 of 21) (Actions F1, F4).

500/500 words

Action A1	Review and broaden the coverage of the annual staff equality, diversity and inclusion (ED&I) staff survey.
Action A2	Initiate an annual student survey about equality, diversity and inclusion (ED&I). Questions will also be asked to identify factors affecting their decision to enrol in Cardiff.
Action A3	Consult with female MSc students (and, if possible, decliners) to identify possible reasons why female applicants might not accept places on MSc programmes.
Action B1	Review recruitment procedures for researcher positions, especially with regard to advertising material and the profile of appointment panels.
Action B2	Create a better-balanced website and marketing materials with particular regard to improving current recruitment levels of female researchers and postgraduate researchers.
Action B3	Increase the prominence of female academics at open days.
Action B4	Encourage more postgraduates to enroll as STEM ambassadors
Action B5	Review the research student admissions processes to ensure all applications/panel interviews have the input from at least one male and one female member of academic staff.
Action F1	Raise the profile of Athena Swan related issues at meetings of the External Advisory Board. Introduce as standing agenda item.
Action F4	Improve the diversity of the External Advisory Board.

3. THE SELF-ASSESSMENT PROCESS
Recommended word count: Bronze: 1000 words | Silver: 1000 words

Describe the self-assessment process. This should include:

(i)   a description of the self-assessment team

The self-assessment team (SAT) represents all main groups in the School, including junior and senior academic staff, professional and support staff, and undergraduate and postgraduate students (Table 3.1). Representation has improved since the Bronze award by inclusion of students on the taught courses (currently two undergraduate, one taught masters student and one postgraduate researcher). There is a reasonable gender balance with 10 females and 8 males and the team includes the Head of School and the School Manager.

Membership of the SAT is open to all school members and periodically emails are sent out inviting people to join.

Table 3.1 The Self Assessment Team

Name	Position	Role	Other Information
Alia Abdelmoty	Senior Lecturer	Undergraduate students	Single parent, tries to balance work and life commitments as she cares for a child with long-term medical issues.
Chloe Allen	Undergraduate student	Undergraduate rep.	Chloe became involved in the committee in her 2nd year in order to improve aspects of equality within the school.
Stuart Allen	Head of School (Teaching and Research)	School management	Originally joined the School as a post-doc in 1996, and lives locally with wife and two teenage children.
Martin Chorley	Director of Teaching (Teaching and Scholarship)	Teaching and student issues	A father of two children under five, Martin works flexibly to manage the demands of childcare and his job.
Giselle Corey	Masters student	Postgraduate taught course rep	Giselle returned to education from industry. She balances studies and part-time work, caring responsibilities, and maintaining her mental health.
Robert Davies	School Manager	Professional and support staff rep	Changed career after 20 years as a computer systems administrator to manage non-academic staff and operations.

Hélène de Ribaupierre	Lecturer (Teaching and Scholarship)	Equality and diversity co-ordinator	Joined Cardiff University in 2017 and has strong research interests about gender and Computer Science
Natasha Edwards	Lecturer (Teaching and Scholarship)	Staff (teaching and scholarship) rep	Member of Trevithick Women in STEM, a group supporting networking and development among female staff from science and engineering departments.
Daniel Harborne	Undergraduate student	Undergraduate rep	Mature Student. Student Rep, student mentor and member of students' union education executive committee. Holds part-time research assistant position.
Wendy Ivins	Senior Lecturer (Teaching and Scholarship)	National Software Academy rep	Changed career to lecturing in 1996 after 7 years in industry. Recently appointed to Director of Collaborative Learning with Industry.
Christopher Jones	Professor of Geographical Information Systems (Teaching & Research)	Equality & diversity coordinator, Chair of SAT	Chris has two children now both at university and has been a single parent since being widowed in 2003.
David Marshall	Director of Post-Graduate Research Studies (Teaching & Research)	Post graduate researcher staff representative	Father of 14-year daughter and two adult children. Now married but was daughter's single carer for her first 3 years.
Pam Munn	HR Administrator (P&S)	Professional and support staff rep	Pam is married with one son. Her husband also works for Cardiff University. She has caring responsibilities for her 95-year-old father.
Helen Phillips	Lecturer (Teaching and Scholarship)	Outreach rep	Academic in the School of 20 years. Main current responsibility is as Assessment and Feedback Lead.
David Owen	Research assistant registered for PhD	Post graduate student and researcher representative	Joined as an MSc student in 2014 having worked for both non-profit and private sector organisations beforehand.

Steven Schockaert	Professor of Artificial Intelligence (Teaching & Research)	Action plan management	Steven is married and has two children, who are 1 and 3 years old.
Catherine Teehan	Teaching administrator (P&S)	Outreach and Professional and Support Staff rep	Joined Cardiff as an undergraduate in 2008, followed by a PhD, part-time teaching, and then full-time staff member in 2015.

(ii)   An account of the self-assessment process

The team was originally set up in December 2013, prior to the Bronze submission. Since then the SAT has met as a group with varying frequency, with monthly meetings having been held in the year leading up to this submission.

The SAT meetings are used to review progress against the Action Plan, initiate and monitor short term actions and consider revisions to the Action Plan. Actions arising from the meetings are placed against individual members of the team while responsibility for progress on the Action Plan and preparation of the application is assigned to sub-groups as explained below.

The sub-groups within the team are responsible for undergraduates, taught postgraduates, postgraduate and postdoctoral researchers, academic staff, professional and support staff and outreach. These groups meet separately to progress their respective actions and it is through these focused activities that significant progress has been made against the Bronze Action Plan.

Communication

Since its inception the team has employed various web applications for sharing documents and to converse online on a variety of topics, notably to inform others of relevant events and initiatives outside the SAT.

Within the School the progress of the SAT and any associated issues and suggestions for new actions are reported by the SAT chair at bi-monthly intervals to the School Board, which has the Action Plan as a standing agenda item. Awareness of Athena Swan issues has also been maintained since our Bronze award by running surveys (there have been two staff surveys and one student survey), unconscious bias workshops and online unconscious bias and ED&I training (both of which are mandatory in the School). Topics related to Athena Swan, such as workload, unconscious bias and outreach events are regularly included in the Head of School's monthly update to all staff. The Head of School will also updates all students on ED&I issues once per semester (Action E1).

Additional support for the SAT within the University is provided by the Equality Diversity and Inclusivity Network of the College of Physical Sciences and Engineering, which meets several times per year to support the Athena Swan SATs within schools in the College. The Network has an Action plan with

objectives common to all Schools. Meetings focus on selected themes (such as outreach, workload and mentoring) and allow SAT chairs to share experiences relating to their respective schools and to activities in the University and in external organisations. A specific example of their support is the development of our Returners Policy which is based on a draft policy produced for the College.

External engagement of team members

Catherine Teehan is a committee member of Women in Tech Cymru and its events have also been attended by SAT members Helen Phillips and Dr Wendy Ivins. The School hosted their 2018 events with 72 attendees including 6 of our undergraduate students (male and female). Catherine has on several occasions run a panel session on "Routes to employment" at the Building a Brighter Future in Tech events, a Welsh government initiative to support people, particularly women, wishing to change career. Helen Phillips is a committee member of Computing At School Wales and is the University's contact for the National Network for Excellence in Science and Technology (NNEST), which is currently looking at the development of the Welsh National curriculum in STEM.

Dr Hélène de Ribaupierre (with three other colleagues in the School) published and presented the paper "Towards Gender Equality in Software Engineering: the NSA Approach" at the 2018 International Workshop on Gender Equality in Software Engineering (Gothenburg, Sweden). The paper documents the gender equality culture at our National Software Academy (of which Dr Wendy Ivins is the Programme Director) in which all but one of the 6 female academics were recruited under the revised recruitment procedures that implement our Athena Swan actions. Dr de Ribaupierre has proposed that we should review our learning material for gender bias, with regard for example to gender-specific representation in examples (Action F2).

Prof. Christopher Jones has participated in SAT Chairs meetings held by the four universities known as GW4 (Cardiff, Bristol, Bath and Swansea) at which representatives from GW4 and other universities, and from ECU, promote discussion and innovation in implementing Athena Swan. Prof Stuart Allen attended the CPHC meeting on Athena Swan and EPSRC events on gender equality. Dr Robert Davies attended the British Computer Society Athena Swan Cygnet Workshop.

(iii)   Plans for the future of the self-assessment team

Following submission of this application, meetings of the SAT will be held four times per year. We will broaden the remit of the team to focus additional attention on ethnicity. The chair of the SAT will continue to update the School Board at bi-monthly intervals on progress on the Action Plan (Action E1), responsibility for the implementation of which will devolve to individuals and to the sub-groups referred to above. Membership will change following open invitations. Regarding change continuity, there are two ED&I coordinators, one whom is the SAT Chair. Student membership will be reviewed to ensure that we have a minimum of two undergraduate representatives at different stages as well

as representatives of the taught masters programmes and the postgraduate researchers.

In preparing this submission we have presented graphs and data tables relating mostly to the 4-year period to 2016/17, for which full data are currently available. while highlighting notable differences in 2018 in the narrative and ensuring that descriptions of our current situation relate to 2018.

1000/1000 words

Action A2	Initiate an annual student survey about equality, diversity and inclusion (ED&I). Questions will also be asked to identify factors affecting their decision to enrol in Cardiff.
Action E1	Raise awareness of ED&I issues in the School: Head of School to include regular item in monthly update/communications to staff. Update students each semester on ED&I. Add a section on ED&I in the School Wiki.
Action F2	Review learning materials for bias in gender and other protected characteristics and propose changes to content where appropriate.

4.   A PICTURE OF THE DEPARTMENT
Recommended word count: Bronze: 2000 words | Silver: 2000 words

4.1.   Student data
If courses in the categories below do not exist, please enter n/a.

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

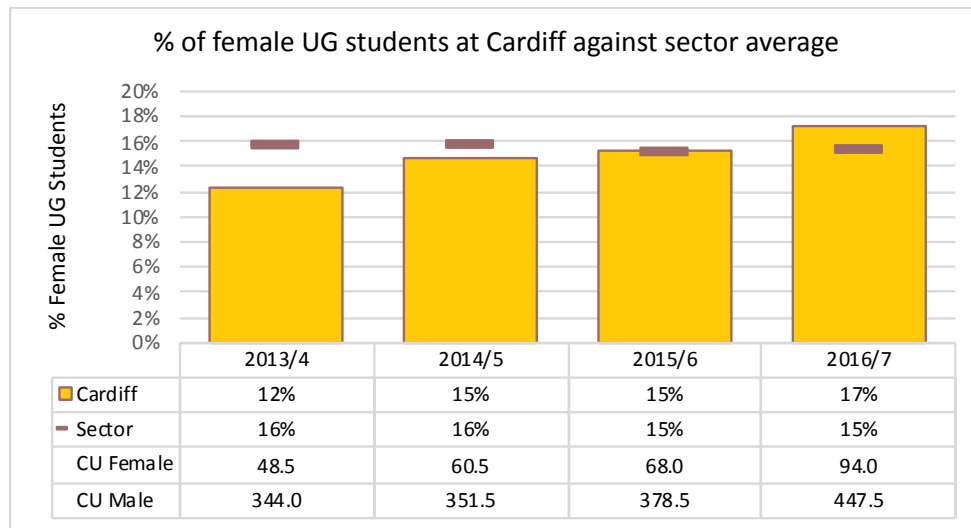n/a (We do not run access or foundation courses).

(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.

All of our undergraduate courses are full time. Since our Bronze submission progress has been made against our objective to improve the numbers of female students, with the proportion of female undergraduates having increased fairly steadily from 4% below the sector average to 1% above it in 2016/17 (Figure 4.1). This increase was accompanied by an overall increase in student numbers (FTE) from 392 in 2013/15 (12% female) to 541 (17% female) in 2016/17 and in 2017/18 to 698 (19% female). In 2017/18 149 undergraduate students identified as BAME, being 35% of all female undergraduates and 21% of male undergraduates.

100 words

Figure 4.1 Undergraduate female and male numbers and percentages

% of female UG students at Cardiff against sector average

	2013/4	2014/5	2015/6	2016/7
☐ Cardiff	12%	15%	15%	17%
− Sector	16%	16%	15%	15%
CU Female	48.5	60.5	68.0	94.0
CU Male	344.0	351.5	378.5	447.5

Following our Bronze Action Plan (Action Br-B1), the content of the School's web site and the marketing material has been reviewed regularly to ensure that female students are well represented (see images in Figure 4.2). Since 2015 we have invested considerable effort in a student ambassador scheme which allows our students to play a major role in open days and outreach events (see section 5.6(viii)). The student ambassadors have a very good level of female representation (38% vs about 17% female students) and have done an excellent job in presenting the School as welcoming and supportive.
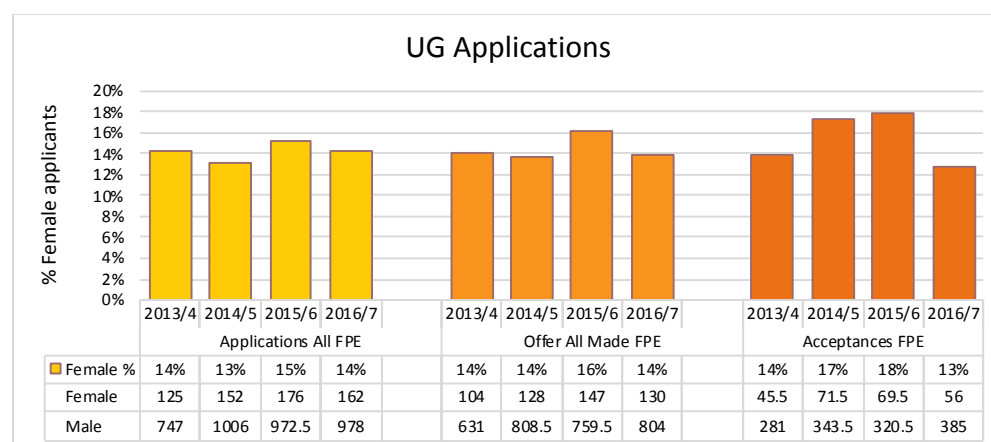
Figure 4.2 Marketing example images from the School's undergraduate brochure: the front cover from 2017 and two pages from 2018 respectively.

Data for applications, offers and acceptances shows that within each year of the period there is a reasonably even balance in female percentages between the three statistics (Figure 4.3). Notably the average ratio of acceptances to applications is higher for females than for males (38% vs 34.5%). In the last couple of years, while the balance between applications, offers and acceptances has remained fairly even, there has been a slight drop overall in proportion of females. A possible explanation relates to changes in course offerings, in that the now discontinued Business Information Systems degree, which had attracted more females than the Computer Science degree, stopped recruiting in 2014/15. We have introduced a new degree in Applied Software Engineering which started recruiting in 2015/16. Its percentage of female applicants and acceptances has fluctuated, both above and below the undergraduate courses average, with no clear pattern (Action A6). As part of our effort to improve female recruitment, we aim to ensure that the relatively high proportion of female lecturers on that course is reflected at open days (Action B3).

273 words

Figure 4.3 Undergraduate Applications

UG Applications

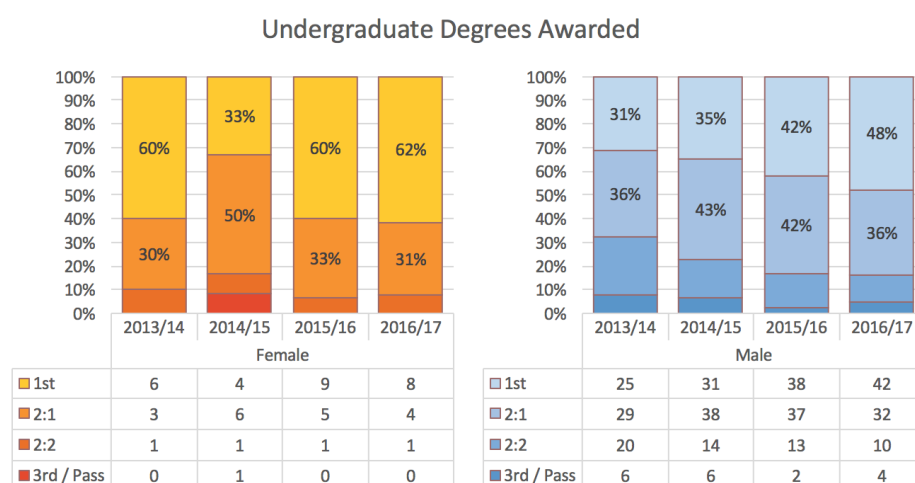|	Applications All FPE				Offer All Made FPE				Acceptances FPE			
	2013/4	2014/5	2015/6	2016/7	2013/4	2014/5	2015/6	2016/7	2013/4	2014/5	2015/6	2016/7
Female %	14%	13%	15%	14%	14%	14%	16%	14%	14%	17%	18%	13%
Female	125	152	176	162	104	128	147	130	45.5	71.5	69.5	56
Male	747	1006	972.5	978	631	808.5	759.5	804	281	343.5	320.5	385

Awards

Our female students have consistently outperformed males in the proportion of first class and upper-second class awards when the two are combined (Figure 4.4). In three out of the four years, females obtained a substantially larger proportion of first class degrees. At the third class / pass level females have proportionally fewer such awards in all of the four years. The reasons are not clear but we believe it might reflect national trends in academic performance of female students.

79 words

Figure 4.4 Undergraduate Degree Classes Awarded by Gender

Undergraduate Degrees Awarded

	2013/14	2014/15	2015/16	2016/17
Female				
1st	6	4	9	8
2:1	3	6	5	4
2:2	1	1	1	1
3rd / Pass	0	1	0	0

	2013/14	2014/15	2015/16	2016/17
Male				
1st	25	31	38	42
2:1	29	38	37	32
2:2	20	14	13	10
3rd / Pass	6	6	2	4

Action A6	Investigate and act upon factors affecting recruitment of females on the Applied Software Engineering (ASE) degree.
Action B3	Increase the prominence of female academics at open days.

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

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

Numbers of students on our taught postgraduate courses have been increasing considerably with a rise in numbers of students graduating from 41 in 2014 to 78 in 2017, and to 110 in 2018. As illustrated in Figure 4.5, the proportion of female students has increased from 14% in 2013/14, well below the sector average of 26%, to 36% in 2016/17 which was above the sector average of 29%. In 2017/18 the figure was 30%. As with undergraduates, we have implemented our actions to ensure the web site and marketing materials provide a prominent and positive image of female students (Figure 4.6 images) and we assume these factors contributed to raising the proportion of female students. Part-time completion numbers are too low to make meaningful gender comparisons (a maximum of 4 per year to 2018). In 2017/18 59 (17 female) taught postgraduates (PGT) identified as BAME, making up 51% of female and 55% of male PGTs.

155 words

Action A2	Run an annual student survey about equality, diversity and inclusion (ED&I). Questions will also be asked to identify factors affecting their decision to enrol in Cardiff.
Action B3	Increase the prominence of female academics at open days.

Figure 4.5 Percentage of PGT females graduating in Cardiff vs sector average (full-time plus part-time)
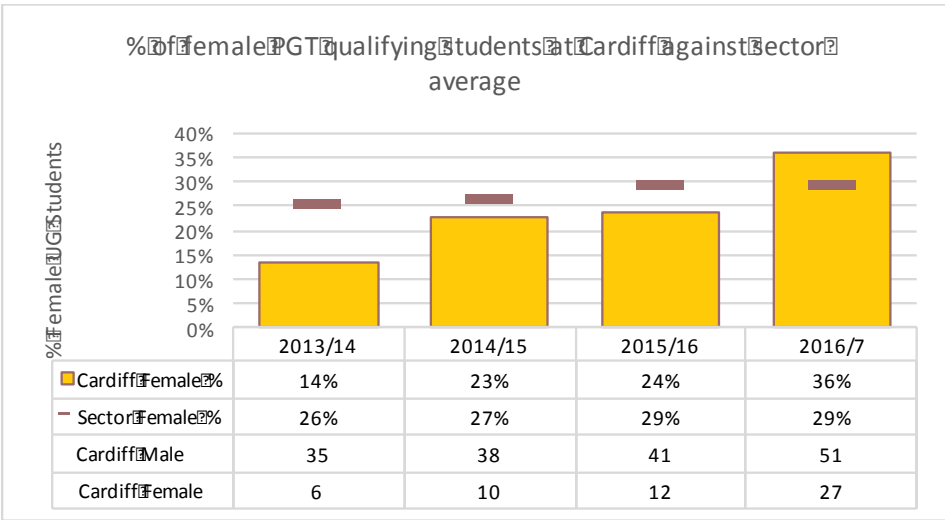

% of female PGT qualifying students at Cardiff against sector average				
	2013/14	2014/15	2015/16	2016/7
Cardiff Female %	14%	23%	24%	36%
Sector Female %	26%	27%	29%	29%
Cardiff Male	35	38	41	51
Cardiff Female	6	10	12	27

Figure 4.6 Images in pages and a front cover from the School's postgraduate brochure from 2016, 2017 and 2018 respectively

Applications, offers and acceptances

Applicant numbers for our PGT courses have increased significantly, from 611 in 2013/14 to 707 in 2016/17 (Figure 4.7) and to 819 in 2017/18. The proportion of female applicants has held steady at 29%, as has the proportion of offers made to female students, which remains at 30%. In 2013/14, 66% of male and 66% of female applicants were offered a place on a PGT programme. By 2017/18 this has risen to 84% of male applicants and 87% of female applicants being offered a place. While 58% of male applicants accepted an offer on our PGT programmes in 2017/18, a slightly lower figure of 51% of female applicants accepted an offer in

the same year. In the previous year it was about 58% for both males and females (see Figure 4.7). We have an action to investigate this further (Action A3).

142 words

Figure 4.7 Postgraduate Taught Programme Applications, Offers and Acceptances

PGT Applications

		Applications All FPE				Offer All Made FPE				Acceptances FPE		
	2013/4	2014/5	2015/6	2016/7	2013/4	2014/5	2015/6	2016/7	2013/4	2014/5	2015/6	2016/7
Female %	29%	25%	31%	30%	29%	25%	33%	30%	28%	27%	31%	30%
Female	178	146	189.5	215.5	117	104.5	172.5	197	67	62.5	90	113.5
Male	430	429.5	415.5	492	285	306.5	350	450	176	171.5	198	265
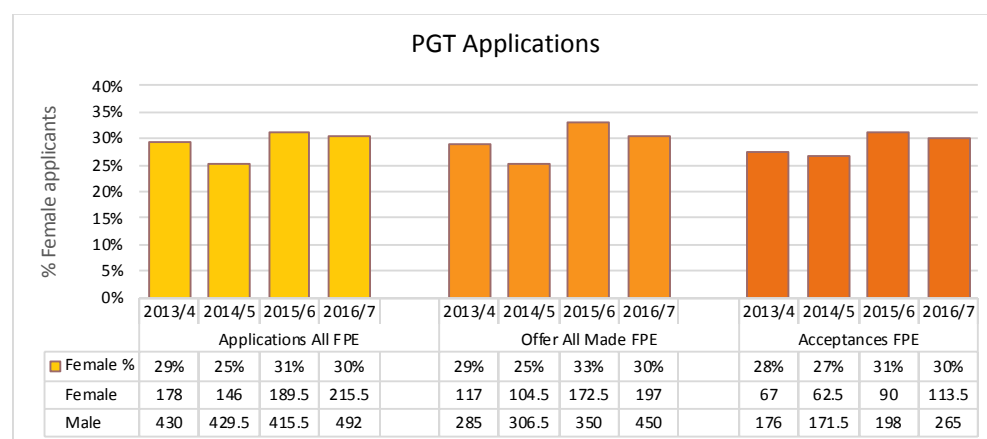
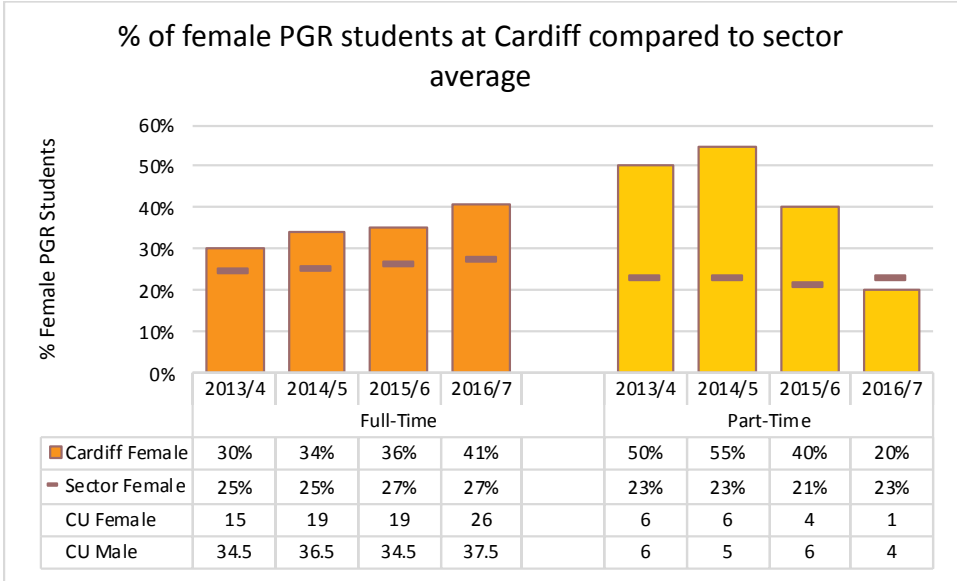| Action A1	Survey students to identify factors affecting their decision to enrol in Cardiff.
Action A3	Consult with female MSc students (and, if possible, decliners) to identify possible reasons why female applicants might not accept places on MSc programmes.

(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.

Over the period postgraduate research (PGR) student numbers have increased steadily (Figure 4.8) and that growth, in males and females, has continued to 2017/18 (81 including part-time). The overall increase is thought to be due at least partly to an increase in the number of academic staff who can supervise and offer PhDs. The postgraduate research student population in the School is notable for having had a consistently higher than average proportion of females relative to the sector average. The overall percentage female students in 2017/18 was 43%. That proportion is similar to that of our Bronze submission. The part-time proportion is usually similar but can fluctuate, as numbers are small. In 2017/18 34 (19 female) PGR students identified as BAME, making up 56% of the female and 35% of the male PGR students.

134 words

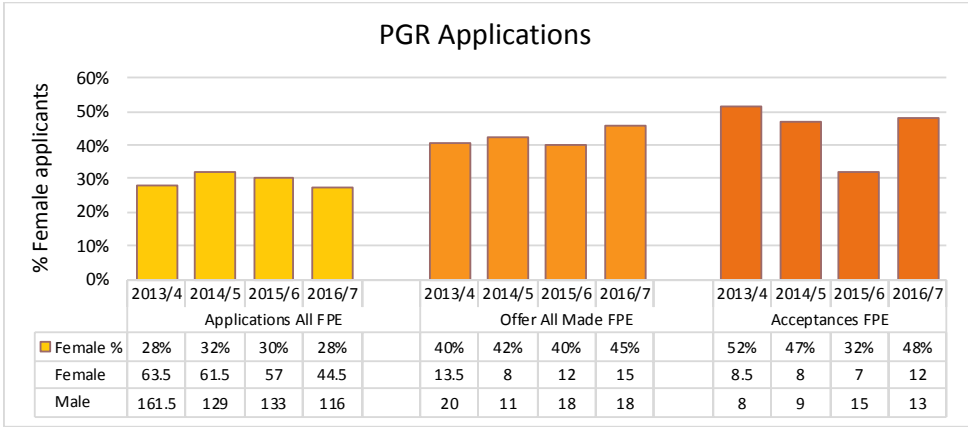Figure 4.8 Percentage female PGR students compared to sector average

% of female PGR students at Cardiff compared to sector average

% Female PGR Students

	2013/4	2014/5	2015/6	2016/7		2013/4	2014/5	2015/6	2016/7
		Full-Time					Part-Time		
Cardiff Female	30%	34%	36%	41%		50%	55%	40%	20%
— Sector Female	25%	25%	27%	27%		23%	23%	21%	23%
CU Female	15	19	19	26		6	6	4	1
CU Male	34.5	36.5	34.5	37.5		6	5	6	4

Applications

Applications for PhD study over the period (Figure 4.9) have declined somewhat although the numbers of offers and acceptances have remained broadly constant (Action B5). This reduction might be explained by the School's advertising material which now requires applicants to align research proposals with listed priority areas and identify a potential supervisor, which was not previously the case. The proportion of females applying for PGR study has varied over the period from 28% to 38% (the latter for 2017/18). The proportion of females offered positions is higher, ranging from 40% to 46% in 2017/18, while the proportion accepting offers tends to be higher again being nearer to 50% in all years to 2016/17 except 2015/16.

116 words

Figure 4.9 Postgraduate Research Applications, Offers and Acceptances

PGR Applications

% Female applicants

	2013/4	2014/5	2015/6	2016/7		2013/4	2014/5	2015/6	2016/7		2013/4	2014/5	2015/6	2016/7
		Applications All FPE					Offer All Made FPE					Acceptances FPE		
Female %	28%	32%	30%	28%		40%	42%	40%	45%		52%	47%	32%	48%
Female	63.5	61.5	57	44.5		13.5	8	12	15		8.5	8	7	12
Male	161.5	129	133	116		20	11	18	18		8	9	15	13

Although improvement in publicity materials since the Bronze submission has been associated with improved gender balance for undergraduate and postgraduate taught students this is less obvious for research students. We will therefore review advertising content for opportunities for improvement (Action B2). We will also invest efforts in continuing to improve the culture for female students in the School and Actions A2, A5 are designed to solicit relevant feedback.

Completion rates

As indicated in Table 4.1 the proportion of female students completing their degrees over the period averages 29%, which is below the average percentage of females of 40%. Actual numbers are low and so statistical significance is questionable. However, an issue of some concern is that maternity leave can have an adverse effect on the recorded "completion rate", i.e. the time from start to finish, of some students. It is also the case that over the period some of our female overseas students have withdrawn from the course for "family reasons" for which we have no further information. Proportionally fewer males have withdrawn and we need to survey students in an effort to understand the situation Action A2).

188 words

Table 4.1 Postgraduate research degree awards

	Female		Male	
Postgraduate Research Awards	Count	%	Count	%
2013/4	1	17%	5	83%
2014/5	3	38%	5	63%
2015/6	2	22%	7	78%
2016/7	4	33%	8	67%
Grand Total	10	29%	25	71%

Action A2	Run an annual student survey about equality, diversity and inclusion (ED&I). Questions will also be asked to identify factors affecting their decision to enrol in Cardiff.
Action A5	Survey postgraduate researchers regarding the effectiveness of current mentoring procedures and opportunities for new types of mentoring
Action B2	Create a better-balanced and positive website and marketing materials with particular regard to improving current recruitment levels of female researchers and postgraduate researchers.
Action B5	Review the research student admissions processes to ensure all applications/panel interviews have at least one male and one female member of academic staff

(v)   Progression pipeline between undergraduate and postgraduate student levels

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

There are several mechanisms within the School to encourage and support progress from undergraduate to postgraduate studies. These include research-directed final year projects (normally counting for 40 credits as opposed to 20 or 10 credits for other modules) and research-led teaching on modules. Of particular value is the Cardiff University Research Opportunities Placement (CUROP) scheme which provides an avenue for second year (and occasionally year 1) students to undertake a short, typically eight-week research project in the summer vacation. The scheme is competitive and pays just over £2000. Over the last three years the proportion of females with CUROP awards has increased to about one third (5/16) female in 2017/18, well above (about double) the proportion of female students in the year. Regarding the gender balance of the students taking up postgraduate study within the School, in the past four years 9 male and 9 female students have progressed from either undergraduate or masters courses to PhD study. This contrasts with the gender imbalance of undergraduate students (19% female in 2017/18). As indicated earlier, female students in the school are particularly successful in obtaining first class degrees, relative to males, and several have registered for research degrees.

Most of the students progressing to postgraduate study have applied for one of the typically 2 or 3 School funded scholarships on offer each year or applied for other advertised project-funded studentships.

232 words

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.

The total number of academic staff in 2017 was 61 (FPE), of which 14 i.e. 21.5%, were female, which is a little below the sector average of 22%. Since our Bronze submission this represents a minor improvement from 19.6% (in 2014). When researchers are separated out (see subsequent discussion), the picture changes considerably, with the proportion of females in teaching and research and teaching and scholarship positions being 28%, against a sector average of 22% (Figures 4.10, 4.11, 4.12). This has resulted from a period of new appointments to these academic positions, in the course of which improvement of gender balance has been a critical issue. The appointment process has benefited from our Bronze actions including changing the wording of adverts, recruitment training of staff, and ensuring that there is at least one female on appointment panels (as well as changes to marketing and web site material). More academic staff appointments have been made in 2018 and the percentage of females (academics and

researchers) is now, at 23.6, a little higher than 2017 (and just above the sector average).

Our Bronze submission highlighted the poor representation of females in the senior grades and several actions were put in place concerning promotion procedures, including improved appraisal training for line managers, broadening mentoring opportunities, ensuring female representation on promotion panels and mandatory unconscious bias training. Progress has been made, with a female Senior Lecturer being promoted to a professorship, and a promotion of a female Lecturer on the teaching and scholarship pathway to Senior Lecturer, which is a first in the School irrespective of gender. We have also recruited a female Senior Lecturer (note that no professors were recruited externally in the period). We will continue with working to improve female representation at senior levels (Actions C1, C2). Given the increasing number of early career female academics there is good reason to be optimistic about future progression.

During the period, no technical staff transitioned to academic roles though previously one of our Lecturers did transfer from being a Senior Technician to being appointed to a Lectureship, having previously become involved in teaching and research. However, during the period a Computer Manager changed role to become the School Manager following the advertisement of that position.

371 words

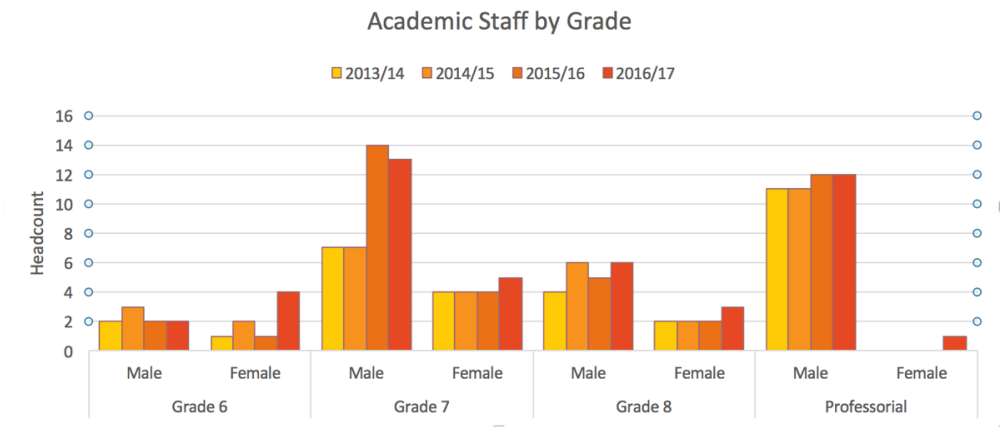Figure 4.10 Academic Staff Gender Profile: Excluding Researchers (Postdocs)

	2013/14	2014/15	2015/16	2016/17
Female %	23%	23%	18%	28%
Sector %	22%	22%	22%	22%
Female	7	8	7	13
Male	24	27	33	33
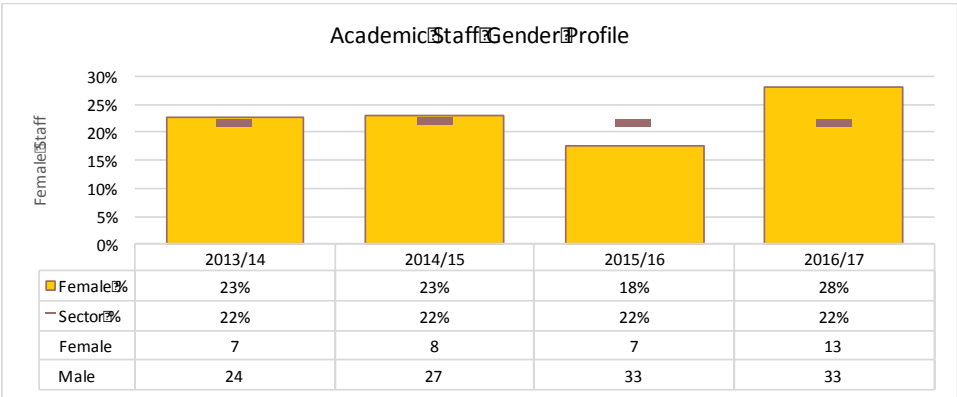
Figure 4.11 Academic Staff by Grade

Academic Staff by Grade

When considering researchers (Fig. 4.13) the situation is much poorer with the numbers of females being well below the sector average. This situation has not improved since the Bronze award. In comparison with established academic staff (lecturers and above) a possible explanation is that the recruitment panels have not always included a female. However interview panels for researcher positions must include a member of staff who has taken recruitment training, line manager training is now obligatory, and we have a policy for including females on recruitment panels that has been observed in the period for all other academic staff (Actions B1, B2).

102 words

Figure 4.12 Academic Staff (All) by Career Pathway (T&R: Teaching and Research; T&S Teaching and Scholarship; R: Research)

Academic Staff by Career Pathway
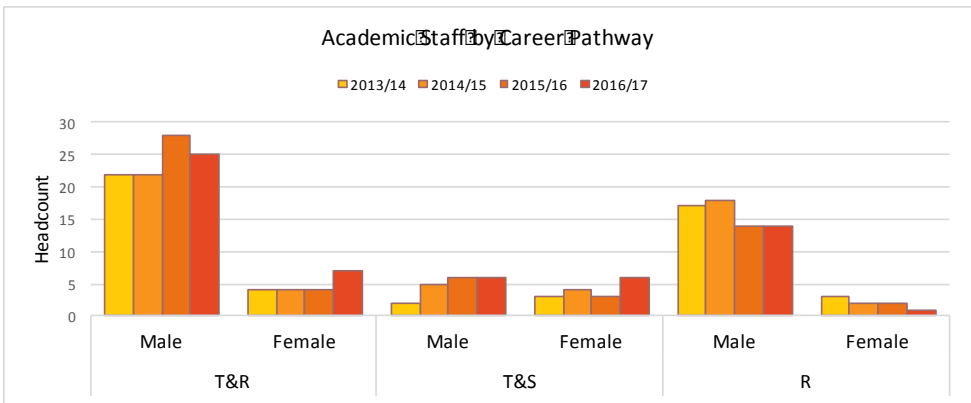
Figure 4.13 Research Staff Gender Profile (mostly postdoctoral)

Research Staff Gender Profile

	2013/14	2014/15	2015/16	2016/17
Female %	15%	10%	13%	7%
Sector %	22%	22%	22%	22%
Female	3	2	2	1
Male	17	18	14	14

Action B1	Review and revise recruitment procedures for researcher staff positions, especially with regard to advertising material and the gender balance of appointment panels.
Action B2	Create a better balanced and positive website and marketing materials with particular regard to improving current recruitment levels of female researchers and postgraduate researchers.
Action C1	Improve awareness among staff and line managers of the criteria for promotion, common reasons for failed applications, and the types of support that are available.
Action C2	Ensure staff are aware of mentoring opportunities beyond the probation period.

(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.

As shown in Figures 4.14, throughout the period, the proportion of females in open-ended (OE) as opposed to fixed-term (FT) contracts was similar to that of males except that on average proportionally slightly more females were on OE contacts (and hence of course fewer on FT). When considering grades (Figure 4.15), in most years we see the same pattern.
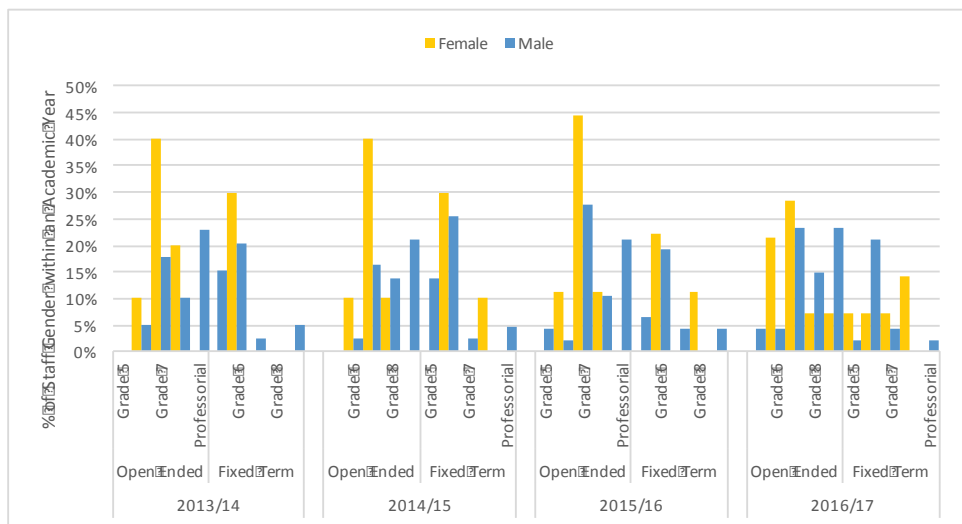
59 words

Figure 4.14 Academic Staff on Open-Ended Contracts

Academic staff on Open Ended Contracts

% Staff on Open Ended Contract

	Female					Male			
	2013/14	2014/15	2015/16	2016/17		2013/14	2014/15	2015/16	2016/17
Fixed Term	3	4	3	5		17	20	16	14
Open Ended	7	6	6	9		22	23	31	33
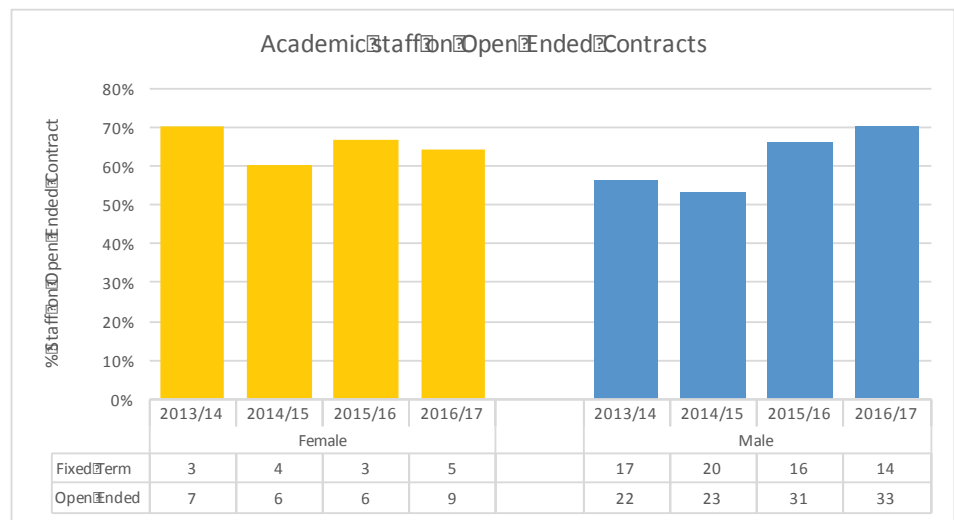
The School encourages staff coming towards the end of fixed-term contracts to apply for other available positions. As explained in section 5.3(iii) several staff (3 male and 2 female) on FT contracts moved to OE positions either by applying for the position well before the FT contract was due to end or through redeployment. Redeployment is open to staff who have been in post for at least 12 months and are within 6 months of the end of their contract.

80 words

Figure 4.15 Academic Staff by Grade on Open-ended and Fixed-term Contracts

Female ■ Male

% of Staff Gender within an Academic Year

(Grade 5, Grade 7, Professorial, Grade 6, Grade 8 — Open Ended / Fixed Term for 2013/14, 2014/15, 2015/16, 2016/17)

Academic 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.

The main reasons for academic staff leaving over the period were resignation or completing a fixed-term contract, normally to take up positions elsewhere. We also have one case of retirement and one of voluntary severance. As shown in Figure 4.16 and Table 4.2, only three females left in the period, all three being postdoctoral researchers on fixed-term contracts who took up positions elsewhere. The University maintains a record of leavers in the above categories, along with "dismissal" (not applying to the individuals here). It maintains a partial record of what positions people move on to, in that staff are asked (but not required) to provide the information on leaving.

111 words

Figure 4.16. Academic Leavers by Gender
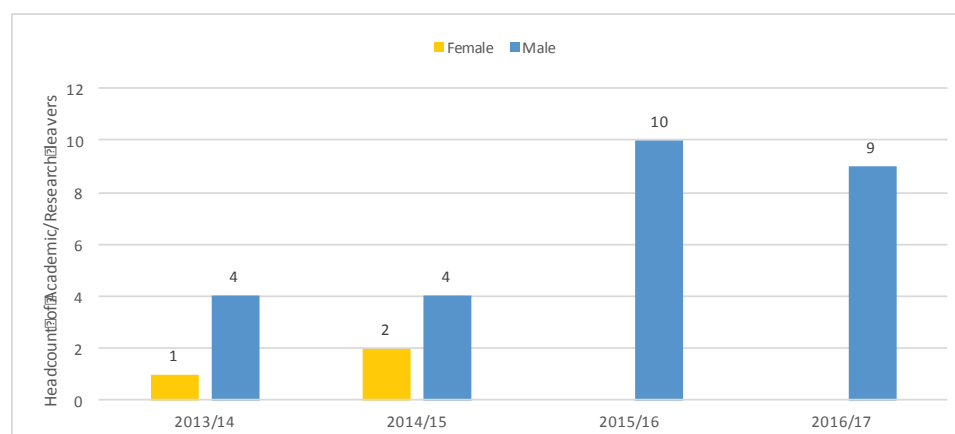
Table 4.2 Academic leavers by career pathway

	2013/14		2014/15		2015/16		2016/17	
	Female	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**
Research	1	2	2	3	0	7	0	4
Teaching & Research	0	1	0	0	0	1	0	4
Teaching & Scholarship	0	1	0	1	0	2	0	1
Total	**1**	**4**	**2**	**4**	**0**	**10**	**0**	**9**

2112/2000 words

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS
Recommended word count: Bronze: 6000 words | Silver: 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.

Following implementation of the Bronze Action Plan, the School has put into place several initiatives aimed at improving the gender balance of academic recruitment. Over the 4-year period (see Figure 5.1a,b) one third of appointments (i.e. 8 out of 24) have been females. This proportion of 33% female appointments can be compared to the sector average number of female academics of 22%, indicating that progress is being made.

One of the recruitment measures that we have implemented is a change in the text of adverts to include positive statements about gender equality, encouraging females to apply, pointing out that we wish to increase the proportion of females and referring to policy on flexible working and achieving a good work-life balance. We have received informal feedback from recruited female staff expressing appreciation for the wording of the adverts. Also related to advertising we have been running advert text through a system that checks for gender balance and modifying it where issues have arisen.

During the period we have required all panel Chairs to have undergone unconscious bias training (in addition to the E&D training that is mandatory in the University). In addition, all staff are now required to have taken unconscious bias training.

206

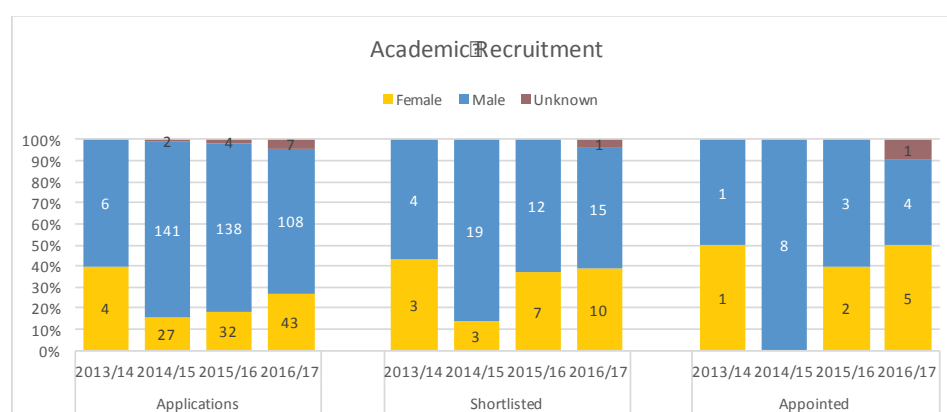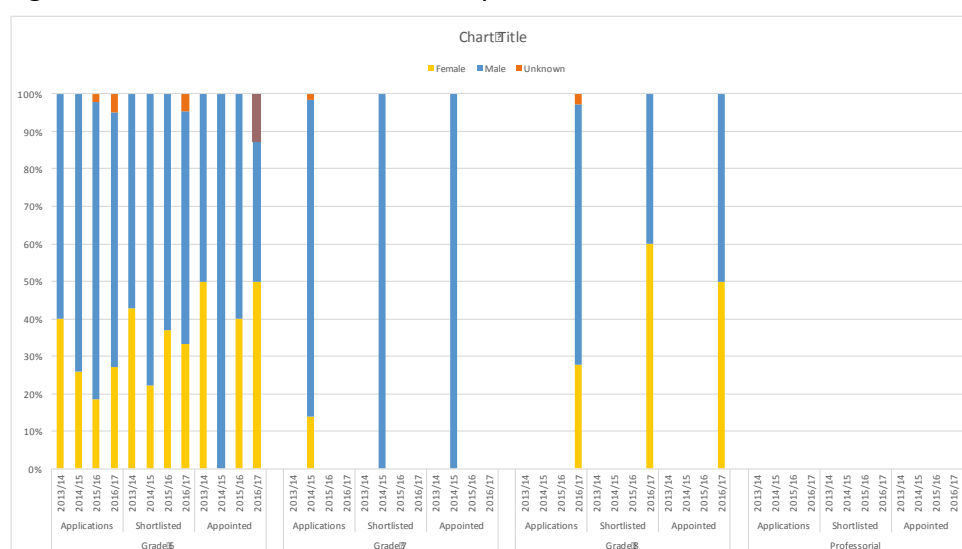Figure 5.1a Academic Recruitment by Gender

Figure 5.1b Academic Recruitment by Gender and Grade

We require academic recruitment panels to include at least one female member of staff. We also require this of other departments where staff are linked to our School. This goes beyond the University advisory (but not mandatory) policy on female representation. In addition we request applicants to focus on quality of outputs rather than quantity in their presentations.

As indicated earlier, an issue that has been identified in the School is that recruitment procedures for Researchers (typically postdoctoral researchers) have not always been as rigorous as those for other academic staff in that some panels have not included a female, and we have initiated an action to address that concern (Action B1).

In parallel with these initiatives and following our Bronze Action Plan we continue to review and update the text of our web site and marketing materials to ensure they provide a positive image of women and promote a culture of equality and diversity. We have however initiated new actions relating to research staff (Actions B1,B2).

167 words

Action B1	Review and revise recruitment procedures for Research staff positions, especially with regard to advertising material and the gender balance of appointment panels.
Action B2	Create a better balanced and positive website and marketing materials with particular regard to improving current recruitment levels of female researchers and postgraduate researchers.

(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.

There are two levels of induction that all new staff are required to undertake, one at University level and the other within the School. The University induction programme, supported by content on the University website, introduces staff to support and training facilities and the mechanisms by which staff can meet other staff across the university. Within the School new staff are introduced to appraisal and probation procedures and to opportunities for mentoring. All new staff are assigned a mentor, typically a member of staff with related interests to the staff member. New staff are introduced to others in the School through direct contact with colleagues who they might be working with as well as through introductions at school meetings and at the social events that take place in association with those meetings.

At School Induction, new staff are given information on mandatory training requirements, which includes Equality, Diversity and Inclusivity and Unconscious Bias online modules. Completion rates are monitored by the School HR Administrator. The staff survey also includes questions on take up these modules, and staff can comment in the survey on any aspects of training.

187 words

Action D1	School Wiki to be updated to highlight ED&I issues including flexible working and maternity and paternity leave.
Action B2	Action D2 Ensure all staff are made aware of opportunities for flexible working.

(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.

In the period 2012-2014 reported in our Bronze submission there were 3 applications for promotion from female academics, 2 of which were successful, while 2 (out of 2) applications from male staff were successful. In the following three years 2015-2017 there were 2 female promotions (out of 2 applications) and 8 (out of 8) male staff promotions. One of these promotions was for the female who was unsuccessful in the previous period. That staff member, who was applying for promotion under the teaching and scholarship pathway, which has a lower rate of success within the University, was advised on reasons for the failed application and supported in helping to develop her subsequent successful application. The other successful female in the period 2015-17 was from a Senior Lecturer to a Personal Chair. There has been a further successful female promotion to Senior Lecturer in 2018.

Staff are supported in applications for promotion primarily through the appraisal process (performance development review), described below, and/or in conversation with the line manager or Head of School when making a decision to apply. Following our Action Plan all line managers take unconscious bias training and are advised to encourage and support applications for promotion.

199

(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.

In the 2014 REF the school submitted 15 people (13.9 FTE) of whom only one was female. The number of eligible staff was 26 (4 were female). The relatively low number of staff submitted overall resulted from the highly selective policy of Cardiff University. It was implemented with an "objective" requirement that submitted staff meet a threshold GPA score and hence have a minimum number of outputs judged as 4* by external reviewers. In RAE 2008, all 21 eligible staff in the School were submitted, of whom 3 were females. This however highlights the low proportion of female research-oriented staff in 2007. This continues to be addressed following our Bronze submission Action Plan and it can be noted that in 2018 there are 8 REF eligible female staff compared to 4 in 2014.

133 words

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.

For purposes of induction, there is no distinction in the School between professional and support staff and academic staff. Thus both attend the School-based induction sessions and the University level induction as summarised in the section on academic staff induction.

41 words

(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.

For professional and support staff the University does not operate the same form of promotion procedure available to academic staff. Thus for an existing member of P&S staff to rise to a higher grade they must either go through the re-grading procedure or apply competitively for a new position. Professional and support staff are encouraged and supported in taking these initiatives by the line manager and specifically through the annual appraisal process (i.e. Performance Development Review – PDR). Examples of regrading, appointments and changes in career pathway during the period are described below.

Four staff have been regraded, 2 male and 2 female. One female was regraded from grade 3 to 4, while the other, who had worked for a year in a maternity-cover position, subsequently left and was re-employed at grade 4 and then re-graded to 5.

Three postgraduate researchers have been employed on either grade 5 or grade 6 positions (one permanent and 2 temporary). Following a 3-month work experience (with interruption of study) one male postgraduate researcher was appointed to a full time grade 6 position in the course of which he was supported to complete his studies successfully through flexible working and time off for the PhD viva. One male was regraded from 5 to 6 while another regraded and changed pathway from a technician to a Managerial, Professional and Specialist Staff (MPSS) role. Another male member of staff was supported in changing career path from an MPSS specialist to a managerial MPSS position (the School Manager).

252 words

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?

A wide range of training courses is available within the University covering professional development and personal wellbeing. In general these are available to all staff to take irrespective of grade or career pathway (see Table 5.1 for take up of some of the main courses). For certain staff however specific courses are mandatory to fulfil particular roles, while some are mandatory either to all staff in the University or within the School (equality and diversity, unconscious bias and security training).

The University website provides details of a wide range of the professional development opportunities while other *ad hoc* courses are typically advertised through email. All staff (and postgraduate students) are prompted to highlight training requirements in the annual appraisal (PDR) process and a record of staff attendance at courses is maintained on the University intranet.

135 words

Action C3	Ensure staff are made aware of and encouraged to participate in Training opportunities

Table 5.1 Training course attendance

Contract	Course	Female	Male
P&S	Equality and Diversity	9	9
Academic	Equality and Diversity	14	37
P&S	Leadership	2	2
Academic	Leadership	1	5
P&S	Induction	1	0
Academic	Induction	8	15
Grade 6 lecturers	Academic Practice	4	4
P&S	Managing Performance for Line Managers	3	2
Academic	Managing Performance for Line Managers	2	8
P&S	New Line management course	3	5
Academic	New Line management course	2	9

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.

All new staff participate in a 1 or 3 year probation process, depending on their career pathway, which reviews progress at regular intervals against mutually agreed objectives and identifies specific training requirements. Early career lecturing staff also engage in an "Academic practice" training programme which leads to fellowship of the Higher Education Academy (HEA). Beyond the probation period all staff (including researchers) have an annual performance development review (PDR) which again provides an opportunity to reflect on progress in the previous year and agree future objectives. An important aspect of PDR is a review of career aspirations at which staff can identify and plan for opportunities such as involvement in particular projects, industrial secondments, specific types of mentoring, as well as participation in University training courses or external training schemes if needed. Regarding mentoring, following our previous Action 2015-C4 all staff now have access to a mentor scheme in addition to the mandatory mentoring of staff on probation and following academic practice (Table 5.2, Action A4, C2).

164 words

Table 5.2   Staff mentoring numbers in 2018

Pathway	Total	Female	Male	Staff with mentors			Mentor gender	
				Total	Female	Male	Female	Male
P&S	25	12	13	3	1	2	1	2
Research	17	1	16	8	1	7	1	5
Teaching & Research	36	8	28	19	5	14	4	14
Teaching & Scholarship	15	8	7	7	5	2	3	3
Total	93	29	64	37	12	25	9	24

As highlighted in the Bronze submission, the PDR is also a prime opportunity to plan and support applications for promotion including receiving guidance on normal expectations of particular types of promotion. Following the 2015 Action Plan all appraisers take appraisal training and unconscious bias training. Since our 2015 Action Plan, discussions at PDR have led to the successful re-application for promotions to a Senior Lectureship for one female member of staff, while another female member of staff who had been at the Lecturer grade for many years, without applying for promotion to Senior Lecturer, was encouraged to do so and was successful.

The School has 100% take up of the annual PDR process. In our STEM survey of 2016 77% of staff agreed that "My School provides me with a helpful annual PDR" which is similar to but down 3% from the 2014 survey. Although generally positive, we will seek to understand the basis of any negative attitudes towards PDR (Action C4)

162 words

Action A4	Monitor the level of effectiveness of staff mentoring and the level of take up of post probation period mentoring.
Action C2	Ensure staff are aware of mentoring opportunities beyond the probation period and supported in their appraisal (Performance Development Review - PDR) in participating in such schemes; evaluate the uptake of these opportunities.
Action C4	We will consult on any negative attitudes towards the appraisal process and seek to improve this process to address them.

(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.

All academic staff including postdoctoral researchers receive guidance and support for career progression through the PDR review process. At the start of the probation period all new staff (including postdoctoral researchers) are also allocated a mentor who can advise on career progression. As indicated above there are numerous training opportunities available to staff some of which relate to career progression.

Postdoctoral researchers are normally given the opportunity to gain teaching experience and develop their teaching skills by delivering lectures of taught modules run by other academic staff. Occasionally researchers with demonstrable aptitude for teaching are given responsibility for leading a taught module, typically in association with another academic staff member. During the period one female and three male research associates (RAs) have been engaged in teaching activities. Notably three of these (the female and two male) RAs were subsequently appointed to lecturer positions within the period. One female RA (at postgraduate level) took up a short-term teaching post in the course of her research position which provided her with valuable teaching experience while she continued with her PhD studies (though most of our Researchers are already at the postdoctoral level) before being appointed to a lectureship.

Staff in Researcher roles are eligible for redeployment when their post comes to an end. One female and one male Researcher were able to progress to lectureships through this route during the period. This, in addition to the three lectureship appointments mentioned above, giving a total of two female and three male Researchers gaining lectureships since the 2015 Bronze submission.

In our Bronze submission we included an action to extend Research mentorship beyond the probation period. Several mentorship opportunities that are open to Researchers have been introduced during the period but there is a lack of clarity about the effectiveness of these mentorship opportunities (Action A4)

Academic staff on lectureship and higher-level positions receive support for career development through the PDR and development processes, including mentoring, described previously.

325 words

Action A4	Monitor the level of effectiveness of staff mentoring and the level of take up of post probation period mentoring.

(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).

A University careers and employability adviser is located in the School one day a week and is responsible for all aspects of student career progression. They organise the STEM careers fair and help students with preparing CVs, writing job applications and general career planning. To enhance their employability prospects, students are encouraged to gain work experience through a schemes such as Go Wales, Cardiff Undergraduate Research Opportunities Programme (CUROP) and the Cardiff Award (see below). All undergraduates and students of taught postgraduate programmes are also assigned a personal tutor whose role includes advising on career development. Following our Bronze action 2015-C6, students are reminded they have the right to request a female tutor if they wish.

The Go Wales program offers work shadowing and placement experiences for students who have a disability, caring or childcare responsibilities or are from a black and minority ethnic background. The Cardiff Award is a structured employability programme offering opportunities for students to gain recognition for skills obtained through extra-curricular activities, thus improving their professionalism and employability. Students are given access to work experience and placement opportunities, including the CUROP, Cardiff University Education Innovation Programme (CUSEIP) and opportunities to participate in employability workshops and recruitment activities. Both CUROP (see section 4.2v) and CUSEIP programmes offer a grant for a summer placement within the School, under supervision of academic staff. We have a good level of female recruitment on CUROP (31% female in 2017/18), while four funded places (two female, two male) were awarded to our students on CUSEIP in the last two years.

The Computer Science undergraduate programmes and some of the taught masters programmes have an optional year in industry which provides an excellent opportunity for career development and is correlated with good performance in the final year for undergraduates. To support such students, the School has a dedicated Placement Officer. Of the 21 placements in 2016/17, 6 (29%) were taken up by female students.

Networking events with industry are open to all taught course and research students and are intended to help with finding work experience, summer placements and year-long placements. Students can meet employers, discuss job opportunities, share their CVs and gain employability skills. In Cardiff there are 6-8 per year and they take various formats (e.g. "speed dating", "fishbowl" discussions, "flash" interviews) intended to appeal to different students. Our female students appreciate the informal atmosphere in these events and have been particularly successful in finding placements and graduate positions. Students on the Applied Software Engineering programme at the NSA benefit from the frequent contact with industry arising from the client-facing projects, that are integral to the course. There are also networking events and regular visits to industrial sites.

Postgraduate researchers, like the taught course students, have access to a dedicated training officer providing career development advice. Each year we have a Postgraduate Student Research Retreat which in recent years has included a focus on academic career training. Keynote speakers at the event often talk on this subject (the 2018 talk was from an ex PhD student now working for a robotics company). In addition, Cardiff University's Doctoral Academy provides many courses on career development. The University's career service also provides advice and has presented talks to our postgraduate research students at their own internal seminar series. Cardiff University's Doctoral Academy also provides many courses on career development.

All postgraduate researchers are offered teaching support roles, typically in lab classes and tutorials. Some students also deliver some lectures. In the period, one female postgraduate student who had applied initially unsuccessfully for a teaching and scholarship (T&S) pathway lectureship, was offered a short-term Teaching position to improve her experience of lecturing and was subsequently successful in attaining a lectureship.

Following Bronze action 2015-C5 postgraduates the students have been running a peer mentoring scheme in which more experienced postgraduates mentor students in earlier years. Its effectiveness needs to be evaluated and alternative approaches considered (Action A5). Training for postgraduate researcher supervisors has emphasises career development in the course of supervision and the annual postgraduate researcher progress reviews identify and monitor take up of training requirements.

680 **words**

Action A5	Survey postgraduate researchers regarding the effectiveness of current mentoring procedures, opportunities for new types of mentoring and awareness of support mechanisms that are already in place.

(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.

The University provides training courses for staff to support them in applying for research funding and our School seminar series now includes sessions devoted to research funding, delivered by staff from the College and from external funding agencies. Examples of support schemes in the University are the Physical Sciences and Engineering College-wide EPSRC First Grant Forum; the university fellowship support programme for postdocs and early career lecturers, EU fellowship support programmes (run internally) and the GW4 EPSRC Mock panel training days (which has limited places and takes one person from our School annually).

Individual funding applications are discussed at the annual PDR as well as within their respective School research groups. Most grant applications are collaborative (internally or eternally), with newer members of staff working with senior colleagues. The School operates a mandatory peer-review scheme for grant applications in which colleagues provide feedback on proposals prior to seeking approval from the Head of School. The School's weekly Research newsletter also advertises funding opportunities and research training events.

168 words

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?

The 'Cardiff Professional' programme provides a suite of training courses for P&S staff, based on the AUA (Association of University Administrators) Continuing Professional Development framework for professionals in the UK. It is used to prioritise development needs for individuals together with input from their line manager (and mentor) as a part of PDR and/or career development reviews.

During the review period, 8 female and 8 male P&S staff took part in 39 different training courses. For example, during the period, 8 Professional Service staff (4 female, 4 male) have taken courses in the "Leadership and Management" category.

The School has funded and supported (with short-term flexible working arrangements during exam periods) two female members of its Finance Team to study for a professional accounting qualification (AAT Diploma and CIMA Professional Qualification). Two male members of the IT support team have undertaken professionally recognised qualifications (ITILS foundation and RedHat Certified Systems Administrator). Other funded training has taken staff beyond the scope of their current roles; one male administrator having received training in change management, and one female administrator currently being trained on a project management framework.

185 words

(vi)   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.

The Performance Development Review process is the same for P&S staff as for academic staff, with the same training of the appraiser. Since 2010 we have maintained a 100% completion rate. Training needs and career aspiration are assessed and supported where possible during the coming year.

PDRs can be used by staff to provide feedback to line managers and senior staff on the effectiveness of the appraisal / development review process. This information is combined with the biannual staff survey results to improve and develop the culture in the School.

89 words

(ii)   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.

As well as training (see above), shadowing and secondment offer opportunities for P&S staff to develop their skills and careers. These are advertised widely as they become available. In the period, one female member of P&S staff has been seconded into the School as a research project manager (on a higher grade).

Within the last 12 months, the University has launched a P&S mentoring scheme to support career development. This is a professional partnership between P&S staff and an experienced mentor to develop specific skills and knowledge.

During the period one male member of staff moved from the technical support pathway to a Managerial, Professional and Specialist Staff role. This followed School funding and support (through flexible work during training and exam periods) for his study for a professional qualification – the HSE (Health and Safety Executive) Certificate in Health and Safety Leadership Excellence.

143 words

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.

During the period, one academic member of staff took maternity leave while one P&S staff member took maternity leave.

In response to our Bronze submission Action 2015-D2 to improve support for staff taking maternity leave, we have adopted a Returners Policy document that includes provision for staff to apply for support on return from leave (which could include some other long-term leave in addition to maternity, such as for ill-health or other personal reasons, but separate from study leave). This includes applying

for funding to provide particular types of support prior to taking planned leave (i.e. as in maternity leave). There are multiple issues that may be discussed and resolved before going on leave, including discussion of: requirement for cover (by other academic or P&S staff) including for teaching and supervision of taught course and research students; intention to use "Keeping in Touch" days involving occasional university attendance during maternity leave; preferences for reduction in administration or management responsibilities for an agreed period on return; possibilities for attendance at a conference or training course; short term research support while on leave or after returning; possibilities for a phased return to work; assistance in grant writing on return.

Where P&S staff maternity leave is covered by another either new or existing post, we arrange one month's overlap prior to going on leave.

222 words

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

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

The nature of support offered depends upon the outcome of the discussions of topics such as those listed above and is guided by the staff member's preferences. The "Keeping in Touch Days", with a maximum of 10 days attendance at the University, can be taken without losing entitlement to maternity/adoption pay. These allow individuals to attend, for example, staff meetings and training events. They could also be used to meet with colleagues about teaching or research.

76 words

(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.

As indicated in the "before leave" section, the Returners Policy provides multiple examples of types of support that can be offered and funded. In developing the Returners Policy there was recognition of the fact that different staff can be expected to have different preferences for the nature of support (thus some academic staff might be keen to return to teaching while others might prefer reduced teaching or administration to concentrate on research). They also allow for phased return, part-time, "compressed hours", and different forms of flexible working.

Returning staff go through induction (again), to raise awareness of their options including training. We also review any specific requirements, such as breast feeding arrangements (for which we have provided a private room) and training needs.

115 words

(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.*

The P&S staff member who took maternity leave in the period had been on a full-time contract, but returned to a part-time contract in January 2016, initially of 0.6 FTE, then 0.8 FTE, and working compressed hours, all based on their requests. Both the academic and P&S members of staff who took maternity leave in the period remain in post.

60 words

SILVER APPLICATIONS ONLY
Provide data and comment on the proportion of staff remaining
in post six, 12 and 18 months after return from maternity leave.

(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.*

Four male academic staff and three male P&S staff took paternity leave in the period (Table 5.2).

We have no examples of adoption or parental leave, but one example of shared parental leave.

Entitlements to paternity leave and shared parental leave are documented on the University Intranet and it is highlighted in staff induction. We will remind people to take advantage of these entitlements periodically in staff communications and add a section to the School Wiki to draw attention to the policy (Action D1).

84 words

Action D1	Update the school's Wiki to include material on maternity and paternity leave making clear people's entitlements.

Table 5.2 Paternity and Parental Leave (last two rows are same person)

Career pathway	Absence Start Date	Absence End Date	Absence Description	Absence Days
P&S	26/09/2016	30/09/2016	Paternity leave ordinary	5
T&S	29/09/2016	05/10/2016	Paternity leave ordinary	5
P&S (Technical)	03/12/2015	16/12/2015	Paternity leave ordinary	10
T&R	29/06/2016	05/07/2016	Paternity leave ordinary	5
T&S	14/05/2015	20/05/2015	Paternity leave ordinary	5
T&R	05/01/2015	09/01/2015	Paternity leave ordinary	5
T&S	12/06/2017	16/06/2017	Shared parental leave	5
T&S	17/07/2017	21/07/2017	Paternity leave ordinary	5

(vi)   Flexible working

Provide information on the flexible working arrangements available.

The University flexible working policy allows staff to request changes to their mode of work, some of which might result in a change of contract. These include requests for part-time work, a career break, semester or term-only working and changes to the pattern of hours worked. Currently 8 members of P&S staff, 9 academic staff and 2 research staff have a part-time contract. In addition to formal requests that might affect a person's contract, the School has a long-standing informal policy of supporting staff requests for flexibilty in how they organise their work on a day to day basis, with regard for example to working from home on certain days and working particular hours in the School. Several of our staff take advantage of this to accommodate child-care arrangements.

Following Bronze Action 2015-D3, new staff are informed of opportunities for flexible working at the School induction and on the School Wiki. A short workshop on flexible working was delivered by an HR representative of the parent College of the School.

Before the beginning of each academic year all teaching staff are invited to express personal constraints and preferences for scheduling their lectures. This has been particularly helpful for staff with caring commitments and has been reflected in positive feedback in the School staff survey (77% agreement with "My line manager is supportive of requests for flexible working", with 21.5% being "don't know", presumably based on not having requested it).

240 words

Action D2	Ensure all staff are made aware of opportunities for flexible working.

(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.

We have not have had staff in this category in the period, but the Returners Policy described above is flexible and would be applicable to staff returning to full-time work.

31 words

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.

Everyone in the School is expected to treat each other with dignity and respect, whether this be between students, staff or staff-student interactions. Responses in our 2018 staff survey are generally positive in reflecting the situation in practice (Figure 5.2), though with a small number disagreeing. More are recorded as "don't know" but this could reflect a reluctance to generalise in the absence of complete knowledge. Students are given an introductory talk on equality and diversity at induction and the Student's Handbook highlights the School's commitment to its legal and moral obligations of eliminating discrimination and promoting equality.   All staff are required to complete an online training module on avoiding unconscious bias in the workplace.

The School encourages all staff to have a mentor and to become mentors themselves. In addition to formal mentoring schemes during the probation period, there are other schemes. For example, the all-Wales Women in Universities Mentoring Scheme (WUMS) facilitates professional and career development for women by setting up inter-university mentoring partnerships. The scheme runs induction workshops for mentors and mentees and has clear guidance and best practice codes to support both.

Staff are encouraged to participate in and contribute to the Cardiff Women in Science (CWIS) network and the Trevithick Women in STEM Group. The networks promote gender equality across STEM disciplines and provide opportunities for multidisciplinary networking, mentoring, professional development and sharing of information to support female scientists across the University. The Trevithick group runs regular meeting and events and, for example, in 2017 it sponsored 4 places on the WISE Returners' Programme for staff (targeted at supporting parents).

The School encourages attendance at the annual BCS Women's Lovelace Colloquium, for female students working in the industry to meet with fellow computer science students from other universities.

Within the student population there are several opportunities to promote interaction, such as the Computer Club and the student-led Computer Science Society.

Team work forms a significant part of the Undergraduate course, particularly in the second year and standards of mutual respect and tolerance are promoted through a Code of Conduct, introduced in 2017. This document was developed in a student project supervised and co-authored by Helen Phillips and Wendy Ivins. The Code stresses the avoidance of discrimination "on the grounds of sex, sexual orientation, age or disability, nationality or race, or of any other condition or requirement".

Postgraduate student-organised events are encouraged and funded by the School and include FTS (Food, Talk and Students) for informal talks and social activities and PSTR (PhD Student Teaching and Research Forum). Both events are normally well attended and provide relaxed environments for students to interact in the context of their research and socially. Communications include their slack chat (qbchat.slack.com) social media group. Annual postgraduate student surveys have been used to monitor inclusivity

Within the postgraduate research community, a positive culture of student interaction has been reflected in surveys (89% overall satisfaction, 96% Supervision in the postgraduate research students 2017 survey). A postgraduate research student operations team was set up in 2016 to reflect the expanding needs for postgraduate research student support. The team meets monthly and covers gender equality and inclusivity matters. A bi-annual student staff panel meets to consider such issues more formally. The School's research students elect a team of 6 representatives each year, one of whom is elected Chair. These elections have resulted in a good gender balance with typically 2-3 (of 6) representatives being female.

The School Christmas meal is attended by a mix of staff at different career levels and gender. Other social events are organised by research groups such as "Vlunch" (Visual Computing) and "DKE" (Data and Knowledge Engineering) which run regular relatively informal lunchtime seminars, with a view to encouraging staff-student interaction in the research community.
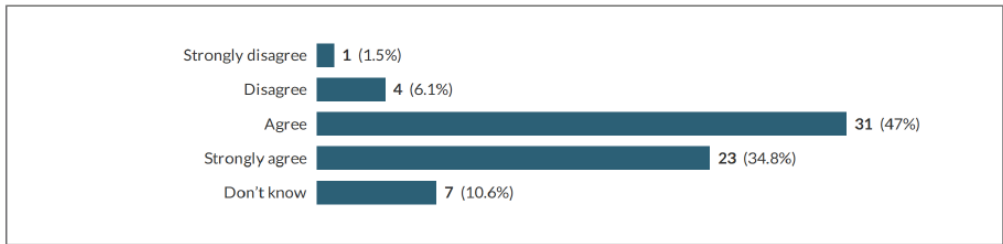
In an effort to raise awareness of gender equality and inclusivity issues and enhance staff and student development we plan to run an annual workshop that will be aimed at, but not exclusive to, female staff and students, who would together plan the agenda for the event (Action E3). The intention is to initiate discussion of ED&I issues that should be addressed in the School including those at the intersection of gender and ethnicity. We will survey the perceived effectiveness of the first workshop prior to making a decision on continued running of the event.
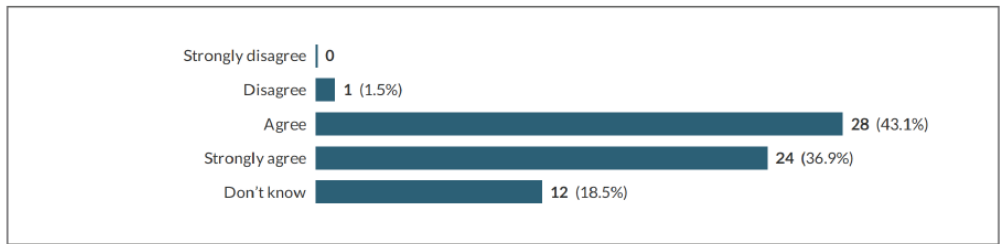
719 words

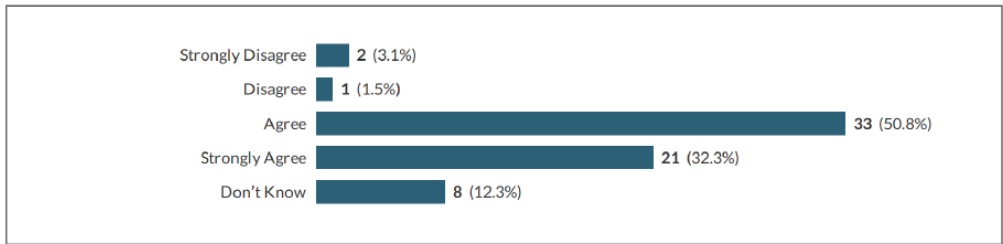| Action E3	Initiate and evaluate the effectiveness of an annual workshop aimed at (but not exclusive to) women staff and students to raise awareness of ED&I and share insights into academic and research career development.

Figure 5.2 Workplace culture survey results

My School makes it clear that unsupportive language and behaviour are not acceptable (e.g. condescending or intimidating language, ridicule, overly familiar behaviour, jokes/banter that stereotype women or men or focus on their appearance).

Strongly disagree	1 (1.5%)
Disagree	4 (6.1%)
Agree	31 (47%)
Strongly agree	23 (34.8%)
Don't know	7 (10.6%)

Inappropriate images that stereotype women or men are not allowed in my School (e.g. in calendars, newspapers and magazines; on computers and mobiles; on marketing material):

Strongly disagree	0
Disagree	1 (1.5%)
Agree	28 (43.1%)
Strongly agree	24 (36.9%)
Don't know	12 (18.5%)

Work related social activities in my School such as staff parties, team building or networking events, are likely to be welcoming to both women and men (e.g. avoid venues that may be degrading to women or men; avoid sporting activities that some staff may not be able to, or wish to, watch or take part in; avoid times that frequently exclude part-time staff or those with caring responsibilities):

Strongly Disagree	2 (3.1%)
Disagree	1 (1.5%)
Agree	33 (50.8%)
Strongly Agree	21 (32.3%)
Don't Know	8 (12.3%)

(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 polices.

The University surveys all staff biannually to monitor these issues and the Colleges and Schools select priority areas for particular attention. The School also undertakes its own staff and student surveys. In the latest staff survey 86% of staff agreed that "I am confident that my line manager/supervisor would deal effectively with any complaints about harassment, bullying or offensive behaviour", with 4% don't know.

We have the support of our College HR team to assist with any issues on bullying and harassment, equality, disciplinary and grievances which ensures we adhere to University policies. Within the School however we have initiated the appointment of at least two "Dignity at Work" contacts, who staff are invited to speak to when they have negative experiences or concerns and be given advice on possible further courses of action. Those contacts receive training on performing the role and line managers are kept informed of any policy changes or important information by emails circulated by the School HR Administrator. The College HR team meet regularly each month and information from these meetings is disseminated to staff in the School. Line Managers receive training on Promoting & Supporting Wellbeing and Managing & Supporting Staff which addresses these issues.

201 words

(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

Committee members are identified primarily by administrative role for academic staff and by job description for professional service staff. Current membership (Table5.3) does not indicate inequality in gender balance relative to overall staff numbers. Committee roles for academics are filled either through and open call to express an interest, response to an interest expressed to line managers (including in PDR) and, less commonly, at the request of the Head of School. We have introduced Action C5 to re-word the open calls to stress the importance of gender equality in committee membership.

The School's Senior Management Team is composed of the Head of School, the School Manager, four Directors of thematic areas and three Research Group heads. Currently, two of these nine staff are female, reflecting female academic staff numbers. Of the three Senior Tutor roles, one is female, again reflecting our gender balance.

Committee membership for P&S staff is largely determined by their job descriptions which typically specify such membership.

To improve gender balance but not overburden female staff, the School has introduced three Deputy Director roles to support early career and under-represented staff in advancing to senior roles (currently Director of Learning and Teaching is male and the Deputy is female; the Director of PGR Studies is a Professor while the Deputy is early career).

217 words

Action C5	Revise the text of open calls for committee membership to stress our wish for gender equality in these roles.

Table 5.3 Committee membership (SMT: Senior Management Team; TLAQC: Teaching Learning and Academic Quality Committee; UGT Ops: Undergraduate Taught Operations Team; PGT Postgraduate Taught; NSA National Software Academy)

	Female					Male				
	Prof 5%	SL 48%	L 31%	PS 36%	Extrn 23%	Prof 95%	SL 52%	L 69%	PS 64%	Extrn 77%
SMT	0	2	0	0	0	5	2	0	1	0
School Brd	0	2	0	1	0	6	2	2	1	0
TLAQC	0	1	3	1	0	0	1	3	3	0
Ext Adv Brd	1	1	0	0	3	5	2	0	2	10
UGT Ops		2	2	2			1	4	3	
PGT Ops				1		1	3	4	2	
NSA Ops		2	5					6	2	
PGR Ops				3		1		4		
Ethics			1					2		

(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?

Membership of external committees is regarded as an aspect of Citizenship and hence is a component of our Workload model. Staff record such membership in their annual Performance Development Review and it is treated very positively in assessing staff members' contributions over the year. It is also a significant consideration when being considered for promotion, which acts as an incentive.

Participation in influential external committees within the University, but outside the School, is often available to staff with formal administrative duties in the relevant area. Administrative duties are published on the School's Wiki and normally allocated in one of the following ways:

- By mutual agreement between the member of staff and someone more senior

- By expression of interest to the Head of School after a general call to all staff

- At the request of the Head of School, but at the discretion of the member of staff

Many academic staff are invited to join external committees in their professional capacity and it is at the discretion of the individual whether to accept or not. Costs of participation, such as for travel, are normally covered by the School unless other sources are available.

192 words

(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.

The School has implemented the University's academic workload model which recognises activities in the following key areas: Modular teaching, Non-modular teaching (e.g. personal tutoring), PGR supervision, Teaching-related scholarship, Research, Engagement, Management and administration, Citizenship.

The supporting IT system provides data on career pathway and gender and this information is reviewed when creating individual workload models and ensuring parity across the School. Once a final workload allocation for the academic year is published within the School, reports are made available to the University's Executive Board for review and comparison across the organisation.

The workload model is in its third year of implementation. Currently the system does not permit an individual to compare themselves against others (even in an anonymised way) nor does it give a line manager a view of their report's allocation. Transparency and support for more informed PDR discussions is high on the University's agenda and within the School we have shared workload data.

At present, members of staff are encouraged to discuss the model, its implementation or any aspects of their allocation with the School Manager. Any issues that arise are resolved by the Head of School.

There is no workload model for professional and support staff.

200 words

(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.

For the academic year 2017-18 most of the School's regular committees and boards have been given a fixed day/time to occur each month – all scheduled between 1 and 4pm each Wednesday afternoon, with most being timed to finish by 3pm. The repeated structure to monthly meetings is intended to allow staff the opportunity to plan attendance well ahead. Infrequent but important meetings, including all-School gatherings and social events, are always scheduled between 10am and 3pm and with as much notice as possible.

82 words

(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.

Following our Bronze Actions 2015-B1,B2 we monitor and update our marketing materials and web site to ensure there is a good gender balance, with women portrayed in a positive light (Dr de Ribaupierre of our SAT has been assigned that role). Within our internal seminar series, which are based around the individual research groups, the gender balance of speakers is determined by the profile of our academic staff, in that all research active academic staff (and research students) are strongly encouraged to present on a regular basis. The speakers at the "external" seminars have been largely determined by proposal for speakers that individual staff members make. We are aware that the majority of external speakers have in practice been male and we have now initiated an action to seek out female speakers in to redress this imbalance (Action F3).

140 words

Action F3	Improve the gender balance of our invited external seminar speakers.

(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 majority of staff in the School are involved to some extent in outreach through their participation in open days and UCAS days, which involve presentations and individual engagement with visiting students. Following the Bronze submission commitment to increase investment in outreach, several staff members have become more actively involved in other aspects of outreach (described below) These include five female and five male members of staff. We do however plan to raise further the profile of outreach within the school (Action E2). Involvement in open days is recognised formally in our workload model as part of Citizenship while other forms of outreach are recognised explicitly in the model as "external engagement and outreach**".**

In addition to staff efforts, a major development since the Bronze submission is the previously mentioned establishment of the STEM Ambassador Scheme that recruits students to visit local primary and secondary schools to deliver workshops to pupils on coding and to provide a fun introduction to computer science. The students also assist at Teacher Continuing Professional Development (CPD) workshops, university open days and college events. As part of the scheme they join the UK national STEM Ambassador programme and undertake the STEM net half day training course, as well as receiving further training from existing Ambassadors in the School. Currently we have 77 STEM Ambassadors of which 21 are female (38% comparing with about 19% female students overall in the School). Popularity of the scheme has been increasing (we had 12 students in the initial intake in 2015). While the majority of STEM ambassadors are undergraduate students, we have had 4 PhD ambassadors in the period but we need to encourage more postgraduates, particularly research students to engage with this programme (Action B4).

The School operates as a Technocamp hub (with the "mission is to inspire, motivate and engage people with computational thinking and promote Computer Science as underpinning all aspects of modern society."). Our Technocamp events are designed either for school children, teachers or families or more generally for adults. While organised largely by our staff, the student STEM ambassadors deliver the content. As part of Technocamp, we visit schools and run in-house events (see Table 5.4).

Recently the School has obtained funding to participate in the Institute of Coding scheme for secondary school and further education students (see Table 5.4 for initial activities).

Table 5.4 Examples Outreach events since March 2015

Technocamp coding sessions for students in more 100 schools in the South Wales area.
In-house 'Skills Days' on coding and digital literacy for primary school children, variously known as Code Clubs (running weekly over a period of 6 weeks), "boot camps" (1 or 2 days) and workshops (half day).
In-house Technocamp workshop on 'digital competency' coding skills for 30 primary, secondary and further education teachers as part of their continuing professional development (CPD) training.
Similar Technocamp workshop to the above to 15 teachers at a further education college in North Wales.
Community-based events: Rhondda Gaming Expo (2 days), Digital Inspiration (1 day), Skill Cymru at the Motorpoint Arena (2 days); 6-week programme at the Llanhileth Miners Institute (3 hours per week), in association with the Welsh Government funded digital inclusion programme; 2 days at the Grangetown Community Hub.
Cardiff University annual STEM Live events (part of the RCUK funded University's School's Partnership Project) at the National Museum in Cardiff: an interactive computing stall (with Lego Mindstorms). Attended by over 120 year 7 and 8 local secondary school students. Schools are asked to bring equal numbers of boys and girls (apart from all-girls or all-boys schools).
In-house: Two "Cyber Girls First Days" each with about 60 pupils from 12 schools. Included female role models from 10 Downing Street (the Chief Communications Officer) and from GCHQ.
Institute of Coding scheme for secondary school and further education students: weekly code club at the National Software Academy; weekly club at a school in Usk.

Helen Phillips has taken the WISE People Like Me Training to qualify her to deliver a session for girls to consider a career in STEM. Helen was involved in the Cardiff Trial of the training programme which involved sessions to evaluate the methods employed.

433 words (or 690 words including content of Table 5.4)

Action B4	Encourage more postgraduates to enrol as STEM ambassadors.
Action E2	Add a new section to the School Wiki on outreach activities organised by the School and encourage more people to be involved.

6202/6500 words (or 6459/6500 including Table 5.4)

6. CASE STUDIES: IMPACT ON INDIVIDUALS

Wendy Ivins, Senior Lecturer and member of self-assessment team

I joined the University in September 2000. I was given roles that developed my leadership and management skills, such as Chair of the Teaching, Learning and Academic Quality Committee (2006-2009) and Leader of Taught Postgraduate Operations Team (2009-2015). In 2011 I applied for promotion to Senior Lecturer on the Teaching and Scholarship (T&S) pathway but was disappointed when I was unsuccessful. My application was strong in most areas but lacked sufficient evidence of Scholarship.

In the subsequent years, the School went through a period of change with three Directors of Teaching (DoT) and three Heads of School (HoS). I was given excellent support, advice and opportunities from all my different line managers (DoT) and from each HoS with regards to enhancing my development needs and supporting my career progression. This included: extensive on-going training in Leadership and Management; encouragement and support for building external recognition through becoming a BCS Assessor for University Accreditation and an external examiner; and opportunities to contribute to strategically important projects such as developing new programmes and establishing placements.

I became Programme Director for the newly established National Software Academy (NSA) in June 2015, which gave me the opportunity to demonstrate my leadership skills in an initiative of significant strategic importance to the University, Welsh Government and industry. My role involves line management of eight T&S lecturers at the NSA. I provide academic leadership to enable the NSA team to develop and deliver innovative degree courses with an emphasis on project-based learning. Our close collaboration with industry enables the transfer of realistic work-experience into the teaching environment to provide a distinctive student experience that enhances the employability of all students. Our approach was recognised by Cardiff University through winning the "Excellence in Teaching Award 2017" and by industry through winning the "Collaboration of the Year Award 2016" and "Industry Trailblazer Award 2017" at the Welsh Technology Awards.

The HoS set me the key objective of taking leadership in developing Scholarship at the NSA. In the last two years the NSA team has worked collaboratively to disseminate its work in two national conferences, four international conferences, one journal paper and a book chapter. I am particularly grateful for the advice and support I have received from our current HoS when dealing with sensitive circumstances such as illness and bereavement within my team. I've also had personal experience of receiving such support with my mother undergoing major surgery last summer and the recent death of my father. It was reassuring to know that I could take the time I needed to support my family, without worrying about work commitments.

My re-application for promotion to Senior Lecturer in 2016 was successful and I was recently appointed as Director of Collaborative Learning with Industry. This is a new post and as part of the Senior Management Team I have responsibility for strategy and operational oversight with regards to industry-focused teaching in the School. The last three years have been the most rewarding in my career. I am grateful for the opportunity to make a real difference in the School through my leadership role in establishing the National Software Academy and I'm looking forward to taking on the

challenges in my new role. This would not have been possible without the on-going encouragement, advice and support of my line managers and HoSs.

Kathryn Jones, Lecturer

I joined the School in 2017 as a Lecturer at the National Software Academy (NSA). I spent the previous 12 years working as a Software Engineer specialising in developing applications and intelligent network services for the telecommunications industry. Prior to this I had been an undergraduate student of the School attaining a first-class degree in Computer Science that led to me pursuing a PhD in optimisation of 3G network designs.

During my time in industry I had considered changing companies, but as I was working part-time this usually "fell flat" at the initial stages – very few software companies are supportive of part-time working at the recruitment stage. When an opportunity presented at the NSA I decided to make an application as it explicitly mentioned that part-time working was supported and that women were under-represented in the School and so applications along these lines were encouraged. The NSA now has more women lecturers than men, which contrasts to my experience of gender balance in the workplace.

I have two school age children (for which I am the primary carer) and my husband has a demanding career too. I have been able to work on a part-time basis, which has allowed me to balance looking after my children with my career ambitions. I have additional carer responsibilities for my son, due to him having a chronic illness, and this means having to attend regular appointments at the hospital. The School has ensured that I do not have any fixed time-table activities on days that I need to attend appointments, which has been a real help. I also have the choice to work from home on days with no timetabled teaching commitments.

During my first semester the work-load model seemed too intense for the hours I was employed to work and when this was realised the School ensured that adjustments were made to address the issue. Resultingly, I have been able to apply for two separate lots of funding and co-authored a paper on gender equality in software engineering. I have already attended various staff development courses provided by the University and School seminars and workshops.

I recently applied for the Deputy Director of Learning and Teaching role within the School and was successful. I felt particularly encouraged to apply for this role because of the Head of School's email, which highlighted that any member of academic staff within the School was eligible to apply. I am looking forward to the challenge and scholarship opportunities this role will provide in the coming years.

971/1000 words

7. FURTHER INFORMATION
Recommended word count: Bronze: 500 words | Silver: 500 words

Please comment here on any other elements that are relevant to the application.

As indicated above, the School has undergone a considerable expansion in both staff and student numbers since the Bronze award. Implementation of the Bronze actions has resulted in very clear progress in improving the gender balance in the School, particularly through the appointment of new lecturers, but also at the student level. It should be pointed out however that most of the recent staff appointments were made at the Lecturer level, with one at Senior Lecturer. While we now have better representation of females at senior levels achieved via promotion, including to a Professorship, there is very good reason to believe that the increased numbers of female academics, along with our improved support procedures for career development, will lead in coming years to significant further improvement in gender balance at the senior levels.

Another of the major changes since the Bronze Award was the introduction of the National Software Academy (NSA), which is located in Newport. We have already alluded to the project-based learning approach at the NSA which is designed to appeal to practically-minded students who might not be attracted to more traditional courses. One key aspect of that teaching is an active learning approach in which much greater emphasis is placed on project work within the main scheduled classes, in combination with online support. Our new Director of Teaching is championing this approach on the Cardiff site and it forms part of our broader strategy to widen the appeal of our courses to a more diverse student population as well as improving teaching effectiveness in general.

In 2021 the School in Cardiff will re-locate to a new purpose-built building. The consultative design process for this building has placed emphasis on creating spaces that will foster communication among both staff and students. It has also included quite practical issues such as the commitment to the provision of non-gender specific facilities. Consultation on the new building is to continue with a diverse group of staff and students whose views will direct the design of a wide variety of spaces from social seating and public collaboration spaces to individual study areas and project rooms.

353/500 words

8. ACTION PLAN

The action plan should present prioritised actions to address the issues identified in this application.

Please present the action plan in the form of a table. For each action define an appropriate success/outcome measure, identify the person/position(s) responsible for the action, and timescales for completion.

The plan should cover current initiatives and your aspirations for the next four years. Actions, and their measures of success, should be Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

See the awards handbook for an example template for an action plan.

ACTION PLAN

Actions related to collecting information

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
A1	Review and broaden the coverage of the annual staff equality, diversity and inclusion (ED&I) staff survey	Identify areas of concern; evaluate effectiveness of actions that have been taken. The results will inform and be acted upon at School management meetings. There is a need for new questions notably relating to ethnicity.	An annual staff survey has been carried out since 2013.	Annual	Chair of the Athena SWAN Self Assessment Team	70% of staff complete the survey.
A2	Run an annual student survey about equality, diversity and inclusion (ED&I). Questions will also be asked to identify factors affecting their decision to enrol in Cardiff to support better understanding of the issues. Include questions on culture and ethnicity to better understand the interplay between these and gender under-representation in our discipline.	Identify areas of concern; evaluate effectiveness of actions that have been taken; increase understanding of how the school can be made a more attractive place to study for different groups of students.	The first survey was launched in October 2018.	Annual	Chair of the Athena SWAN Self Assessment Team	50% of students complete the survey. Where relevant, new actions are identified to address issues that arise from the survey.
A3	Consult with female MSc students (and, if possible, decliners) to identify possible reasons why female applicants might not accept places on MSc programmes.	The proportion of female applicants accepting an offer for our MSc programmes (27%) is far lower than for male applicants (58%).		2018/2019	Director of Teaching	Proportion of acceptances is approximately equal among male and female applicants.

A4	Monitor the level of effectiveness of staff mentoring (through staff consultation) and the level of take up of post probation period mentoring.	There is currently a lack of clarity regarding the effectiveness of available mentorship opportunities.		2019/2020	HR administrator	Statistics are obtained about how staff perceive the effectiveness of mentorship opportunities. At least two areas for improvement and one success story are identified.
A5	Survey postgraduate researchers regarding the effectiveness of current mentoring procedures, opportunities for new types of mentoring and awareness of support mechanisms that are already in place.	Some female students have withdrawn from their PhD course for family reasons.		2018/2019	Director of PGR	No students withdraw from the PhD course because of preventable family reasons.
A6	Investigate and act upon factors affecting recruitment of females on the Applied Software Engineering (ASE) degree.	It was assumed that the emphasis in the ASE degree on project-based learning would attract a more diverse student population, which has not (consistently) been the case thus far.		2018/2019	Director of Teaching	Survey carried out during the academic year and/or discussion with female applicants and current female students on CS and ASE degree programmes. Remedial actions are proposed for the next academic year.

Actions related to recruitment

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
B1	Review and revise recruitment procedures for researcher staff positions, especially with regard to advertising material and the gender balance of appointment panels.	Reduce the possibility of unconscious gender bias in the panels and present a positive image of gender equality to applicants. Increase the proportion of female staff.	Recruitment panels are required to include at least one female member of staff and at least one member has to have taken recruitment training.	2018/2019	HR administrator	The proportion of female research staff increases from around 10% to at least the sector average of 22%.
B2	Create a better balanced and positive website and marketing materials with particular regard to improving current recruitment levels of female researchers and postgraduate researchers. Add case studies at multiple career points and with variation in gender and ethnicity, linked from the respective sections.	The percentage of female research staff is noticeably lower than for other staff categories. Despite general improvement in student gender balance, there has not yet been any noticeable change in the proportion of female postgraduate researcher (PGR) applications, although the proportion of PGR females is above the sector average.	Marketing materials aimed at undergraduate and postgraduate taught programmes have been updated to ensure that female students are well represented in photos and quotes from individual students.	2018/2019	HR administrator and Director of PGR	The proportion of female research staff increases from around 10% to at least the sector average of 22%. The proportion of female PGR applications increases by at least 5%.
B3	Increase the prominence of female academics at open days.	Encouraging more female students to apply to undergraduate courses.	Student ambassadors at open days already have a very good level of female representation.	Continuous	Undergraduate staff representative	Recent increases in the proportion of female students are at least sustained, and ideally further extended.

B4	Encourage more postgraduates to enrol as STEM ambassadors	There is currently a low level of representation of postgraduates among STEM ambassadors		Annual	Director of Teaching	5% of STEM ambassadors are postgraduate students.
B5	Review the research student admissions processes to ensure all applications/panel interviews have the input from at least one male and one female member of academic staff. Monitor the effectiveness of these changes through regular admissions reporting.	The school currently has a policy that recruitment panels should have at least one female member of staff, but no such policy is currently in place for the admission of post-graduate researchers.		Annual	Director of PGR	All interviews have input from at least one male and one female member of staff.

Actions related to career development

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
C1	Improve awareness among staff and line managers of the criteria for promotion, common reasons for failed applications, and the types of support that are available.	Support female members of staff to apply for promotion, to improve the current gender imbalance among senior academic staff.	Several actions were already put in place concerning promotion procedures, including improved appraisal training for line managers, broadening mentoring opportunities, ensuring female representation on promotion panels and mandatory unconscious bias training.	2019/2020	Head of School	Proportion of female staff who apply for promotion is approximately equal to the proportion of male staff.
C2	Ensure staff are aware of mentoring opportunities beyond the probation period and supported in their appraisal (Performance Development Review - PDR) in participating in such schemes; evaluate the uptake of these opportunities.	While various mentoring opportunities are available, it is unclear to what extent staff are taking advantage of these opportunities, and what is the level of engagement of the mentors.		Continuous	HR administrator	Statistics about the participation in mentoring schemes are obtained. Subsequently aim to increase the level of participation in mentoring schemes by at least 10%.

C3	Ensure staff are made aware of and encouraged to participate in training opportunities.	The university offers a wide range of training opportunities but these are not always easy to find on the intranet.	Reminders are sent to all staff.	Continuous	HR administrator	Increased awareness evidenced in annual staff survey; higher uptake of training courses.
C4	We will consult on any negative attitudes towards the appraisal process and seek to improve this process to address them.	15% of staff in the latest survey disagreed with the claim that the school provides a helpful appraisal.		2019/2020	HR administrator	The proportion of staff disagreeing that appraisal is helpful is consistently below 10% in staff surveys.
C5	Revise the text of open calls for committee membership to stress the wish for gender equality in these roles.	Improve and maintain the gender balance of senior roles and committee membership in the School.		2018/2019	Head of School	Gender balance of committees reflects that of the School

Actions related to workload management / flexible working

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
D1	Update the school's Wiki to include material on maternity and paternity leave making clear people's entitlements.	Increase awareness of support that is available to staff including the recently introduced Returners to Work policy.	Some content is already available on the university's intranet.	2019/2020	HR administrator	Increased awareness evidenced in annual staff survey.
D2	Ensure all staff are made aware of opportunities for flexible working.	We are keen to ensure that current levels of awareness and takeup of flexible working are maintained particularly among new staff.	Before the beginning of each academic year all teaching staff are invited to express personal constraints and preferences for days and times for their lectures to be scheduled.	Continuous	HR administrator	Increased awareness evidenced in annual staff survey.

Actions aimed at increasing awareness

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
E1	Raise awareness of ED&I issues in the School: Head of School to include regular item in monthly update/communications to staff. Update students each semester on ED&I. Add a section on ED&I in the School Wiki.	Awareness among staff in the school of the activities and issues related to the Athena Swan self-assessment team can be improved.		Continuous	Head of Shool and Chair of the Athena SWAN Self Assessment Team	Increased awareness evidenced in annual staff survey and in Student surveys.
E2	Add a new section to the School Wiki on outreach activities organised by the School.	Raise awareness among staff of outreach activities and encourage more staff to be involved.		2018/19	Administrator with responsibility for supporting outreach	Increase in the number of staff active in outreach activities.
E3	Initiate and evaluate the effectiveness of an annual workshop aimed at (but not exclusive to) women staff and students to raise awareness of ED&I and share insights into academic and research career development.	Foster discussion of ED&I issues that should be addressed in the school including at the intersection of gender and ethnicity.		2019/2020	School Manager	Positive feedback on the perceived effectiveness of the workshop from the point of view of staff and of students, which will be followed up by repeating it in subsequent years.

Other

Ref.	Planned action/objective	Rationale	Progress to date	Timeframe	Person responsible	Success criteria and outcome
F1	Raise the profile of Athena Swan related issues at meetings of the External Advisory Board. Introduce as standing agenda item.	A greater involvement of the External Advisory Board would likely result in meaningful actions, e.g. based on initiatives from industry to improve gender balance.		Continuous	Head of School	At least one new action is proposed by the External Advisory Board.
F2	Review learning materials for bias in gender and other protected characteristics and propose changes to content where appropriate.	Efforts to improve gender bias and diversity have so far mostly focused on the public website and marketing materials.	The school has an annual peer review process for teaching related matters. This has already been used to identify gender balance and diversity related issues.	2020/2021	Director of Teaching	Increased satisfaction with learning materials as evidenced by questions about gender balance in the annual student survey.
F3	Seminar organisers will be encouraged to increase the percentage of external fmale speakers. They will be required to report this percentage at the end of every year.	Provide more female role models for students and staff.		Continuous	Chair of the Athena SWAN Self Assessment Team	Increased percentage of female external speakers.

| F4 | Improve the diversity of the External Advisory Board. | Currently 6 board members out of 21 are female. We envisage that a better gender and diversity balance will lead to better advice on addressing equality issues in the School. | | Continuous | Head of School | Annual improvement in diversity of the External Advisory Board members . |