



## Athena SWAN Bronze department award application

**Name of university:** Cardiff University

**Department:** School of Computer Science & Informatics

**Date of application:** 30<sup>th</sup> April 2015

**Date of university Bronze SWAN award:** April 2014

**Contact for application:** Professor Christopher Jones

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Athena SWAN **Bronze Department** awards recognise that in addition to university-wide policies the department is working to promote gender equality and to address challenges particular to the discipline.

Not all institutions use the term 'department' and there are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' for SWAN purposes can be found on the Athena SWAN website. If in doubt, contact the Athena SWAN Officer well in advance to check eligibility.

It is essential that the contact person for the application is based in the department.

### **1. Letter of endorsement from the head of department: maximum 500 words**

*An accompanying letter of endorsement from the head of department should explain how the SWAN action plan and activities in the department contribute to the overall department strategy and academic mission.*

*The letter is an opportunity for the head of department to confirm their support for the application and to endorse and commend any women and STEMM activities that have made a significant contribution to the achievement of the departmental mission.*

As Head of the School of Computer Science and Informatics I am delighted to endorse this application for an Athena Swan Bronze Award. At the time of this submission I would have been in post as Head of School for around two years and as part of my appointment process I made a personal commitment to improve the gender equality culture within the School.

There is no doubt that the School faces challenges that must be addressed and that strong engagement with the Athena Swan process offers the prospect of significant improvement. Most notable on the staffing front is the absence of female staff at professorial level despite having twelve professors, though it may be remarked that some years ago we did have an impressive female professorial role model in Prof Antonia Jones (who retired in 2007). In the student population our proportion of undergraduate females is slightly below average for the sector and female applicant numbers are not increasing considerably (though the PhD population numbers are above average).

Several actions have been initiated with a view to remedying the situation:

- Future staff recruitment procedures will target talented female academics through the use of head hunters and amendment of recruitment literature to emphasise our wish to increase numbers of female academics.
- Improve the promotion prospects of staff by placing greater emphasis on promotion in the appraisal procedures both with regard to the formal documentation and to the advice to line managers.
- Improve the mentoring procedures and level of involvement in networking groups to support women's careers.
- Increase the number of female undergraduates, by devoting more resources to outreach activities, with more explicit recognition of such activity in appraisal and workload management, along with measures to engage with female students in the recruitment process.
- Improve the environment for female students in the School through increased promotion of extra-curricular computing and social activities and creation of an online forum for females in computing.
- Remove unintended barriers to progress by running unconscious bias workshops.

It is encouraging that in the recently completed academic promotions round the School had two female members apply for promotion, one to Reader, the other to Senior Lecturer, both of whom were successful after undergoing the University and external assessment process. The intention is that actions initiated by the Athena Swan process will lead to further promotions and to external recruitment of senior female academics. While it is also encouraging to see that recently more of our outstanding female undergraduates have progressed to PhD study and are playing an active role in the recruitment processes, it remains a priority to recruit more female students.

As Head of School I am committed to the changes identified by the action plan in this application. Equality and the Athena Swan actions are now standing items on the School Board agenda and will receive my full support in implementing the action plan and lead I believe to a culture in the School that works to foster the academic careers of women in science.

Professor Stephen Hurley

[500 words]

## 2. The self-assessment process: maximum 1000 words

Describe the self-assessment process. This should include:

- a) *A description of the self assessment team: members' roles (both within the department and as part of the team) and their experiences of work-life balance*

Table 2.1 Self assessment team members

<b>Name</b>	<b>Team role</b>	<b>Biographical information</b>
Natasha Edwards	Invited speaker programme	Lecturer. Responsible for providing Personal Development Planning support within the School. Currently writing her PhD. Married with one daughter, a 6th form student.
Dr John Evans	Job applications, staff recruitment, committee representation	School Manager. John is married with children and plans to work flexibly to enable childcare.
Prof Stephen Hurley	Workload, promotion and career development	Head of School since 2013. He balances his University responsibilities with being primary carer for his mother and cycles to work whenever possible to maintain a healthy work/life balance.
Dr Wendy Ivins	Undergraduate students	Lecturer. Wendy leads the Postgraduate Taught Operations Team and is the Programme Leader for MSc Computing & IT Management.
Dr Andrew Jones	Committee representation	Senior Lecturer. Deputy Director of Teaching; Equality & Diversity Contact. Andrew is married with two children - one studying in further education college, the other an undergraduate.
Prof Chris Jones	Chair of self-assessment team	Professor of Geographical Information Systems. He has two teenage children in secondary school and for the last 12 years has been a single parent, having been widowed in 2003.
Dr Pam Munn	Staff induction, staff, maternity and paternity leave, flexible working	Finance & HR Administrator. Pam is married with one son, now at University. Her husband also works for Cardiff University. She has caring responsibilities for her 91 year-old father.
Sarah Narusberg	Marketing for student and staff recruitment	Marketing & Communications Officer. She contributes to the effort to raise student application numbers and improve communication and satisfaction throughout the School.
Helen Phillips	Outreach activities, support for female students	Lecturer. She is Undergraduate Senior Personal Tutor, Chair of the Engagement & Outreach Committee, Chair of the Extenuating Circumstances Committee and MSc programme

		leader. Also chair of the sub group BCS Women Wales and committee member of Cardiff University Women in Science and a member of Chwarae Teg ( <a href="http://www.cteg.org.uk/">http://www.cteg.org.uk/</a> ).
Dr Steven Schockaert	Committee representation, staff contracts, the action plan	Lecturer and member of University Senate. He is married and a father since January 2015. As an early career researcher, Steven is strongly aware of the challenges involved in combining family life with establishing an academic career.
Dr Irena Spasic	Postgraduate research students, support for female students	Senior Lecturer. She is Deputy Director of Research and Ethics Group Chair. As School representative for the University and College Union, she is actively involved in promoting the work-life balance.
Catherine Teehan	Postgraduate student representative	Catherine is a mature PhD student who returned to education after 20 years in industry. Married and mother of one, Catherine was diagnosed with a chronic auto-immune disorder when aged 20 and has found the university to be understanding and supportive when balancing family life, her illness and studying.
Dr Will Webberley	Post doctoral researcher representative	Research associate. Will has experience of the various levels of student and professional life within the School. He is an active member of the School's outreach group.

*b) an account of the self assessment process: details of the self assessment team meetings, including any consultation with staff or individuals outside of the university, and how these have fed into the submission.*

The first meeting of the self-assessment team (SAT) was held in December 2013. Meetings have been held at approximately one-month intervals. Early on, the composition of the team was reviewed to ensure a reasonable balance of both gender and roles in the School, including representation at postgraduate and postdoctoral levels. The roles on the team, as well as positions and roles in the School, are listed in Table 2.1. The intention was that engaging each team member in particular areas of the submission would help to ensure stronger buy-in to the process of effecting change in the gender equality culture of the School and increase the chances of successful implementation of the action plan. In this regard it may be noted that a significant proportion of the permanent academic staff in the department (about 25%) is on the team.

The SAT has had strong support from the University's Athena Swan Physical Sciences and Engineering College Network which coordinates Athena Swan related matters in the College. They hold regular meetings on relevant topics and provide feedback on draft applications. Dr Sophie Buchaillard (a member of the College Network and College representative on the University Athena SWAN steering group) advised us on issues including the composition of the SAT, the formulation of an action plan and

strategies to ensure long-term engagement with Athena Swan objectives. Attendance by Chris Jones at the CaSE opinion forum on Diversity at King's College London in February 2014 proved valuable in gaining a greater appreciation of issues in implementing objectives of Athena Swan.

Efforts to raise awareness of gender equality issues have included the introduction of relevant agenda items on school-wide meetings and organising school seminars to be addressed by individuals with in-depth understanding and experience of the issues. A talk on Athena Swan and associated gender equality issues was given in September 2014 by Prof Terry Threadgold, who had previously chaired the Athena Swan committee within Cardiff University. Further talks are planned on flexible working and the subject of unconscious bias.

In an effort to understand current perceptions of and opinions on the gender equality culture of the School we conducted an online survey, in March 2014, based on the HE STEM survey, further details of which are referred to in relevant sections and in the additional comments section.

- c) Plans for the future of the self assessment team, such as how often the team will continue to meet, any reporting mechanisms and in particular how the self assessment team intends to monitor implementation of the action plan.*

Following the application process, the self-assessment team will meet at approximately 2 monthly intervals and when particular initiatives require it. The meetings will focus on ensuring the implementation of current and planned actions and the introduction of new actions. In addition to reporting regularly to the School Board, members of the SAT will report progress to the meetings of the College Athena Swan Network. If we are successful in the current application, then the planned process of implementation and revision of actions to effect change in the culture and profile of the School, and the associated monitoring of change, will we hope assist in preparing us for submission of a renewal of the application and progression to application for the Silver award.

[994 words including the content of Table 2.1 but not including the Athena SWAN-supplied headings & guidance text]

### 3. A picture of the department: maximum 2000 words

- a) *Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features.*

The School of Computer Science & Informatics is one of 27 schools in Cardiff University. It belongs to the College of Physical Sciences and Engineering (one of three colleges in the University). The School, which is research-led, has a relatively new Head of School in Prof Stephen Hurley. Currently we have 36 academic (research and teaching) staff, 18 research staff and 15 computing and administrative support staff. Of the 35 academic staff at the grade of lecturer or above, 7 are female, i.e. 20%, the majority of whom are on the lecturer grade, with one senior lecturer, one reader (part-time), but none at professorial grade. Many of our actions are dedicated to the aim of improving representation of female staff in senior positions in the School.

There are about 400 undergraduate students in the School on the Undergraduate degrees in Computer Science, Business Information Systems, Software Engineering and Joint Honours Computing and Mathematics. The Computer Science programmes have several specialism streams while all programmes have the option of a Year in Industry. There are currently 63 students on the taught Postgraduate Masters courses and 34 students registered for Postgraduate research degrees. Our numbers of female students on taught courses are in general slightly below the sector average, but a notable aspect of our situation is that, once we have recruited female students, we retain a larger proportion of females, compared to males, and female students usually outperform males in the 1<sup>st</sup> and 2(1) degree classifications.

- b) *Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.*

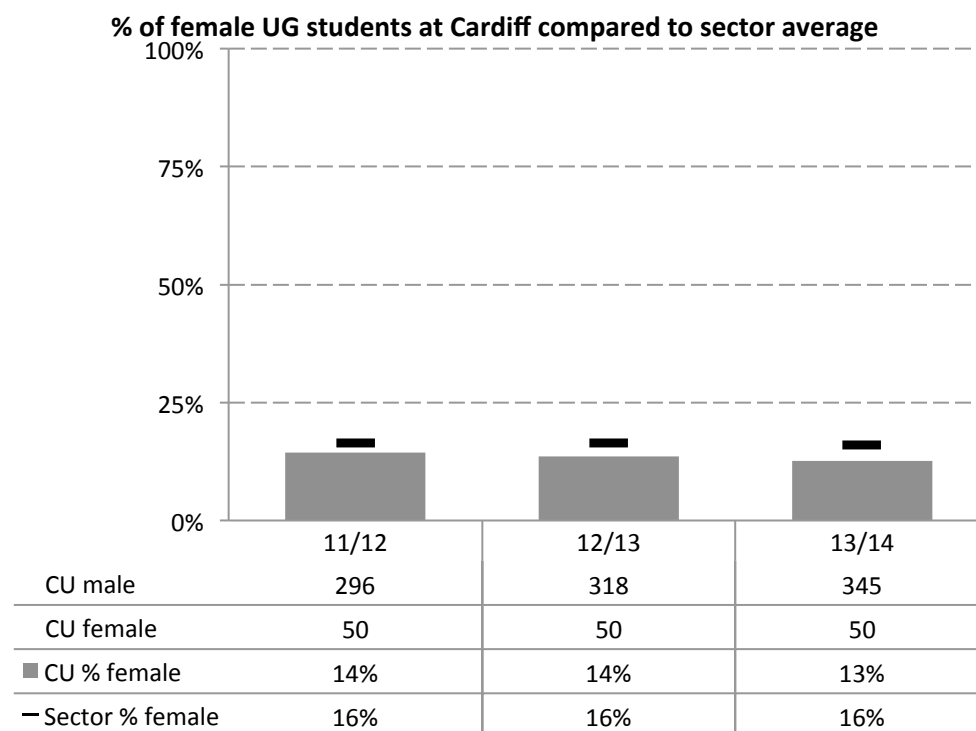
#### **Student data**

- (i) ***Numbers of males and females on access or foundation courses*** – *comment on the data and describe any initiatives taken to attract women to the courses.*

The School does not offer any foundation courses.

- (ii) **Undergraduate male and female numbers – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the impact to date. Comment upon any plans for the future**

Figure 3.1 Undergraduate female and male numbers and percentages



Note: Our undergraduate degrees are not offered part-time

The female:male ratio for our School is slightly lower than the national average for Computer Science (Figure 3.1). It is notable that although total student numbers have increased, the number of female students has remained constant, for reasons that are not clear, but with regard to which we have several actions (**B1, B2, B3**). It is encouraging to see, however, that for 2014/15 the enrolment of female students to Year 1 improved considerably to 20%. Of the two main undergraduate courses, in Computer Science (CS) and Business Information Systems (BIS), the BIS programme has a more qualitative emphasis and is notable for attracting a higher proportion of females than the CS programme, reflecting the situation across the sector for such courses. Thus in 2012/13, 33% of the 39 BIS students (in all years) were female, while 11% of the 327 CS students were female. The proportion of females on the CS degree has, however, increased this year (with some decrease on BIS). We have several actions (**B1, B2, B3**) with the aim of raising female students above the sector average.

For many years the School has involved both female and male students and staff in open days, outreach events and UCAS visit days, to ensure the presence of female role models. For the past 5 years it has been our policy to include prominent images and profiles of students of different genders and from diverse cultural backgrounds throughout our promotional material.

## Actions

Promotional information for undergraduate courses will be monitored to ensure prominent portrayal of women in technological roles. We will also highlight initiatives aimed at female students. Actions **B1, B2**.

Outreach activities have a major role to play in encouraging school and FE students to study and pursue a career in Computing. We are increasing the level of investment of staff time and resources into such events, including recruiting current students to participate in the events. Action **B3**.

We will conduct a survey of existing female students on how best to increase the appeal of our courses to prospective female students. Action **B3**.

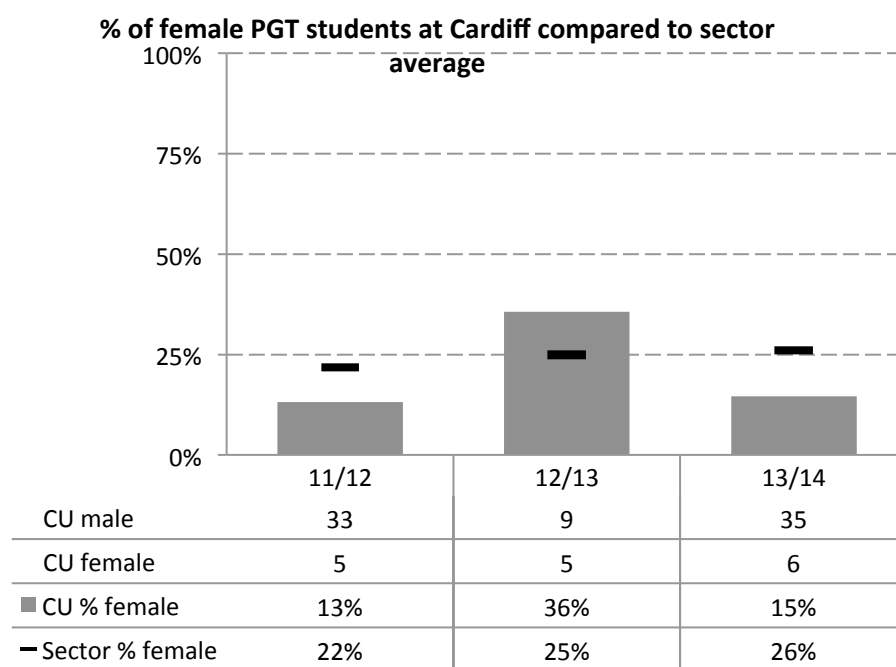
Female students need to be made aware of the fact that they can request a female personal tutor if they so wish. Action **C6**.

- (iii) ***Postgraduate male and female numbers completing taught courses – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future***

The proportion of female students on our Postgraduate taught courses was below the national average for two of the three years considered here (Figure 3.2), leading to actions **B1, B2**. Of the different MSc taught courses, the highest proportion of females during the period was on the MSc Information and Security course. In the last two years the MSc in Computing course dropped to zero female students, although in 2014/15 one female did enrol on the programme out of the 12 female PGT students. While the proportion of females across all our MSc programmes remains low this year, one of the new courses – MSc Computing and IT Management, oriented to business applications development rather than software development – has seen 40% and 57% females in the last two years respectively. It should be noted that we aim to recruit most MSc students externally and that our undergraduates are not eligible for the MSc in Computing and MSc in Computing & IT Management as they are intended for non-computing graduates.



Figure 3.2 Postgraduate females and males completing PGT courses



Note: the HESA figures above are based on averages for institutions

### Actions

Information relating to postgraduate courses in marketing literature will be updated to ensure an appropriate gender balance in the portrayal of students in technological roles. We will also consult our current female students on possible reasons for relatively low levels of female recruitment on some degrees and on strategies for improvement. Actions **B1, B2**.

- (iv) **Postgraduate male and female numbers on research degrees – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.**

Figure 3.3 Postgraduate research student female and male numbers and percentages

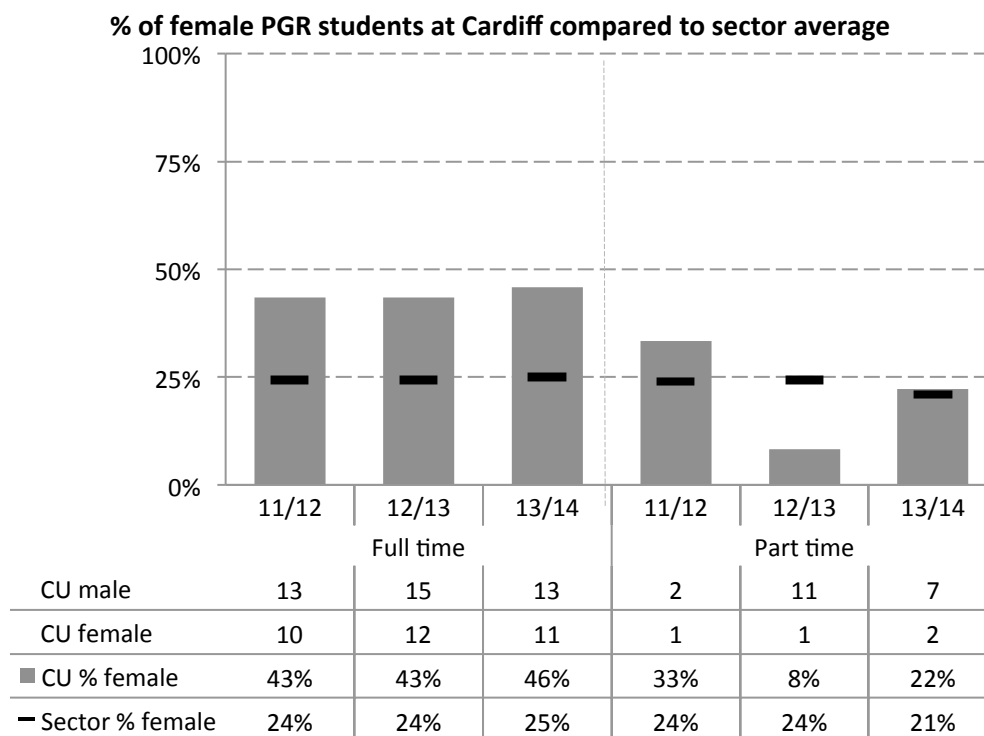


Table 3.1 Postgraduate research degrees awarded<sup>1</sup>

Year	Female		Male	
	Number	Percentage	Number	Percentage
2011/2012	5	33%	10	67%
2012/2013	2	22%	7	78%
2013/2014	1	14%	6	86%

Table 3.2 Withdrawals from postgraduate research degrees

Year	Female	Male
2011/2012	1	0
2012/2013	0	1
2013/2014	0	1

The number of female PGR students (Figure 3.3) has not varied significantly in the past three years with annual recruitment of 11±1 full-time and 1-2 part-time female students. The proportion of full-time female students has remained stable over the period and at 43-46% stands well above the national average of 24-25%, though the proportion of part-time females is more variable. Given the relatively small size of the

<sup>1</sup> These numbers refer to the date of awards (e.g. July 2012) and not start of the studies (e.g. 2011/2012).

School, it is difficult to generalise the latter fluctuation, but there is certainly room for improvement. The overall number of completions (Table 1.2) has varied in recent years (from 15 to 9 to 7) and hence the proportion of degrees awarded to female students has varied too (from 33% to 22% to 14%). Again, the small size of respective cohorts prevents us from sensibly generalising these results. On a positive note, no female students withdrew from their programme of studies in the past two years. Several actions have been initiated with the aim of increasing female PGR numbers.

### **Actions**

Promotional materials will be reviewed to ensure that both genders are featured equally. Actions **B1, B2**.

A survey will be conducted on how best to increase the appeal of the courses to prospective female students. Action **B3**.

We will initiate a Positive Action to search for funding opportunities targeted at women and advertise them prominently. We will offer support (in terms of mentorship, application writing and internal review) to our female UG and PGT students who wish to apply for such funding calls in order to pursue PGR studies. Action **C1**.

- (v) ***Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees – comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect to date. Comment upon any plans for the future.***

For undergraduate courses our application data shows that the female:male ratio of offers is the same or slightly higher than the female:male ratio of applicants (Figure 3.4). Over the period the numbers of female applicants varied from 73 to 63 to 115. For the last two years the proportion of females accepting offers slightly exceeded the proportion receiving offers, though in 2011/12 it was somewhat less. The situation in 2013/14 is reasonably encouraging in that 15% of acceptances were from females which was up on the 13% and 12% of the previous two years. Although 15% is still 1% below the sector average for female graduates for that year, given that our retention rates of females has been consistently higher than males we can predict that the 2013/14 intake will at least match that sector average of female graduates on completion of their course. We aim to improve upon the sector average and actions **B1, B2, B3** are designed with that goal in mind.

Figure 3.4 Application statistics – Undergraduate Taught – the vertical bars show percentages of female students for applications, offers and acceptances.

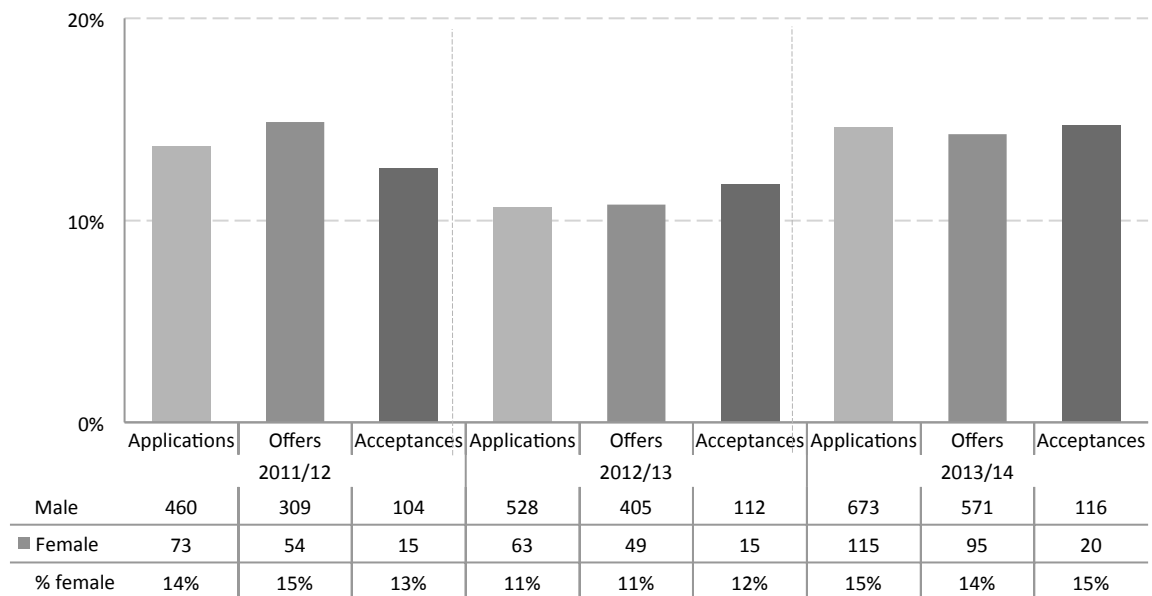
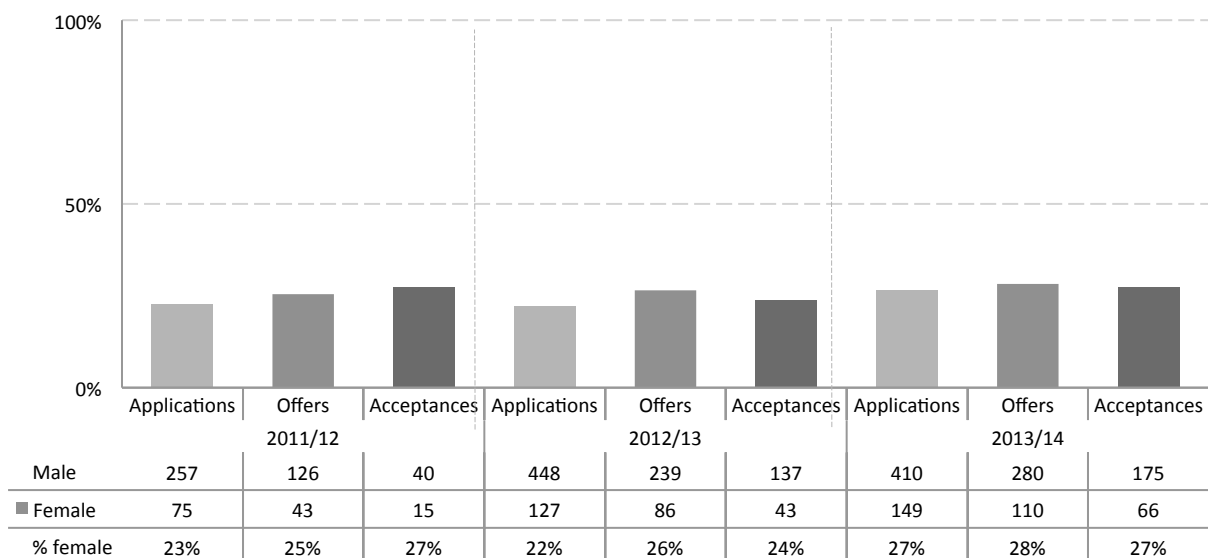
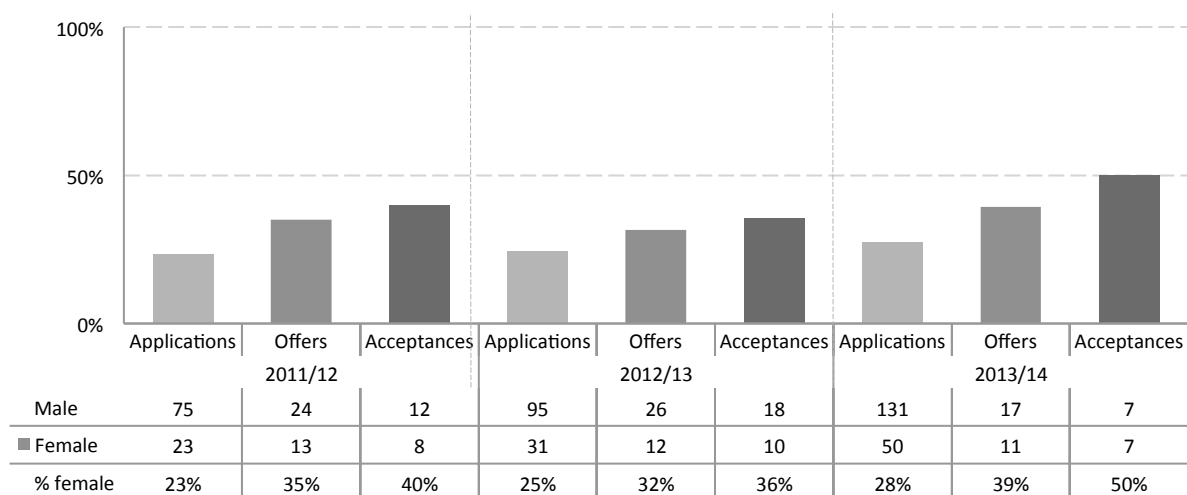


Figure 3.5 Application Statistics – Postgraduate Taught – the vertical bars show percentages of female students for applications, offers and acceptances.



For postgraduate taught courses (Figure 3.5), the low number of applicants in 2011/2012 was due to late advertising of programmes following a review of our postgraduate taught programmes. Offers to females slightly exceed the proportion of female applications. In the three years the percentage of female acceptances was similar to the percentage receiving offers.

Figure 3.6 Application Statistics – Postgraduate Research Degrees – the vertical bars show percentages of female students for applications, offers and acceptances.



On the postgraduate research degrees, the proportion of female student acceptances is notably higher than on the taught degrees and has resulted in a higher proportion of female students than the sector average.

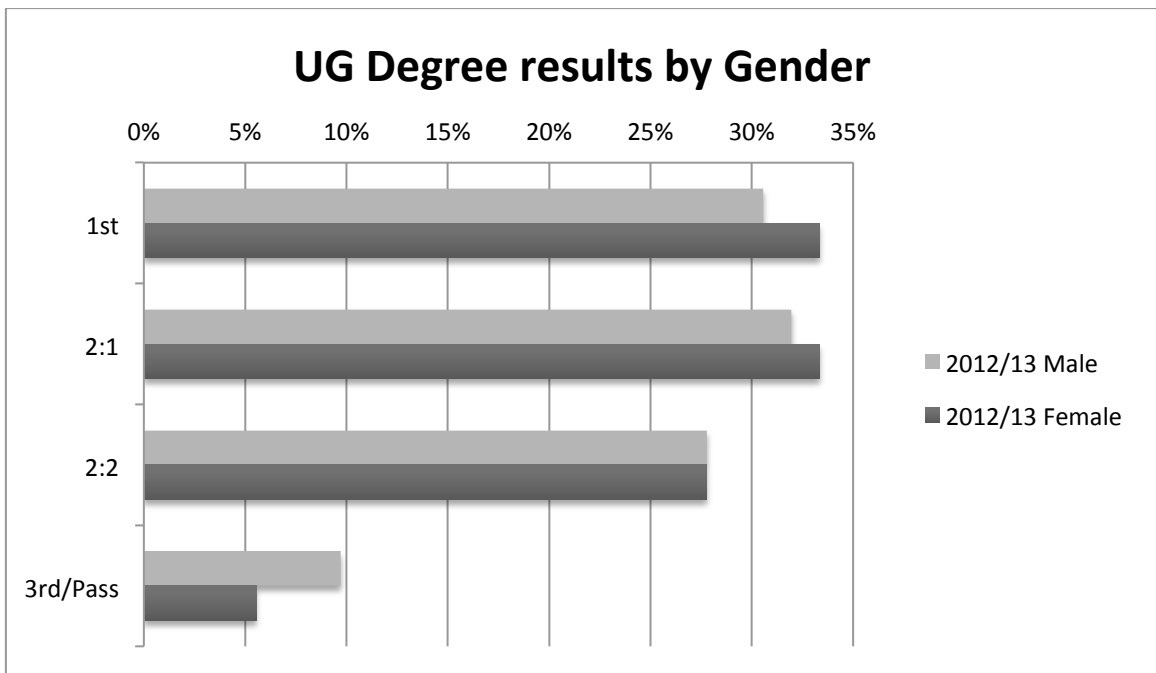
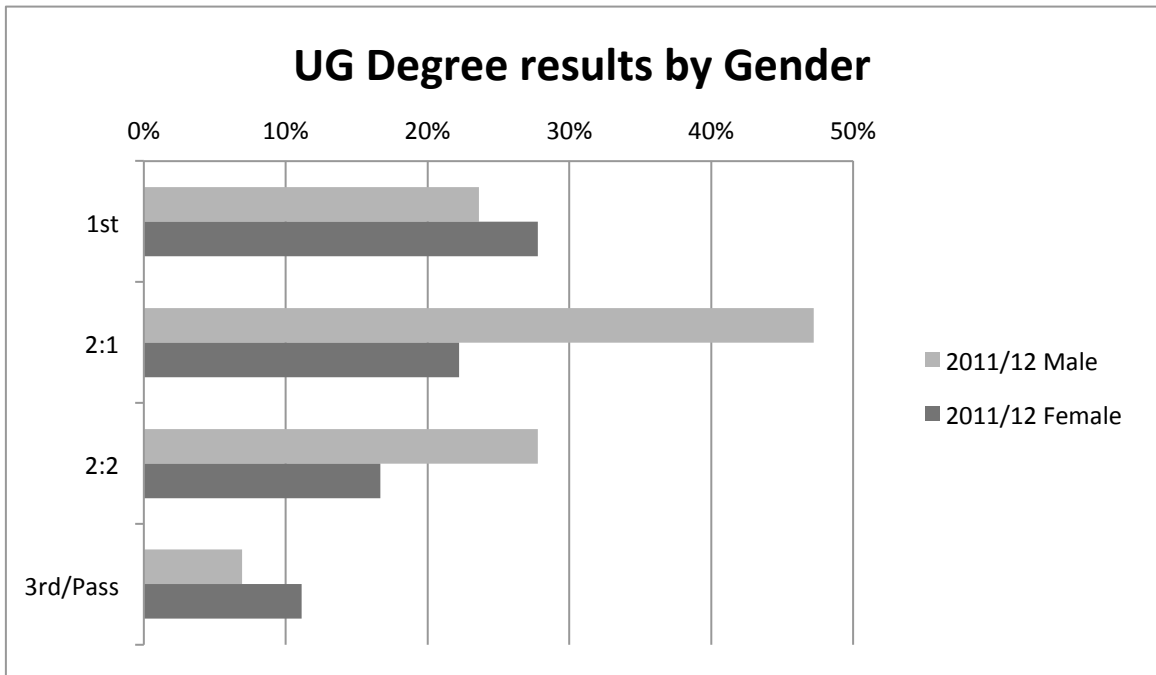
### Actions

More female students will be encouraged to apply to all degrees by ensuring female-friendly advertising that includes more female case studies in brochures, on the web site and social media and increasing the focus of outreach events on female recruitment. Actions **B1, B2, B3**.

Action **C1** is concerned with highlighting funding opportunities for female students.

(vi) **Degree classification by gender** – comment on any differences in degree attainment between males and females and describe what actions are being taken to address any imbalance.

Figure 3.7 Degree classifications by gender



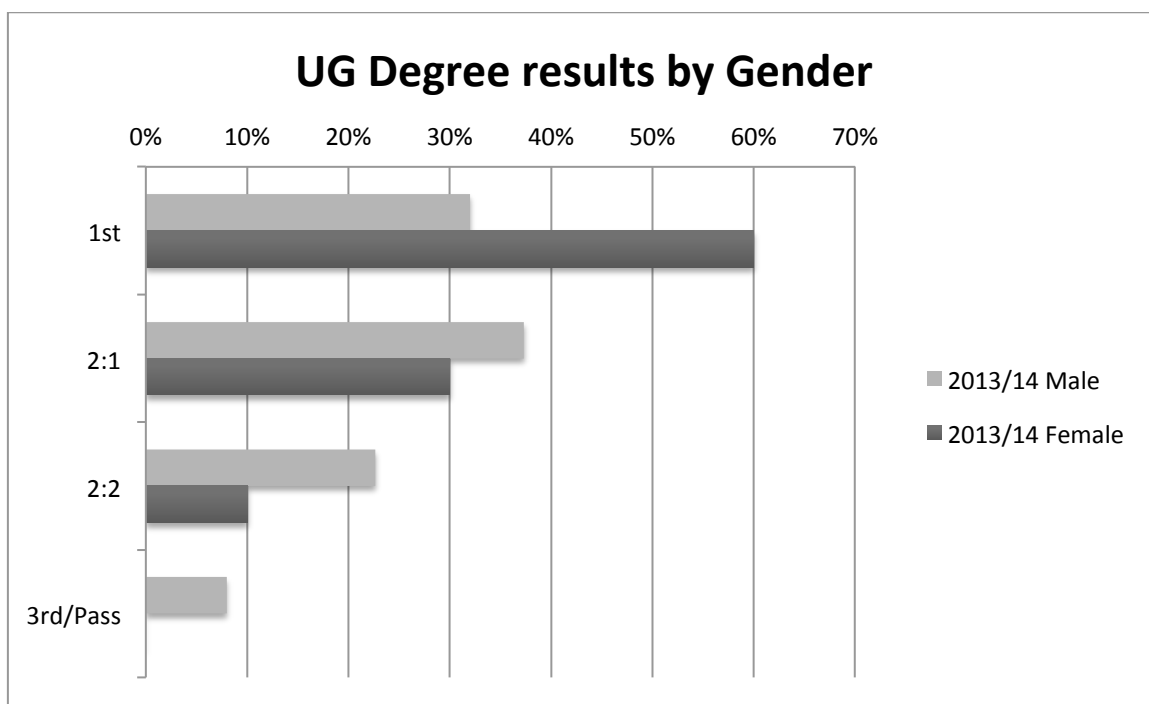


Table 3.3 Degree classification by gender

Year	Classification	Females	Female %	Males	Male %
2011/12	First	5	35.7%	17	22.4%
	2:1	4	28.6%	34	44.7%
	2:2	3	21.4%	20	26.3%
	Third/Pass	2	14.3%	4	5.3%
	All qualifiers	14	100.0%	76	100.0%
2012/13	First	6	33.3%	22	30.6%
	2:1	6	33.3%	23	31.9%
	2:2	5	27.8%	20	27.8%
	Third/Pass	1	5.6%	5	6.9%
	All qualifiers	18	100.0%	72	100.0%
2013/14	First	6	60.0%	24	26.1%
	2:1	3	30.0%	28	30.4%
	2:2	1	10.0%	17	18.5%
	Third/Pass	0	0.0%	6	6.5%
	All qualifiers	10	100.0%	92	100.0%

For the undergraduate degree classification data (Figures 3.7 and Table 3.3), relative to their absolute numbers females received a larger proportion of first class degrees than males in all three years. Considering 1<sup>st</sup> class and 2(1) class degrees together females were better or about as good as males. Differences at the third class / pass level do not appear to be of concern, with females having proportionally fewer such awards in two out of the three years (none in 2013/14). It appears that while action certainly needs to be taken to recruit more female students (**B1, B2, B3**), once recruited, female student's academic attainment is above average. We will, however, continue to monitor the situation.

## Staff data

- (vii) **Female:male ratio of academic staff and research staff** – researcher, lecturer, senior lecturer, reader, professor (or equivalent). comment on any differences in numbers between males and females and say what action is being taken to address any underrepresentation at particular grades/levels

In 2012 (Figure 3.8a) there were 11 female academic staff and 48 male academic staff, i.e. 18.6% female overall (see Table 3.4 for numbers). In 2013 (Figure 3.8b) the School lost one female researcher at the end of her grant funding, while one female lecturer was promoted to senior lecturer (17.2% females overall). By 2014 (Figure 3.8c) two female staff had been promoted to senior lecturer and reader respectively, but there remained no professorial female staff (19.6% female overall). The reduction in female staff between 2012 and 2013 was due to completion of a fixed-term contract. In comparison with SET schools in Cardiff University, female staff are under-represented in all academic roles, but the situation is particularly acute at professorial level. Benchmarking data indicate that the situation is also poor nationally in this sector with 12.4% female professorships in 2012/13.

Figure 3.8a Proportion females in academic posts 2012

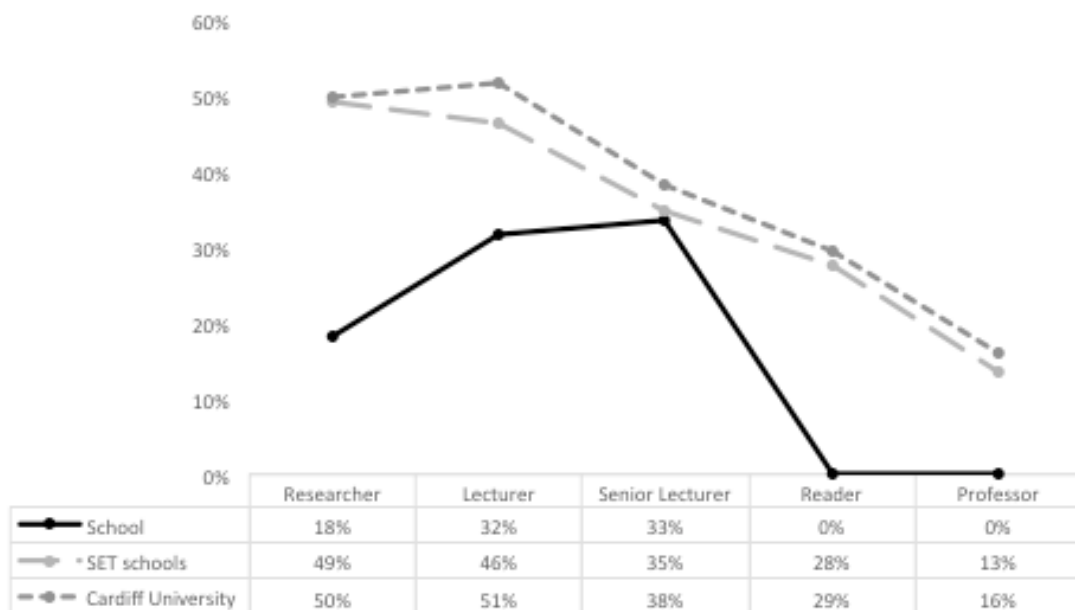




Figure 3.8b Proportion females in academic posts 2013

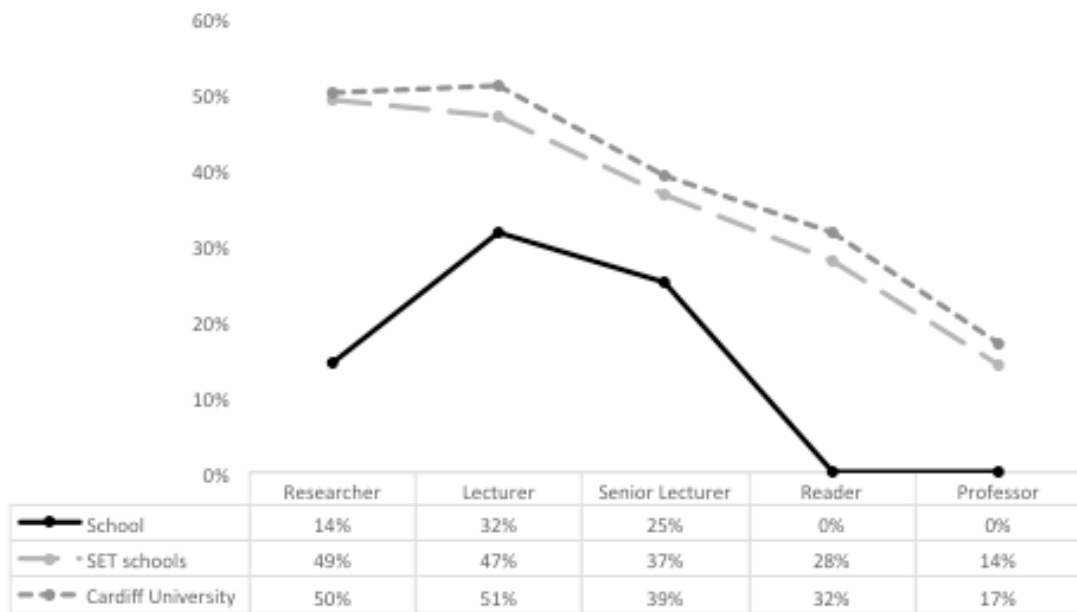


Figure 3.8c Proportion females in academic posts 2014

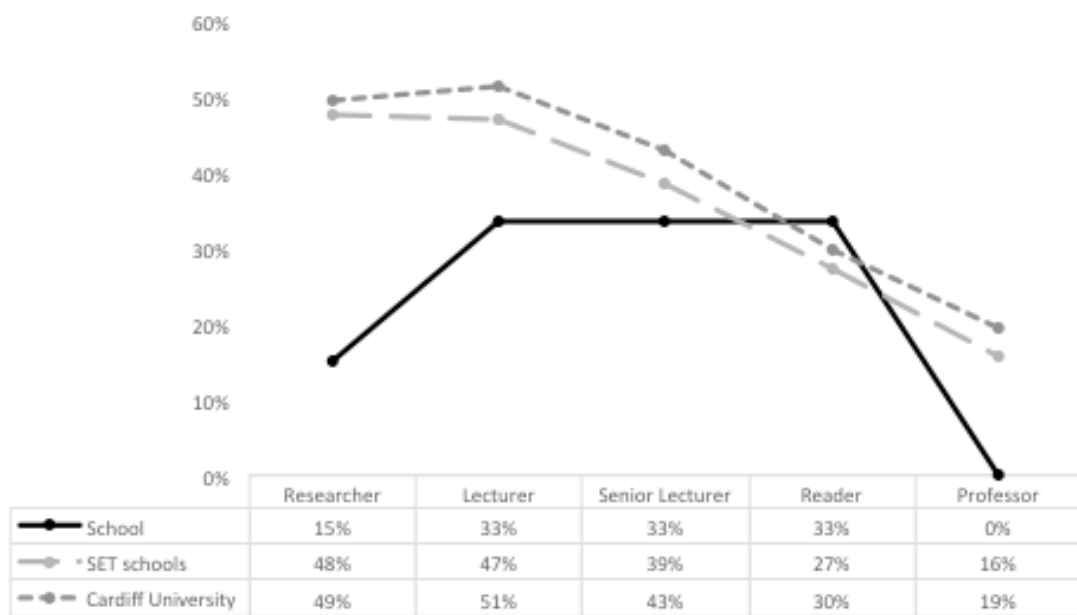


Table 3.4 Proportion of females in academic posts (females / total staff)

	Research	Lecturer	Senior Lecturer	Reader	Professor
2012	4/22 (18.2%)	6/19 (31.6%)	1/3 (33.3%)	0/2 (0%)	0/13 (0%)
2013	3/21 (14.3%)	6/19 (31.6%)	1/4 (25%)	0/2 (0%)	0/12 (0%)
2014	3/20 (15%)	6/18 (33.3%)	1/3 (33.3%)	1/3 (33.3%)	0/12 (0%)

## Actions

The School has worked with HR advisors to create job advert text to encourage females to apply for academic positions within the School, with consideration to the positive action provisions in the Equality Act 2010. Adverts will also highlight the flexible working/work-life balance policies operating in the University and School (reflecting a University-level Athena Swan action). Action **B4**.

We will update advice for line managers who conduct appraisals to place greater emphasis on encouraging staff to work towards successful applications for promotion and encouraging female staff to attend the university course “Career development for female staff”. Action **C2**.

Improvements will be made to the mentoring processes by (for example) recruiting senior female mentoring staff from our College, as part of the new College mentoring scheme, and encouraging more female staff to engage in the Aurora Leadership programme. Action **C4**.

We will ensure staff members are aware of the networking groups available in the College/University, such as Cardiff Women in Science (<http://sites.cardiff.ac.uk/cwis/>). Action **C4**.

***Turnover by grade and gender** – comment on any differences between men and women in turnover and say what is being done to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left.*

The turnover of female staff between 2012 and 2014 (Table 3.5) ranged between 1.75% and 3.4%, with that of male staff ranging between 8.8% and 14.0%. The higher turnover in male staff is particularly prevalent within the researcher category which has a higher proportion of male staff. In the year 2012 turnover for both male and female lecturing staff was the same, which is anomalous given the lower numbers of female staff. It was due to the retirement of two female staff (following long periods of service). It may be remarked that these individuals did not progress beyond Lecturer grade. The actions that we are now initiating relating to staff progression are intended to reduce the future likelihood of this eventuality (notably Actions **C2**, **C3**). Over the period, staff in both fixed term and permanent posts left as a result of retirement or moving to new employment, as well as being due to end of contract for fixed term positions.

[1987 words]

Table 3.5 Staff turnover in comparison with SET Schools and the University

<b>2012</b>						
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	0.00%	22.73%	9.84%	12.63%	9.99%	12.72%
Lecturer	10.53%	10.53%	6.49%	4.47%	7.98%	7.09%
Senior Lecturer	0.00%	0.00%	3.00%	4.72%	3.45%	4.31%
Reader	0.00%	0.00%	0.00%	1.02%	0.00%	0.68%
Professor	0.00%	0.00%	0.69%	2.77%	1.24%	3.94%
Average	3.39%	11.86%	6.20%	7.07%	6.57%	7.52%
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	0	5	74	95	84	107
Lecturer	2	2	45	31	99	88
Senior Lecturer	0	0	7	11	12	15
Reader	0	0	0	1	0	1
Professor	0	0	2	8	6	19
Total	2	7	128	146	201	230
<b>2013</b>						
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	5.00%	10.00%	6.96%	10.62%	7.35%	10.64%
Lecturer	0.00%	10.53%	5.23%	4.66%	6.18%	4.93%
Senior Lecturer	0.00%	0.00%	2.86%	4.08%	4.51%	3.38%
Reader	0.00%	0.00%	2.15%	1.08%	2.07%	0.69%
Professor	0.00%	7.69%	0.65%	9.03%	1.17%	11.15%
Average	1.75%	8.77%	4.83%	7.31%	5.34%	7.19%
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	1	2	57	87	67	97
Lecturer	0	2	37	33	79	63
Senior Lecturer	0	0	7	10	16	12
Reader	0	0	2	1	3	1
Professor	0	1	2	28	6	57
Total	1	5	105	159	171	230
<b>2014</b>						
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	5.00%	30.00%	11.23%	14.07%	11.78%	13.45%
Lecturer	0.00%	11.11%	2.50%	3.69%	4.37%	4.64%
Senior Lecturer	0.00%	0.00%	1.00%	1.00%	0.62%	1.55%
Reader	0.00%	0.00%	1.05%	2.11%	0.68%	2.03%
Professor	0.00%	0.00%	0.40%	6.43%	0.67%	6.00%
Average	1.75%	14.04%	5.38%	7.62%	5.46%	6.92%
Turnover	School		SET Schools		University	
	F	M	F	M	F	M
Research	1	6	95	119	113	129
Lecturer	0	2	21	31	65	69
Senior Lecturer	0	0	2	2	2	5
Reader	0	0	1	2	1	3
Professor	0	0	1	16	3	27
Total	1	8	120	170	184	233

#### 4. Supporting and advancing women’s careers: maximum 5000 words

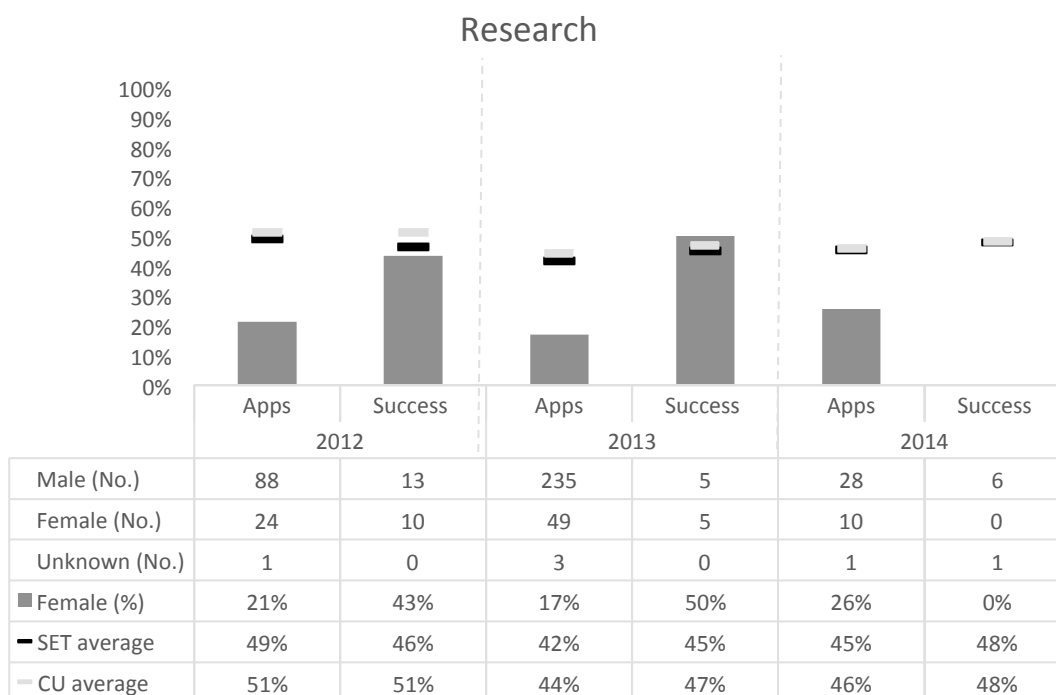
##### Key career transition points

a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(i) **Job application and success rates by gender and grade** – comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

Figures 4.1 and 4.2 only represent data for Researchers and Lecturers. For higher grades there were no posts advertised and no appointments. As the figures show, our School has a much lower proportion of female applicants, particularly for researcher posts, than the SET average. While clearly unsatisfactory, this might be expected as there is a much smaller pool of female applicants in Computer Science compared with some other SET schools, with the IT sector average of female postgraduate researchers being about 24% and the overall proportion of females about 22% (based on the Athena Swan benchmark data).

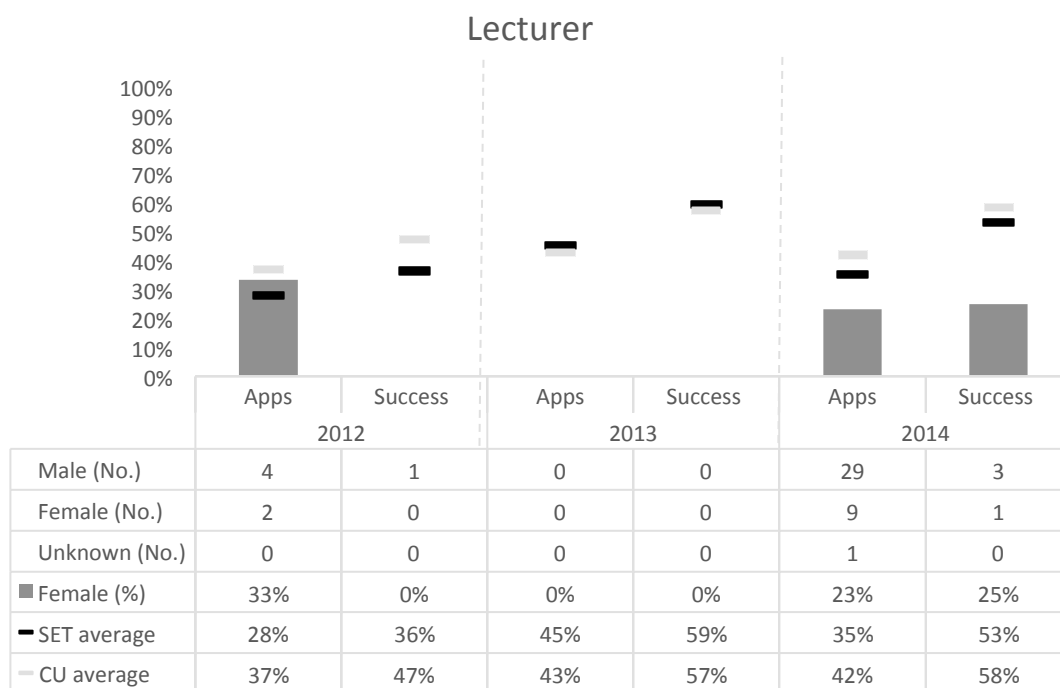
Figure 4.1 Job applications and success rates for research staff (the vertical bars represent female percentages)



For researcher posts, the percentages of female appointments in the period were 43% (of 23 appointments in 2012), 50% (of 10 in 2014) and 0% (of 6 in 2014). In 2012 our success rate for female researchers was very close to the sector average although the rate of applications was much lower. Five appointments to lectureships were made in the period. The one appointment in 2012 was male, while one of the four

appointments in 2014 was female (with no lecturer appointments in 2013), hence 20% females appointed. Our actions on recruitment (see below) are aimed both at increasing numbers of applicants and improving the rate of success of female applicants.

Figure 4.2 Job applications and success rates for lecturer staff



## Actions

It is notable that interview panels for academic posts in the School are often male dominated, due to the very small proportion of senior female academic staff. We will take action to address this situation which includes requiring at least 25% females on recruitment panels (or at least one in a panel of three) as well as ensuring all staff involved in shortlisting and interviewing undergo unconscious bias training. Because of our current low numbers of senior female staff, consideration will also be given to inviting female staff from other schools in our College to join our recruitment panels (Action **B5**). There is clearly scope for improving our marketing materials to promote the role of women in computing and for modifying the content of job advertisements to encourage more female applicants. Actions **B1, B2, B4**.

In an effort to gain better insight into the low level of female appointments in recent years we will perform an analysis of recruitment data, so far as that is possible retrospectively, including comparing numbers of female applicants against numbers shortlisted. We will also consider further changes to the recruitment process such as anonymising applications and considering only the declared 5 best papers. Action **B6**

*(ii) Applications for promotion and success rates by gender and grade – comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific examples of where women have been through the promotion process. Explain how potential candidates are identified.*

Decisions on promotion of academic staff are made by the University but the School plays a key role in encouraging and supporting staff in the promotion process via the annual appraisal process, as explained in the section on promotion and career development. Staff are self-selecting to apply for promotion but individuals planning an application are invited to discuss their application with the Head of School with a view to maximising success rates.

During the period 2012-2014 there was one unsuccessful female application for promotion (to senior lecturer) and two successful applications (to senior lecturer and reader). There were two male applications (to reader and to professor), both successful.

### **Actions**

As part of our efforts to increase female staff numbers in senior roles it is essential that we support and develop staff towards promotion. Advice to line managers will be updated to encourage and provide guidance for staff to apply for promotion. Action **C2**.

All line managers and appraisers will also be required take unconscious bias training (Action **C2, B5**)

b) *For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.*

*(i) Recruitment of staff – comment on how the department’s recruitment processes ensure that female candidates are attracted to apply, and how the department ensures its short listing, selection processes and criteria comply with the university’s equal opportunities policies*

The recruitment process is governed by University-wide procedures and policies which includes a condition that at least one member of the interview panel must have undergone chairing interview panel training, which has a strong focus on equal opportunities. In addition, all staff are required to undertake training on equality and diversity, successful completion of which is currently nearly 100%. The University’s current Action Plan states: “Require all recruitment (shortlisting, interviewing and appointing) panels to include at least 25% women (or at least one woman in a panel of 3).” This is reflected in Action **B5**. Shortlisting and the selection processes are based on whether or not a candidate meets the essential and desirable criteria.

Over the three year period 2011/12 to 2013/14 across all academic staff groups, female applications total 60 compared to 243 male applications, i.e. 19.8% female. At present the recruitment process includes limited explicit measures to attract female candidates, but this is being reviewed (Action **B4**) along with continuing efforts to

ensure that our website and other promotional materials provide a positive image of the role of females in the School.

### **Actions**

We need to raise the profile of women in our marketing materials. The text of adverts has been extended to make clear our wish to increase the proportion of women staff but we need to emphasise opportunities for flexible working and the importance of gender equality. Actions **B1, B2, B4**.

*(ii) **Support for staff at key career transition points** – having identified key areas of attrition of female staff in the department, comment on any interventions, programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training. Identify which have been found to work best at the different career stages.*

At the early stage, of taking up postgraduate research, we regard the final year project supervision process as an opportunity to engage students in research oriented projects and to encourage the strong students to consider pursuing PhD studies. Recently we have succeeded in recruiting some excellent female PhD students through this approach. The issue of progressing the careers of PhD students is addressed in the section on “Support for female students”.

At the postdoctoral level all such staff are subject to a probation procedure that includes allocation of a mentor whose role includes that of supporting career development. Many of our research assistants/associates (RAs) are given the opportunity to engage in aspects of the teaching programme, gaining valuable experience of lecturing. All post-doctoral researchers are notified annually of details of the Cardiff Researcher programme for career development.

All staff in the School are encouraged to attend the Cardiff University events concerned with career development, with an emphasis on gender equality, notably the Cardiff Woman programme and the Cardiff Women in Science network. Several female academic staff in the School are involved in professional bodies (BCS, The Chartered Institute for IT) and have attended the Lovelace Colloquium. One of our female academic staff (Helen Phillips) is on the Committee of the local branch of the BCS, The Chartered Institute for IT.

The University has an extensive programme of personal development courses for all academic staff, including leadership courses, and all staff are encouraged to attend these courses. The School’s budget guarantees that all staff can attend at least two courses per year, but there is rarely any obstacle to staff wishing to attend more.

Female staff are nominated and encouraged by Head of School to attend Professional Leadership courses for University management. At present we have two members of staff on the Aurora Leadership Programme. In addition to this, one female staff member recently undertook the selective University Futures programme which is led by the Vice Chancellor.

It is notable that the School's STEM survey indicated that 30% of respondents disagreed that the School provided "useful mentoring opportunities". It is essential that we respond to that message (Actions **C3, C4, C5**).

### **Actions**

We will ensure that all staff are aware of and take advantage of staff development courses, including training for appraisers, to ensure these opportunities are emphasised. Action **C3**.

Mentoring and networking opportunities for female staff will be improved. This should include extending expectation of mentoring beyond the probation period, encouraging more staff to act as mentors, encouraging women to join the University-based Cardiff Women in Science network and exploiting the College mentoring system. Action **C4**.

Mentoring will be extended to PhD students and the existing mentoring process for RAs will be extended beyond the probation period. Action **C5**.

### **Career development**

a) *For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.*

(i) **Promotion and career development** – *comment on the appraisal and career development process, and promotion criteria and whether these take into consideration responsibilities for teaching, research, administration, pastoral work and outreach work; is quality of work emphasised over quantity of work?*

Over the period the School has a record of 100% annual appraisal. The appraisal documentation and meeting are structured around teaching, research, citizenship, administration, impact and innovation, workload, objectives and training requirements. The formal process is complemented by opportunities for reflective discussions with the line manager or Head of School and all appraisees have the option to change their appraiser. Most academic appraisers in the school have taken the University course in academic appraisal training, but we have an action to ensure that all attend the course as well as taking unconscious bias training (Actions **B5, C2**).

Appraisals provide an opportunity to review an individual's workload and to monitor progression according to their respective career track, e.g. teaching and scholarship or teaching and research, with a view to increasing the probability of success in applications for promotion. The current workload model does not have explicit categories for pastoral work and outreach work, though they are taken into account. This shortcoming in the model is addressed by Action **D4**.

The appraisal process contains a section to enable the appraisee or the appraiser to suggest training courses that will enhance career development. The School is very supportive of such development opportunities and supports staff in pursuing such opportunities within and outside the appraisal system. Where development opportunities are not provided by the University, the School funds staff to attend relevant external courses. All new academic members of staff are supported to



complete the PCUTL (Postgraduate Certificate in Teaching and Lecturing) programme. On completion of the required modules, early career staff can progress to a higher grade.

With regard to the perceived effectiveness of the appraisal process, our 2014 STEM survey indicates that 80% of respondents agreed the School provides “a helpful annual appraisal” with 12% disagreeing (8% don't know). Actions relating to improving the process (**B5, C2**) aim to reduce the level of disagreement and will be monitored (**A1**).

All new staff are assigned a mentor who helps guide the development of the individual, though this process had previously been confined to the probation period. The STEM survey found that 30% of respondent did not agree that the School provided useful mentoring opportunities, highlighting the urgency of improving the mentoring process (Action C2). This will be helped, for example, by the School's participation in a scheme whereby a senior IBM staff member mentors selected academic staff. The intention is to enhance and develop the careers of both our female and male staff by providing a different organizational perspective.

Cardiff University has an annual academic promotion process and the Head of School encourages discussion with anyone considering making an application, working closely with such individuals to develop their applications (Actions **C2, C3**). In the 2013/14 round of promotions there were two applications for promotion (both female) that arose as a result of appraisal or reflective discussion. To succeed in promotion, each applicant must satisfy criteria for excellence in one field (teaching, research/scholarship, contribution to the university) with attainment of benchmarks in the other areas. In recent years the School has placed increased emphasis on the quality of research rather than quantity. The promotion application forms include an optional section to consider personal circumstances such as a career break. Promotion applications are reviewed in the School, prior to submission to the University, by a panel of senior staff all of whom will now be required to undertake unconscious bias training (**C2**).

### **Actions**

We will update advice for line managers who conduct appraisals to encourage staff to work towards successful applications for promotion and will ensure that all appraisers undergo both University training for appraisal and unconscious bias training. Action **C2**.

We will ensure all staff are aware of and encouraged to take advantage of staff development courses. Action **C3**.

Mentoring and networking opportunities for female staff will be improved to place greater emphasis on career progression, extend the process beyond probation and take advantage of the College mentoring schemes. Action **C4**.

- (ii) **Induction and training** – describe the support provided to new staff at all levels, as well as details of any gender equality training. To what extent are good employment practices in the institution, such as opportunities for networking, the flexible working policy, and professional and personal development opportunities promoted to staff from the outset?

The School implements the Cardiff University Induction policy. This is designed to ensure that new members of staff are provided with information needed to aid a smooth transition into their role within their College/School and the University as a whole. The University website provides staff with a guide to induction and training. Induction is in two parts. The University session gives participants an overview of the key issues relevant to all staff, including the available support, and an opportunity to meet colleagues from across the University. The School Induction covers information on the appraisal and probation processes and mentoring, work-life balance and flexible working policies within the School and training opportunities.

Participation in on-line equality & diversity training is mandatory for all staff. Staff with line management responsibilities are also required to complete additional equality & diversity training.

The Staff Development Programme offers courses across a wide range of key areas of personal and professional development open to all staff. Although the programme is introduced during induction, in our STEM survey only 70% of staff agreed/strongly agreed that they were encouraged to take up career development opportunities. We will address this in Action **C3**. Also 54% of staff who work part time or flexibly said they did not know if they were offered the same career opportunities as other full-time staff (Action **C3**).

### **Actions**

In view of the lack of awareness among some staff of the staff development programme, advice to line managers will be updated to place additional stress at appraisal meetings on ensuring staff are aware of – and encouraged to take advantage of – staff development opportunities. Action **C3**.

- (iii) **Support for female students** – describe the support (formal and informal) provided for female students to enable them to make the transition to a sustainable academic career, particularly from postgraduate to researcher, such as mentoring, seminars and pastoral support and the right to request a female personal tutor. Comment on whether these activities are run by female staff and how this work is formally recognised by the department.

There is no formal mechanism in the School that targets female students in making the transition to an academic career. There is, however, an annual workshop, run by the University Graduate College (UGC), for PhD students wishing to develop an academic career. All PhD students are notified of this and other career development events run by UGC. The School also supports the Higher Education Academy (HEA) Recognition Support Scheme for research students wishing to achieve HEA Associate Fellow status. Helen Phillips (Lecturer) is a mentor on this scheme.

At present there is no mentoring scheme for Postgraduate students but we are initiating an action (**C5**) to introduce such mentoring. All research students are expected to participate in the School's internal seminar series at which they can give presentations and receive feedback. As described in the Culture section, there are also student-organised events to promote discussion of research topics and provide opportunities for giving presentations.

Within the School we have set up informal events such as 'cake and conversation' aimed at female students (undergraduate and postgraduate) and female members of staff. This is a chance for female students to meet staff and other students in an informal setting to discuss issues such as improving the image of Computer Science for women and encouraging girls in school to pursue higher education in this field. In the coming year it is intended to hold events based on the Cardiff Chapter of the Girl Geeks Society (focused on technology). We have a vibrant Computer Club, but females are under-represented, indicating the need to encourage more female undergraduates to participate (action **C9**).

### **Actions**

A mentoring scheme for postgraduates will be developed that provides support for career development. Action **C5**.

The student handbook will be updated to draw attention to the opportunity for students to request a female personal tutor. Action **C6**.

Efforts will be made to raise the level of participation of female undergraduates in extra-curricular computing events such as the Computer Club. Action **C9**.

## Organisation and culture

a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

- (i) **Male and female representation on committees** – provide a breakdown by committee and explain any differences between male and female representation. Explain how potential members are identified.

Table 4.1 School committees female:male membership (numbers)

	2011/12	2012/13	2013/14
Committee Name	Female: Male	Female: Male	Female: Male staff
School Board (Senior Management Team prior to Nov 2013)	1:8	1:7	1:9
Teaching Learning and Academic Quality	3:5	2:4	2:5
Taught Programme Operations Team UGT	4:5	3:5	3:5
Taught Programme Operations Team PGT	5:5	4:6	4:6
Programme Review Group UGT	3:8	3:8	3:8
Programme Review Group PGT	2:4	2:4	2:3
Student/Staff Panel UGT	4:5	4:5	4:5
Student/Staff Panel PGT	4:3	4:3	4:3
Exams	3:6	3:6	3:6
Admissions	2:2	1:2	1:2
Student Welfare/Experience	4:3	4:4	4:4
Research Committee	0:8	0:10	1:8
Research Operations Team	2:5	2:5	2:5
Student Staff Panel PGR	1:5	1:5	2:5
Ethics Committee	-	-	2:1
Health, Safety and Environment Committee	0:7	0:8	0:8
International Committee	-	-	2:5
Engagement and Outreach Committee	-	-	3:8
Chair of Committee	2:16	2:16	4:15

Membership of committees has been determined with regard to people's roles within the School and their individual expertise. Where a committee is expected to consist of senior members of staff, females are often either absent entirely or poorly represented, due to having no female professors and no more than one female Senior Lecturer or Reader. For committees with a broader representation across grades, i.e. the majority, representation reflects in general the proportion of female staff at the Lecturer grade. The four committees chaired by females in 2013/14 were Taught Programme Operations Team PGT, Student/Staff Panel PGT, Engagement and Outreach, and Ethics (Ivins, Mumford, Phillips and Spasic respectively).

The section below on decision-making committees follows up on the situation with actions to provide a better gender balance.

- (ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts** – comment on any differences between male and female staff representation on fixed-term contracts and say what is being done to address them.

The female:male ratio of academic and research staff on fixed-term contracts and open-ended contracts for each year under consideration is given in Table 4.2.

Table 4.2 Female:ratio of academic staff of fixed term and open-ended contracts

	2011/12	2012/13	2013/14
Contract type	female:male (female %)	female:male (female %)	female:male (female %)
FIXED TERM Academic	3:6 (33%)	1:6 (14%)	1:3 (25%)
FIXED TERM Research	2:15 (12%)	4:15 (21%)	1:4 (20%)
OPEN-ENDED Academic	7:22 (24%)	6:24 (20%)	6:20 (26%)
OPEN-ENDED Research	0:3 (0%)	0:3 (0%)	0:3 (0%)

Due to the relatively small numbers, and the fact that in the case of fixed term academics they vary considerably from year to year, it is difficult to discern any very clear patterns. However:

(a) the lack of female staff on open-ended research contracts raises the issue of whether there are barriers to female research staff establishing long-term research-only careers in the School, but as the total numbers in that category are small at 3, there may not be any particular significance in the statistics;

(b) the proportion of female staff on fixed-term academic contracts in 2011/12 was relatively high compared to the proportion of females on academic contracts, but this was not the case in subsequent years, indicating the lack of a clear pattern. The proportion of females in open-ended academic posts remained very similar over the three years and was higher than the overall proportion of female academics (teaching and research related) in the School.

### Actions

In an effort to raise awareness of issues relating to fixed term vs. long-term contracts, we will improve the mentoring scheme for female staff to take more explicit account of these issues (Actions **C4**, **C5**). We will also take account of the problem in implementing Action **E2** which is dedicated to increasing staff awareness of unconscious bias.

- b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

- (i) **Representation on decision-making committees** – comment on evidence of gender equality in the mechanism for selecting representatives. What evidence is there that women are encouraged to sit on a range of influential committees inside and outside the department? How is the issue of ‘committee overload’ addressed where there are small numbers of female staff?

The key decision-making committees in the School are the School Board, the Research Committee, Teaching Learning and Academic Quality Committee and the Health, Safety and Environment Committee. Three of these are notable for their poor representation of female staff. Until recently there was no female academic staff representation on the School Board, but we now have one female academic member, Dr Irena Spasic, who was Deputy Directory for Research, but for the year 2014-15 is the Director of Research while Prof Preece is on leave of absence. She chairs the Research Committee while in that role, as well as chairing the School Research Ethics group in the School and serving on the University Research Ethics Board.

Helen Philips is closely involved with various groups concerned with women in science, being chair of the BCS Chartered Institute for IT sub-group BCS Women Wales and a committee member of Chwarae Teg (which has the vision of “A Wales where women achieve and prosper”), as well as being a member of the BCS South Wales Committee.

As regards the possibility of committee overload for females, at present the proportion of female staff on committees is broadly in alignment with the proportion of female staff within the represented grades of committee members.

### **Action**

The composition of committees in the School will be reviewed annually to ensure a reasonable representation of females, with particular regard to the decision-making committees where female representation is low. A possible route to improving representation is to consider widening the membership of committees to include (for example) early career academic staff, researchers and students. Action **C8**.

- (ii) **Workload model** – describe the systems in place to ensure that workload allocations, including pastoral and administrative responsibilities (including the responsibility for work on women and science) are taken into account at appraisal and in promotion criteria. Comment on the rotation of responsibilities e.g. responsibilities with a heavy workload and those that are seen as good for an individual’s career.

The School has a workload model that is intended to promote an equitable balance of work across all staff. The University is currently introducing a standardised workload model. In developing the University-wide model the Computer Science model was regarded as an example of good practice.

The School’s current model encompasses School citizenship; teaching; scholarship and continued professional development; research; allocated duties and academic administration; and exceptions. It has become apparent that there should be an

explicit category to cover outreach and engagement, which until now was included in “allocated duties”. The University-wide model improves on our current model in enabling staff to record explicitly a wider range of activities, which should result in a better understanding of people’s workloads and fairer distribution of work to take account of individual circumstances.

In addition to the formal workload process, and its discussion in appraisal, the Head of School encourages staff to discuss the impact of their current workload and any personal factors that affect their responsibilities and subsequent workload. In one recent case the teaching responsibilities of a female staff member were temporarily re-allocated by engaging a temporary staff member.

- (iii) ***Timing of departmental meetings and social gatherings*** – provide evidence of consideration for those with family responsibilities, for example what the department considers to be core hours and whether there is a more flexible system in place.

Typically for small meetings, the timing is arranged by mutual agreement between the members of staff involved, as individuals’ working times vary considerably. Doodle polls are used extensively for this purpose. Departmental meetings are always held within our currently designated core hours of 10am – 4:00pm. However, we need to consult further on the most convenient core hours and it would be beneficial to raise awareness of formally agreed core hours. During Semester time some social gatherings, such as prize giving, nevertheless need to be arranged outside normal teaching hours in order that students can attend. Similarly, arranging UCAS visits on Saturdays has proved to be popular with applicants. Contribution to such events is encouraged, but it is appreciated that for some staff it will be difficult to volunteer.

### **Action**

We will increase the proportion of meetings that are held within core hours. Action **D1**.

- (iv) ***Culture*** –demonstrate how the department is female-friendly and inclusive. ‘Culture’ refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff and students.

The School aims to provide an open and welcoming environment for staff and students from all backgrounds, both in professional and informal situations. To quote a comment from our STEM survey “the impression of the school that I get is that it doesn’t care if you are purple, pink, green or blue. (this is a good thing)“.

For the student population there are several opportunities to promote interaction, such as the School-run Computer Club and the student-led Computer Science Society which has been organised largely by female students over the past few years and has proved extremely popular with undergraduate students (and some staff). Team work forms a large part of the Undergraduate course and diversity is encouraged by the staff

involved. The situation is certainly not perfect, however. For example, in a recent academic year a female PhD student was subjected to a situation in which an undergraduate refused her help in a practical lab session due to her gender, which has led to Action **E1** to address the matter.

Student-organised events are encouraged and funded by the School and include FTS (Food, Talk and Students) for informal talks and PSTR (PhD Student Teaching and Research Forum). Both events have very high attendance and provide relaxed environments for students to interact, both in the context of their research and socially. It has been observed, however, that attendance at specifically social events is more male-oriented, which is to be addressed by Action **C7**.

The School runs a variety of social events for staff, such as a “cultural” day out to Hay on Wye and a canoeing trip. Each year the Christmas meal is attended by a large mix of staff at different career levels and gender. Other social events are organised by research groups such as “Vlunch” and “MobiSoc” which also run regular relatively informal lunchtime seminars, particularly with a view to engaging research students.

### **Actions**

To counter the possibility of inappropriate behaviour, we will review advice in the Student Handbook and ensure the subject of gender equality is raised in the introductory talks to undergraduates. Action **E1**.

Increase the number of female PhD students participating in the social events. This is expected to involve discussions with a focus group of female PhD students. Action **C7**.

Ensure the School’s diversity in staff and students is reflected on the official website—Action **B2**).

- (v) **Outreach activities** – *comment on the level of participation by female and male staff in outreach activities with schools and colleges and other centres. Describe who the programmes are aimed at, and how this activity is formally recognised as part of the workload model and in appraisal and promotion processes.*

Prior to 2014, the outreach to schools and colleges was undertaken on an informal basis by volunteers, coordinated by one female member of academic staff. This situation was rectified in May 2014 when the Engagement and Outreach Committee was convened. The committee is composed of the Marketing and Communications Officer, Chair, UG Admissions Tutor, PhD/RA representative, Staff co-ordinating the School’s Computer club, Open Day co-ordinator, School Technician and a Lecturer in Mobile Forensics (3 female and 5 male).

As summarised in Table 4.3, we have multiple events per year, the majority of which involve groups of secondary school and FE college students visiting the University. Where possible there will always be at least one female PhD student present. However in the more recent visits there have been 3 female students. The average numbers of female staff participating is relatively high given the proportion of female academic



staff. The situation will be kept under review but it is hoped that the prominent presence of female staff at these events serves to counter gender stereotyping in the discipline.

The School has recently developed links with the Engineering Enterprise Scheme Wales with the aim of contributing and offering two visits for their Girls into Engineering Programme. These visit days are designed to provide a flavour of University life and to encourage girls to consider going to University to study STEM subjects.

Each year the School hosts several school students on Nuffield Research Placements. For the last three years two male and one female member of academic staff have acted as supervisors.

Historically outreach activities were not recognised formally within the workload model and were not an explicit element of the appraisal and promotion process, though appraisal does include the subject of engagement (Action **D4**).

### Action

Increase investment in outreach activities aimed at school students and school teachers. Action **B3**.

The workload model will be amended to include an explicit element for outreach and engagement and the appraisal and promotion procedures will be updated to recognise explicitly staff contributions to outreach and engagement. Action **D4**.

Table 4.3 Outreach events

Date	Number and type of events	Average Staff Nos		Average Nos Cardiff Student Ambassadors	
		Female	Male	Female	Male
2011	3 events involving 5 schools (years 9, 10 and Key Stage 3)	1.7	3.3	0.7	3
2012	2 events with 2 schools (year 10 and KS 3) and 1 University-organised teachers conference.	1.3	1	0.5	3.2
2013	3 events, Partnership project, years 12 & 13	1.3	0.3	1	3
2014	7 events, of which 2 in schools, 5 in University, 1 in an HE college, for years 9, 11, key stage 3, and for training school teachers.	1.1	0.7	0.8	1.4

## Flexibility and managing career breaks

a) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

(i) **Maternity return rate** – comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

During the period one member of academic staff took maternity leave and returned to work, maintaining our previous record of 100% retention rate.

(ii) **Paternity, adoption and parental leave uptake** – comment on the uptake of paternity leave by grade and parental and adoption leave by gender and grade. Has this improved or deteriorated and what plans are there to improve further.

Dependents leave during the period (Table 4.5) has been low with little variation by gender or in the level of take up over the period. Paternity leave (Table 4.5) was taken by 2 male academic staff members in 2013 and 2014. All staff entitled to paternity leave during the period did take it. It is clear that there is a low take-up of dependency leave, although the University web site includes a clear description of entitlements (Action **D3**).

Table 4.5 Dependents leave

Leave type	2012		2013		2014	
	F	M	F	M	F	M
Dependents Leave	0	0	1	0	1	1
Paternity Leave	0	0	0	1	0	1

### Action

Raise awareness of the availability of paternity leave in the induction process and within updated HR documentation on the School intranet. Action **D3**.

- (iii) **Numbers of applications and success rates for flexible working by gender and grade** – comment on any disparities. Where the number of women in the department is small applicants may wish to comment on specific examples.

There have been no formal requests for flexible working in the School. However the School does operate an informal flexible working policy described in the next section.

- b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.
- (i) **Flexible working** – comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.

Over the period we did not have any staff on formal flexible working arrangements. This is because the School has an informal approach to flexible working hours that is embedded in the culture of the School and is by agreement with line managers. Each Semester, all teaching staff are offered the opportunity to adjust their timetabled commitments to personal circumstances; many computer systems and services are available from home; and departmental meetings are restricted to core working hours. Beyond the timetabled activities, staff are able to work hours that best suit their working style and work-life balance. A similar arrangement is available to research staff by mutual agreement with their line managers. Staff can also take time off in lieu for any additional hours worked. Currently 8 out of 54 academic staff work part-time (3 female, 5 male).

Because all flexible working has been on an informal basis there is no formal record of people taking advantage of it. However, examples of regular use of the system include two professors, a lecturer, a post doctoral researcher and an administrator either working at home for at least one day a week or re-arranging hours during the day to accommodate childcare commitments; a professor and three administrators working at home at least one day a week to assist with care for elderly relatives; and two professors and a lecturer working at home for a day a week to accommodate their working practice preferences.

Feedback from our STEM survey suggests this system generally works well without the need for a formal consultation process with HR. One staff member commented “Extremely flexible attitude towards working hours and place of work”. The same survey did, however, draw attention to the fact some staff did not feel that the School made clear its policies on flexible working and other types of special leave, which is addressed in Action **D3**.

### **Action**

Ensure that the opportunities for flexible working are explained during staff induction; run an information session on flexible working and find an opportunity, such as annual appraisal, to ensure that staff take advantage of the system if they so wish. Action **D3**.

- (ii) ***Cover for maternity and adoption leave and support on return*** – explain what the department does, beyond the university maternity policy package, to support female staff before they go on maternity leave, arrangements for covering work during absence, and to help them achieve a suitable work-life balance on their return.

As indicated in the previous section relating to maternity leave, we have had very few staff taking maternity leave, and there has been no additional policy within the School for managing the situation beyond the University's standard arrangements. We have, however, initiated an action D2 to ensure a good level of support for staff in the School taking maternity leave. The intention is that this will preclude a repetition of a situation that arose prior to the reported period in which a member of staff who took maternity leave found the allotted workload on return was excessive.

### **Action**

The School will implement a procedure to ensure that staff planning to take maternity leave are supported in the periods of lead up, cover and return from leave. This will include discussion of the options for and agreement on reductions to normal workload that will assist the staff member. Mentoring opportunities will be highlighted to returning members of staff as an additional means of support. Action **D2**.

[4891 words]

## 5. **Any other comments: maximum 500 words**

*Please comment here on any other elements which are relevant to the application, e.g. other SET-specific initiatives of special interest that have not been covered in the previous sections. Include any other relevant data (e.g. results from staff surveys), provide a commentary on it and indicate how it is planned to address any gender disparities identified.*

As mentioned in previous sections, in order to gauge the current attitude to and perception of gender equality issues in the department an online STEM survey of staff and researchers was conducted, to which 51 members of the School responded. This response represented at least 50% of all academic staff (the figure is probably greater but 9 respondents did not specify their role), the others being researchers, administrative and support staff and PhD students. The survey was very helpful in gauging prevailing attitudes and drawing attention to matters that need to be addressed, such as raising awareness of promotion procedures and mentoring opportunities.

While the great majority of respondents indicated that the School does not suffer from obvious gender stereotyping or discrimination, the survey proved very informative in drawing attention to aspects of the environment where improvements could undoubtedly be made and for which we have initiated actions. These related, for example, to lack of adequate understanding of promotion procedures (Action **C2**), insufficient opportunities for mentoring (Action **C4**), inadequate communication of the importance of gender equality (Action **E2**) and the need to place more women in influential roles the department (Action **C8, C2**). We will conduct annual re-runs of the STEM survey (Action **A1**) to monitor change in perceptions that may arise over time from aspects of the action plan and which may require initiation of further actions (Action **A2**). The survey will be promoted strongly with a view to increasing the response rate to a larger proportion of the academic staff.

There is little doubt that the activities of the Athena Swan process are already bringing about positive changes in, for example, increased discussion of relevant issues such as working hours and recruitment, increased outreach activities, changes to promotional media and increased impetus to efforts to engage students in improving the gender equality culture.

[305 words]

## 6. Action plan

*Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.*

*The Action Plan should be a table or a spreadsheet comprising actions to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The plan should cover current initiatives and your aspirations **for the next three years**.*

*The action plan does not need to cover all areas at Bronze; however the expectation is that the department will have the organisational structure to move forward, including collecting the necessary data.*

## Action plan

**Note:** Actions are organised by theme. We have attached asterisks to those actions that have highest priority.

### Actions related to collecting information

Nr	Action	Action already taken and current position	Further action planned	Responsibility	Timescale	Success measures
*A1	Organise annual surveys of students and staff about their perceptions around workload, personal development and equal opportunity; use survey results to measure the effectiveness of already completed actions; compare survey results against the University Staff Survey (results in May 2015)	An initial STEM gender equality culture survey of staff and researchers in the School was carried out in March 2014	Repeat the survey annually, widen the scope to also include UGT, PGT and PhD students	Chair of the Athena SWAN Self Assessment Team	Annual, from October 2015	70% of staff and students complete the survey; survey results show clear year-on-year improvements in key areas.
*A2	Revise action plan based on feedback from the survey	The results from 2014 STEM survey have shaped the initial action plan	Adapt action plan annually	Chair of the Athena SWAN Self Assessment Team	Annual, from January 2016	At least one new action identified every year

### Actions related to recruitment

Nr	Action	Action already taken and current position	Further action planned	Responsibility	Timescale	Success measures
B1	Improve marketing material aimed at student recruitment	Brochure contains quotes from female students	Update the brochure, website and social media profiles: increase the number of quotes from female students, bring ratio female:male students on photos closer to 50%, mention provisions for female students (e.g. Girl Geek Society)	Marketing officer	Sept 2015	Increase the number of female applicants to at least 20%, which would exceed the sector average of 17%
B2	Make the school's website more attractive to prospective female applicants (students and staff)		Study gender preferences in web site layout and update the school web site accordingly, replace initials by first names in the staff list to highlight the proportion of staff who are female, ensure that initiatives aimed at women in Computer Science receive sufficient attention	Marketing officer	Sept 2015	Increase the number of female applicants to at least 20%, which would exceed the sector average of 17%)



*B3	Increase the focus of outreach and engagement activities on recruiting female students	Aim to have at least one female PhD student participating in outreach activities	Improve appraisal procedures to take into account participation in outreach and engagement activities; involve the Girl Geek Society in future events; consult with our current female students on methods to improve recruitment of female students in schools	Chair of the Engagement & Outreach committee	Sept 2016	Increase the number of female applicants at least to the sector average
*B4	Improve the staff recruitment process to encourage women applicants		Emphasise opportunities for flexible working and a commitment to gender equality in job adverts; provide training for line managers who are recruiting to ensure they know how to deal with requests to work on a job share / part time basis from applicants during the recruitment process	HR administrator	Sept 2015	Increase the number of female applicants by 10%; aim to recruit at least 2 female academic staff by 2017
*B5	Improve the staff selection process to prevent unconscious bias	Participation in on-line equality & diversity training is	Require that all panel members have taken unconscious bias	Head of School	Sept 2016	Require all recruitment panels to include at least

		mandatory for all staff. Staff with line management responsibilities are also required to complete additional equality & diversity training.	training; include more female staff on interview panels; invite staff from other Schools to assist with interviewing to deal with the low number of senior female staff in the School; monitor number of female staff on interview panels			one female
B6	Perform analysis of why no female applicants were recently appointed to academic posts		Analyse statistics on the number of overall female applicants and the number of shortlisted female applicants		Sept 2015	Insights are obtained that can feed into B7
B7	Implement changes to the selection process in response to the results of B6		Consider anonymising applications; consider increasing the emphasis on quality of publications over number of publications (e.g. evaluate applicants based on their 5 best papers)		Sept 2016	Remove any discrepancy between the percentage of female applicants, the percentage of shortlisted female applicants, and the percentage of appointed female applicants

### Actions related to career development

Nr	Action	Action already taken and current position	Further action planned	Responsibility	Timescale	Success measures
C1	Raise awareness of, and support applications for, funding opportunities targeted at women		Actively search for funding opportunities (e.g. Google's Anita Borg Memorial Scholarship), advertise funding opportunities prominently, offer support (mentoring, application writing and internal review); update the advice for line managers who conduct appraisals	Senior Personal Tutor	Continuously, from September 2015	At least one submitted scholarship application per year
*C2	Support and encourage female members of staff to work towards successful applications for promotion	Head of School encourages staff to apply and discusses promotion applications	Update the advice for line managers who conduct appraisals, ensuring readiness for promotion is discussed in appraisal; ensure all appraisers take University HR training for academic appraisal; ensure all appraisers and promotion panel members take unconscious bias training; organise workshops to improve	Head of School	June 2015	Responses in the annual survey become more positive; at least two successful promotion applications from female staff by 2018

			understanding of the promotion process and criteria; encourage staff to apply to find a mentor with experience of university promotion; encourage female staff to attend annual University course on Career Development for Female Academics			
*C3	Ensure everybody is aware of and encouraged to take advantage of staff development courses, where training is required and beneficial to the School and the individual		Update the advice for line managers who conduct appraisals to put more emphasis on staff development courses; use annual survey to monitor staff satisfaction with access to training	HR administrator	Sept 2015	Increase in the number of staff enrolling in development courses to 70%
*C4	Improve mentoring and networking opportunities for staff	Participation in and organisation of events for the "Cardiff Women in Science" College-wide network; participation of two staff in Aurora Leadership programme	Head of School will encourage all senior staff to register as mentors; include mentoring in the appraisal process; raise awareness among staff of the networking groups available in the	Head of School	Set up mentoring scheme by October 2015, remind staff of opportunities annually via email	Responses in the annual survey become more positive; Aim to have 10 active mentoring relationships within the school

			college and university, including Cardiff Women in Science, the IBM mentoring programme and the Aurora leadership programme			by January 2016
C5	Introduce mentoring scheme for PhD students and RAs	A mentoring scheme for RAs already exists but it will be extended beyond probation	Use mentoring scheme to provide explicit support for career development, provide guidance to staff about what are the expectations of the mentor	Director of PGR studies (for PhD students), Director of Research (for RAs)	Annually, from Sept 2015	Responses in annual survey become more positive
C6	Make students aware that they can request a female personal tutor		Update school handbook	Director of Teaching	Sept 2015	Handbook changed
C7	Increase the number of female PhD students participating in the PhD-led social activities		Discuss issue with PhD students' representative and a focus group of female PhD students; change the way these meetings are organised accordingly	Director of PGR studies	Organise focus group by summer 2016	Number of female participants at PSTR meetings increases
C8	The composition of committees in the School will be reviewed periodically to ensure a reasonable	Dr Irena Spasic has recently been appointed to chair the Research Committee for one year and will also attend the	Advertise all vacancies on committees; make explicit which selection criteria will be used	Head of School	Annually from September 2015	Most decision-making committees have some female representation,

	representation of females, with particular regard to the decision-making committees where female representation is currently very low	School Board in that capacity				while avoiding any increase in the overall workload of female staff as a result
C9	Encourage female student participation in extra-curricular computing activities in the School		Create and promote an online forum for females in computing (or use an existing one if appropriate) Advertise the need for more females in the Computing Club and the Computer Society, such as at student induction and in lectures and tutorials	Chair of Athena Swan self assessment team	Continuously	Increase numbers of females participating in specific clubs or forums

### Actions related to workload management

Nr	Action	Action already taken and current position	Further action planned	Responsibility	Timescale	Success measures
*D1	Increase the proportion of meetings within core hours	Official school meetings are already held within the current core hours of 10am to 4pm, but these hours are under review	Head of School will formally define core hours after consultation with staff; raise awareness within the School that smaller, informal meetings should also be organised within core hours as often as possible, to avoid staff or students feeling pressurised into agreeing inconvenient meetings times	Head of School	Finish consultation about core hours by September 2015	All official school meetings held within the agreed core hours; responses in the annual survey become more positive
D2	Increase support for staff leading up to and returning from maternity/paternity, adoption and shared parental leave		Reduce teaching and / or administrative workload during the first Semester after return	Head of School	Continuously	Responses in the annual survey become more positive
D3	Increase staff awareness of the opportunities for flexible working that are available		Discuss flexible working opportunities during induction and appraisal; add a document to the school wiki (intranet)	Head of School	March 2016	Responses in the annual survey become more positive; workshop attended by at least

			explaining the policy on flexible working; organise workshop to discuss flexible working rights			50% of staff
D4	Amend the workload model to include an explicit element for outreach and engagement	The workload model is currently under review in the University but full implementation of changes may not be until later 2015	Issue advice to line managers conducting appraisals to ensure that they take account of outreach and engagement	Head of School	November 2015	Updated workload template; reflection of the change in the appraisal documentation

#### Actions aimed at increasing awareness

Nr	Action	Action already taken and current position	Further action planned	Responsibility	Timescale	Success measures
*E1	Make clear to students that gender discrimination will not be tolerated		Update school handbook, discuss the topic of gender bias during the induction talks	Senior Personal Tutor	Sept 2015 (updating school handbook), annually (induction talk)	Handbook changed
*E2	Increase staff awareness of issues such as unconscious bias	Talk by Terry Threadgold in Autumn 2014 on Athena SWAN	Organise seminars on topics such as unconscious bias, gender preferences for particular types of examination questions, etc.	Chair of the Athena SWAN Self Assessment Team	Organise seminars in Spring of 2016 and 2018	At least 1 seminar per year, at least 20 members of staff attend each seminar